AS FILED WITH THE SECURITIES AND EXCHANGE COMMISSION ON JUNE 13, 2003
REGISTRATION STATEMENT NO. 333-

SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

FORM S-4
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

L-3 COMMUNICATIONS CORPORATION
(Exact Name of Registrant as Specified in its Charter)

DELAWARE
(State or Other Jurisdiction of Incorporation or Organization)

13-3937436
(I.R.S. Employer Identification Number)

600 THIRD AVENUE
NEW YORK, NEW YORK 10016
(212) 697-1111
(Address, Including Zip Code, and Telephone Number,
Including Area Code, of Registrant's Principal Executive Offices)

SEE TABLE OF ADDITIONAL REGISTRANTS

CHRISTOPHER C. CAMBRIA, ESQ.
600 THIRD AVENUE
NEW YORK, NY 10016
(212) 697-1111
(Name, Address, Including Zip Code, and Telephone Number,
Including Area Code, of Agent For Service)

Copy to:
VINCENT PAGANO, ESQ.
SIMPSON THACHER & BARTLETT LLP
425 LEXINGTON AVENUE
NEW YORK, NEW YORK 10017-3954
(212) 455-2000

APPROXIMATE DATE OF COMMENCEMENT OF PROPOSED SALE TO THE PUBLIC: As soon as practicable after this Registration Statement becomes effective.

If the securities being registered on this Form are being offered in connection with the formation of a holding company and there is compliance with General Instruction G, check the following box. [ ]

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. [ ]

If this Form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. [ ]

CALCULATION OF REGISTRATION FEE

TITLE OF EACH CLASS OF SECURITIES TO BE REGISTERED	AMOUNT TO BE REGISTERED	PROPOSED MAXIMUM OFFERING PRICE PER UNIT	PROPOSED MAXIMUM AGGREGATE OFFERING PRICE(1)	AMOUNT OF REGISTRATION FEE
6 1/8% Series B Senior Subordinated Notes due 2013(2)	$400,000,000	100%	$400,000,000	$ 32,360.00
Guarantees of 6 1/8% Series B Senior Subordinated Notes due 2013	(2)	(2)	(2)	None(2)

(1) Estimated solely for purposes of calculating the registration fee.
(2) No separate consideration will be received for the guarantees. Pursuant to Rule 457(n) of the Securities Act of 1933, as amended, there is no filing fee with respect to the guarantees.

THE REGISTRANTS HEREBY AMEND THIS REGISTRATION STATEMENT ON SUCH DATE OR DATES AS MAY BE NECESSARY TO DELAY ITS EFFECTIVE DATE UNTIL THE REGISTRANTS SHALL FILE A FURTHER AMENDMENT WHICH SPECIFICALLY STATES THAT THIS REGISTRATION STATEMENT SHALL THEREAFTER BECOME EFFECTIVE IN ACCORDANCE WITH SECTION 8(A) OF THE SECURITIES ACT OF 1933, AS AMENDED, OR UNTIL THIS REGISTRATION STATEMENT SHALL BECOME EFFECTIVE ON SUCH DATE AS THE SECURITIES AND EXCHANGE COMMISSION, ACTING PURSUANT TO SAID SECTION 8(A), MAY DETERMINE.

TABLE OF ADDITIONAL REGISTRANTS

EXACT NAME OF REGISTRANT AS SPECIFIED IN ITS CHARTER	STATE OR OTHER JURISDICTION OF INCORPORATION OR ORGANIZATION	IRS EMPLOYER IDENTIFICATION NUMBER	ADDRESS, INCLUDING ZIP CODE, AND TELEPHONE NUMBER, INCLUDING AREA CODE, OF REGISTRANT'S PRINCIPAL EXECUTIVE OFFICES
AMI Instruments, Inc.	Oklahoma	73-1122637	600 Third Avenue New York, NY 10016 (212) 697-1111
Apcom, Inc.	Maryland	52-1291447	600 Third Avenue New York, NY 10016 (212) 697-1111
Broadcast Sports Inc.	Delaware	52-1977327	600 Third Avenue New York, NY 10016 (212) 697-1111
Celerity Systems Incorporated	California	77-0365380	600 Third Avenue New York, NY 10016 (212) 697-1111
EER Systems, Inc.	Virginia	54-1349668	600 Third Avenue New York, NY 10016 (212) 697-1111
Electrodynamics, Inc	Arizona	36-3140903	600 Third Avenue New York, NY 10016 (212) 697-1111
Goodrich Flightsystems, Inc.	Ohio	31-1287286	600 Third Avenue New York, NY 10016 (212) 697-1111
Henschel, Inc.	Delaware	23-2554418	600 Third Avenue New York, NY 10016 (212) 697-1111
Hygienetics Environmental Services, Inc.	Delaware	13-3992505	600 Third Avenue New York, NY 10016 (212) 697-1111
Interstate Electronics Corporation	California	95-1912832	600 Third Avenue New York, NY 10016 (212) 697-1111
KDI Precision Products, Inc.	Delaware	31-0740721	600 Third Avenue New York, NY 10016 (212) 697-1111
Goodrich Aerospace Component Overhaul & Repair, Inc.	Delaware	31-1174777	600 Third Avenue New York, NY 10016 (212) 697-1111
Goodrich Avionics Systems, Inc.	Delaware	38-1865601	600 Third Avenue New York, NY 10016 (212) 697-1111
L-3 Communications AIS GP Corporation	Delaware	13-4137187	600 Third Avenue New York, NY 10016 (212) 697-1111
L-3 Communications Analytics Corporation	California	54-1035921	600 Third Avenue New York, NY 10016 (212) 697-1111
L-3 Communications Atlantic Science and Technology Corporation	New Jersey	22-2547554	600 Third Avenue New York, NY 10016 (212) 697-1111
L-3 Communications Aydin Corporation	Delaware	23-1686808	600 Third Avenue New York, NY 10016 (212) 697-1111
L-3 Communications ESSCO, Inc.	Delaware	04-2281486	600 Third Avenue New York, NY 10016 (212) 697-1111
L-3 Communications ILEX Systems, Inc.	Delaware	13-3992952	600 Third Avenue New York, NY 10016 (212) 697-1111
L-3 Communications IMC Corporation	Connecticut	06-1284773	600 Third Avenue New York, NY 10016 (212) 697-1111

EXACT NAME OF REGISTRANT AS SPECIFIED IN ITS CHARTER	STATE OR OTHER JURISDICTION OF INCORPORATION OR ORGANIZATION	IRS EMPLOYER IDENTIFICATION NUMBER	ADDRESS, INCLUDING ZIP CODE, AND TELEPHONE NUMBER, INCLUDING AREA CODE, OF REGISTRANT'S PRINCIPAL EXECUTIVE OFFICES
L-3 Communications Integrated Systems L.P.	Delaware	03-0391841	600 Third Avenue New York, NY 10016 (212) 697-1111
L-3 Communications Investments Inc.	Delaware	51-0260723	600 Third Avenue New York, NY 10016 (212) 697-1111
L-3 Communications Security and Detection Systems Corporation Delaware	Delaware	04-3054475	600 Third Avenue New York, NY 10016 (212) 697-1111
L-3 Communications Security and Detection Systems Corporation California	California	95-2214952	600 Third Avenue New York, NY 10016 (212) 697-1111
L-3 Communications SPD Technologies, Inc.	Delaware	23-2869511	600 Third Avenue New York, NY 10016 (212) 697-1111
L-3 Communications Storm Control Systems, Inc.	California	77-0268547	600 Third Avenue New York, NY 10016 (212) 697-1111
L-3 Communications TMA Corporation	Virginia	54-1221290	600 Third Avenue New York, NY 10016 (212) 697-1111
L-3 Communications Westwood Corporation	Nevada	87-0430944	600 Third Avenue New York, NY 10016 (212) 697-1111
MCTI Acquisition Corporation	Maryland	13-4109777	600 Third Avenue New York, NY 10016 (212) 697-1111
Microdyne Communications Technologies Incorporated	Maryland	59-3500774	600 Third Avenue New York, NY 10016 (212) 697-1111
Microdyne Corporation	Maryland	52-0856493	600 Third Avenue New York, NY 10016 (212) 697-1111
Microdyne Outsourcing Incorporated	Maryland	33-0797639	600 Third Avenue New York, NY 10016 (212) 697-1111
MPRI, Inc.	Delaware	54-1439937	600 Third Avenue New York, NY 10016 (212) 697-1111
Pac Ord, Inc.	Delaware	23-2523436	600 Third Avenue New York, NY 10016 (212) 697-1111
Power Paragon, Inc.	Delaware	33-0638510	600 Third Avenue New York, NY 10016 (212) 697-1111
Ship Analytics, Inc.	Connecticut	06-0966471	600 Third Avenue New York, NY 10016 (212) 697-1111
Ship Analytics International, Inc.	Delaware	06-1336772	600 Third Avenue New York, NY 10016 (212) 697-1111
Ship Analytics USA, Inc.	Delaware	06-1364417	600 Third Avenue New York, NY 10016 (212) 697-1111
Southern California Microwave, Inc.	California	13-0478540	600 Third Avenue New York, NY 10016 (212) 697-1111
SPD Electrical Systems, Inc.	Delaware	23-2457758	600 Third Avenue New York, NY 10016 (212) 697-1111

EXACT NAME OF REGISTRANT AS SPECIFIED IN ITS CHARTER	STATE OR OTHER JURISDICTION OF INCORPORATION OR ORGANIZATION	IRS EMPLOYER IDENTIFICATION NUMBER	ADDRESS, INCLUDING ZIP CODE, AND TELEPHONE NUMBER, INCLUDING AREA CODE, OF REGISTRANT'S PRINCIPAL EXECUTIVE OFFICES
SPD Holdings, Inc.	Delaware	23-2977238	600 Third Avenue New York, NY 10016 (212) 697-1111
SPD Switchgear, Inc.	Delaware	23-2510039	600 Third Avenue New York, NY 10016 (212) 697-1111
SYColeman Corporation	Florida	59-2039476	600 Third Avenue New York, NY 10016 (212) 697-1111
Telos Corporation	California	95-2596107	600 Third Avenue New York, NY 10016 (212) 697-1111
Troll Technology Corporation	California	95-4552257	600 Third Avenue New York, NY 10016 (212) 697-1111
Wescam Air Ops Inc.	Delaware	52-2304424	600 Third Avenue New York, NY 10016 (212) 697-1111
Wescam Air Ops LLC	Delaware	Pending	600 Third Avenue New York, NY 10016 (212) 697-1111
Wescam Incorporated	Florida	59-3316817	600 Third Avenue New York, NY 10016 (212) 697-1111
Wescam LLC	Delaware	91-2077866	600 Third Avenue New York, NY 10016 (212) 697-1111
Wescam Sonoma Inc.	California	95-2942016	600 Third Avenue New York, NY 10016 (212) 697-1111
Wescam Holdings (US) Inc.	Delaware	51-0376332	600 Third Avenue New York, NY 10016 (212) 697-1111
Wolf Coach, Inc.	Massachusetts	04-2482502	600 Third Avenue New York, NY 10016 (212) 697-1111

Information contained herein is subject to completion or amendment. A registration statement relating to these securities has been filed with the Securities and Exchange Commission. These securities may not be sold nor may offers to buy be accepted prior to the time the registration statement becomes effective. This prospectus shall not constitute an offer to sell or the solicitation of an offer to buy nor shall there be any sale of these securities in any State in which such offer, solicitation or sale would be unlawful prior to registration or qualification under the securities laws of any such State.

SUBJECT TO COMPLETION, DATED JUNE 13, 2003

PROSPECTUS

$400,000,000

[L-3 COMMUNICATIONS LOGO OMITTED]

L-3 COMMUNICATIONS CORPORATION

Offer to Exchange All Outstanding 6 1/8% Senior Subordinated Notes due 2013 for an equal amount of 6 1/8% Series B Senior Subordinated Notes due 2013, which have been registered under the Securities Act of 1933.

THE EXCHANGE OFFER

- We will exchange all outstanding notes that are validly tendered and not validly withdrawn for an equal principal amount of exchange notes that are freely tradeable.

- You may withdraw tenders of outstanding notes at any time prior to the expiration of the exchange offer.

- The exchange offer expires at 5:00 p.m., New York City time, on 2003, unless extended. We do not currently intend to extend the expiration date.

- The exchange of outstanding notes for exchange notes in the exchange offer will not be a taxable event for U.S. federal income tax purposes.

- We will not receive any proceeds from the exchange offer.

THE EXCHANGE NOTES

- The exchange notes are being offered in order to satisfy certain of our obligations under the registration rights agreement entered into in connection with the placement of the outstanding notes.

- The terms of the exchange notes to be issued in the exchange offer are substantially identical to the outstanding notes, except that the exchange notes will be freely tradeable.

RESALES OF EXCHANGE NOTES

- The exchange notes may be sold in the over-the-counter market, in negotiated transactions or through a combination of such methods. We do not plan to list the exchange notes on a national market.

If you are a broker-dealer and you receive exchange notes for your own account, you must acknowledge that you will deliver a prospectus in connection with any resale of such exchange notes. By making such acknowledgment, you will not be deemed to admit that you are an "underwriter" under the Securities Act of 1933. Broker-dealers may use this prospectus in connection with any resale of exchange notes received in exchange for outstanding notes where such outstanding notes were acquired by the broker-dealer as a result of market-making activities or trading activities. We have agreed that, for a period of 180 days after the expiration of the exchange offer or until any broker-dealer has sold all registered notes held by it, we will make this prospectus available to such broker-dealer for use in connection with any such resale. A broker-dealer may not participate in the exchange offer with respect to outstanding notes acquired other than as a result of market-making activities or trading activities. See "Plan of Distribution."

If you are an affiliate of L-3 Communications Corporation or are engaged in, or intend to engage in, or have an agreement or understanding to participate in, a distribution of the exchange notes, you cannot rely on the applicable interpretations of the Securities and Exchange Commission and you must comply with the registration requirements of the Securities Act of 1933 in connection with any resale transaction.

YOU SHOULD CONSIDER CAREFULLY THE RISK FACTORS BEGINNING ON PAGE 15 OF THIS PROSPECTUS BEFORE PARTICIPATING IN THE EXCHANGE OFFER.

NEITHER THE SECURITIES AND EXCHANGE COMMISSION NOR ANY STATE SECURITIES COMMISSION HAS APPROVED OR DISAPPROVED OF THESE SECURITIES OR DETERMINED IF THIS PROSPECTUS IS TRUTHFUL OR COMPLETE. ANY REPRESENTATION TO THE CONTRARY IS A CRIMINAL OFFENSE.

The date of this prospectus is , 2003

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WHERE YOU CAN FIND MORE INFORMATION

We are subject to the informational requirements of the Securities Exchange Act of 1934 and, in accordance therewith, file reports and other information with the SEC. Such reports and other information can be inspected and copied at the Public Reference Section of the SEC located at Room 1024, Judiciary Plaza, 450 Fifth Street, N.W., Washington D.C. 20549 and at a regional public reference facility maintained by the SEC located at Citicorp Center, 500 West Madison Street, Suite 1400, Chicago, Illinois 60661. Copies of such material can be obtained from the Public Reference Section of the SEC at prescribed rates. Such material may also be accessed electronically by means of the SEC's home page on the Internet (http://www.sec.gov).

So long as we are subject to the periodic reporting requirements of the Securities Exchange Act, we are required to furnish the information required to be filed with the SEC to the trustee and the holders of the exchange notes. We have agreed that, even if we are not required under the Securities Exchange Act to furnish such information to the SEC, we will nonetheless continue to furnish information that would be required to be furnished by us by Section 13 of the Securities Exchange Act to the trustee and the holders of the exchange notes as if we were subject to such periodic reporting requirements.

ABOUT THIS PROSPECTUS

As used in this prospectus, (1) "L-3 Holdings" refers to L-3 Communications Holdings, Inc., (2) "L-3 Communications" refers to L-3 Communications Corporation, a wholly-owned operating subsidiary of L-3 Holdings and the issuer of the outstanding notes and the exchange notes, and (3) "Guarantors" refers to the current and future domestic restricted subsidiaries, that are or will guarantee the obligations of L-3 Communications under the outstanding notes and the exchange notes. The obligations of the guarantors are referred to herein as the "guarantees." "L-3," the "Company," "we," "us" and "our" refer to L-3 Communications and its subsidiaries. "Senior credit facilities" refers to our 364-day revolving credit facility together with our five-year revolving credit facility. Unless the context otherwise requires, "notes" refers to the outstanding notes and the exchange notes.

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PROSPECTUS SUMMARY

This summary highlights selected information contained elsewhere in this prospectus and does not contain all of the information you need to consider in making your investment decision. You should read carefully this entire prospectus.

We are a leading merchant supplier of secure communications and intelligence, surveillance and reconnaissance (ISR) systems, training, simulation and support services, aviation products and aircraft modernization, as well as specialized products. Our businesses employ proprietary technologies and capabilities, and we believe our businesses have leading positions in their respective primary markets. Our customers include the U.S. Department of Defense and prime contractors thereof, certain U.S. Government intelligence agencies, major aerospace and defense contractors, foreign governments, commercial customers and certain other U.S. federal, state and local government agencies. For the year ended December 31, 2002, direct and indirect sales to the U.S. Department of Defense provided 65.5% of our sales, and sales to commercial customers, foreign governments and U.S. federal, state and local government agencies other than the U.S. Department of Defense provided the remaining 34.5% of our sales. For the year ended December 31, 2002, we had sales of $4,011.2 million, of which U.S. customers accounted for approximately 85.7% and foreign customers accounted for approximately 14.3%, operating income of $454.0 million, net cash from operating activities of $318.5 million and EBITDA (as defined) of $529.9 million. (For a reconciliation of EBITDA to its most directly comparable GAAP financial measure see page 13.) For the three months ended March 31, 2003, we had sales of $1,089.0 million, operating income of $108.8 million, net cash from operating activities of $106.1 million and EBITDA of $131.6 million.

For the twelve months ended March 31, 2003, we had sales of $4,403.4 million, operating income of $491.5 million, net cash from operating activities of $383.2 million and EBITDA of $575.0 million.

We have four reportable segments: (1) Secure Communications & ISR; (2) Training, Simulation & Support Services; (3) Aviation Products & Aircraft Modernization; and (4) Specialized Products.

Secure Communications & ISR. The businesses in this segment provide products and services for the global ISR market, specializing in signals intelligence (SIGINT) and communications intelligence (COMINT) systems. These products and services provide to the warfighter in real-time the unique ability to collect and analyze unknown electronic signals from command centers, communication nodes and air defense systems for real-time situation awareness and response. This segment also provides secure, high data rate communications systems for military and other U.S. Government and foreign government reconnaissance and surveillance applications. These systems and products are critical elements of virtually all major communication, command and control, intelligence gathering and space systems. Our systems and products are used to connect a variety of airborne, space, ground and sea-based communication systems and are used in the transmission, processing, recording, monitoring and dissemination functions of these communication systems. The major secure communications programs and systems include:

- secure data links for airborne, satellite, ground and sea-based remote platforms for real-time information collection and dissemination to users;

- highly specialized fleet management and support, including procurement, systems integration, sensor development, modifications and maintenance for signals intelligence and ISR special mission aircraft and airborne surveillance systems;

- strategic and tactical signals intelligence systems that detect, collect, identify, analyze and disseminate information;

- secure telephone and network equipment and encryption management; and

- communication systems for surface and undersea vessels and manned space flights.

Training, Simulation & Support Services. The businesses in this segment provide a full range of training, simulation and support services, including:

- services designed to meet customer training requirements for aircrews, navigators, mission operators, gunners and maintenance technicians for virtually any platform, including military fixed and rotary wing aircraft, air vehicles and various ground vehicles;

- communication software support, information services and a wide range of engineering development services and integration support;

- high-end engineering and information support services used for command, control, communications and ISR architectures, as well as for air warfare modeling and simulation tools for applications used by the U.S. Department of Defense, Department of Homeland Security and U.S. Government intelligence agencies, including missile and space systems, Unmanned Aerial Vehicles and military aircraft;

- developing and managing extensive programs in the United States and internationally that focus on teaching, training and education, logistics, strategic planning, organizational design, democracy transition and leadership development;

- producing crisis management software and providing command and control for homeland security applications; and

- design, prototype development and production of ballistic missile targets for missile defense applications, including present and future threat scenarios.

Aviation Products & Aircraft Modernization. The businesses in this segment provide aviation products and aircraft modernization services, including:

- airborne traffic and collision avoidance systems for commercial and military applications;

- commercial, solid-state, crash-protected cockpit voice recorders, flight data recorders and maritime hardened voyage recorders;

- ruggedized custom displays for military and high-end commercial applications;

- turnkey aviation life cycle management services that integrate custom developed and commercial off-the-shelf products for various military and commercial wide-body and rotary wing aircraft, including heavy maintenance and structural modifications and Head-of-State and commercial interior completions; and

- engineering, modification, maintenance, logistics and upgrades for U.S. Special Operations Command aircraft, vehicles and personnel equipment.

Specialized Products. The businesses in this segment supply products, including components, subsystems and systems, to military and commercial customers in several niche markets. These products include:

- ocean products, including acoustic undersea warfare products for mine hunting, dipping and anti-submarine sonars and naval power distribution, conditioning, switching and protection equipment for surface and undersea platforms;

- ruggedization and integration of commercial off-the-shelf technology for displays, computers and electronic systems for military and commercial applications;

- integrated video security and surveillance systems that provide perimeter security used by the U.S. Immigration and Naturalization Service and U.S. Border Patrol to monitor and protect U.S. borders;

- o security systems for aviation, port and border applications to detect explosives, concealed weapons, contraband and illegal narcotics, to inspect agricultural products and to examine cargo;

- o telemetry, instrumentation, space and navigation products, including tracking and flight termination;

- o premium fuzing products;

- o microwave components used in radar communication satellites, wireless communication equipment, electronic surveillance, communication and electronic warfare applications and countermeasure systems;

- o high performance antennas and ground based radomes;

- o training devices and motion simulators which produce advanced virtual reality simulation and high-fidelity representations of cockpits and mission stations for fixed and rotary wing aircraft and land vehicles; and

- o precision stabilized electro-optic surveillance systems, including high magnification lowlight, daylight and forward looking infrared sensors, laser range finders, illuminators and designators, and digital and wireless communication systems.

DEVELOPING COMMERCIAL AND CIVIL OPPORTUNITIES

Part of our growth strategy is to identify commercial and non-U.S. Department of Defense applications from select products and technologies that we currently sell to our defense customers. We have initially identified two vertical markets where we believe there are significant opportunities to expand our product sales: transportation and broadband wireless communications products.

Within the transportation market, we are offering (1) an explosives detection system for screening checked baggage at airports, X-ray screening products for cargo, air freight, port and border security applications, display and power propulsion systems for rail transportation and power switches for internet service providers, and (2) maritime voyage recorders and an enhanced aviation collision avoidance product that incorporates ground proximity warning. Within the communications product market, we are offering local fixed wireless access equipment for voice and data communications.

We have developed the majority of our commercial and civil products employing technology used in our defense businesses. Except for our explosives detection systems, sales generated from our developing commercial and civil opportunities have not been material to us.

OUR STRATEGY

We intend to grow our sales, improve our profitability and build on our position as a leading merchant supplier of systems, products and services to the major contractors in the aerospace and defense industry as well as the U.S. Government. We also intend to continue to leverage our expertise and products into selected new commercial and civil business areas where we can adapt our existing products and technologies. Our strategy to achieve our objectives includes:

EXPAND MERCHANT SUPPLIER RELATIONSHIPS. As an independent merchant supplier, we anticipate that our growth will be driven by expanding our share of existing programs and by participating in new programs. We identify opportunities where we are able to use our strong relationships to increase our business presence and allow customers to reduce their costs. We also expect to benefit from continued outsourcing of subsystems, components and products by prime contractors, which positions us to be a merchant supplier to multiple bidders on prime contract bids.

SUPPORT CUSTOMER REQUIREMENTS. We intend to continue to align our research and development, manufacturing and new business efforts to complement our customers' requirements and provide state-of-the-art products.

IMPROVE OPERATING MARGINS. We intend to continue to improve our operating performance by continuing to reduce overhead expenses, consolidating certain of our businesses and business processes and increasing the productivity of our businesses.

LEVERAGE TECHNICAL AND MARKET LEADERSHIP POSITIONS. We are applying our technical expertise and capabilities to several closely aligned commercial business markets and applications such as transportation and broadband wireless communications and we expect to continue to explore other similar commercial opportunities.

MAINTAIN DIVERSIFIED BUSINESS MIX. We have a diverse and broad business mix with limited reliance on any single program, a favorable balance of cost-reimbursable and fixed-price contracts, a significant follow-on business and an attractive customer profile.

CAPITALIZE ON STRATEGIC ACQUISITION OPPORTUNITIES. We intend to enhance our existing product base through internal research and development efforts and selective acquisitions of businesses that will add new products in areas that complement our present technologies. Since January 1, 2003, we acquired two businesses for an aggregate purchase price of $206.0 million. We regularly evaluate opportunities to acquire businesses. See "Risk Factors -- Our acquisition strategy involves risks, and we may not successfully implement our strategy."

REDEMPTION

We initiated full redemption of all of our $180.0 million aggregate principal amount of 8 1/2% Senior Subordinated Notes due 2008 on Wednesday, May 21, 2003. All such notes will be redeemed on June 20, 2003 at a redemption price of 104.250% of the principal amount thereof, plus accrued and unpaid interest to June 20, 2003.

A portion of the net proceeds from the offering of the outstanding notes will be used to finance the redemption.

We are incorporated in Delaware, and the address of our principal executive offices is 600 Third Avenue, New York, New York 10016. Our telephone number is (212) 697-1111.

SUMMARY OF TERMS OF THE EXCHANGE OFFER

On May 21, 2003, we completed the private offering of the outstanding notes. References to the "notes" in this prospectus are references to both the outstanding notes and the exchange notes. This prospectus is part of a registration statement covering the exchange of the outstanding notes for the exchange notes.

We and the guarantors entered into a registration rights agreement with the initial purchasers in the private offering in which we and the guarantors agreed to deliver to you this prospectus as part of the exchange offer and we agreed to complete the exchange offer within 210 days after the date of original issuance of the outstanding notes. You are entitled to exchange in the exchange offer your outstanding notes for exchange notes which are identical in all material respects to the outstanding notes except:

- the exchange notes have been registered under the Securities Act;
- the exchange notes are not entitled to certain registration rights which are applicable to the outstanding notes under the registration rights agreement; and
- certain contingent interest rate provisions are no longer applicable.

The Exchange Offer.....	We are offering to exchange up to $400,000,000 aggregate principal amount of our 6 1/8% Series B Senior Subordinated Notes due 2013, which we refer to in this prospectus as the exchange notes, for up to $400,000,000 million aggregate principal amount of our 6 1/8% Senior Subordinated Notes due 2013, which we refer to in this prospectus as the outstanding notes. Outstanding notes may be exchanged only in integral multiples of $1,000.
Resale.....	Based on an interpretation by the staff of the SEC set forth in no-action letters issued to third parties, we believe that the exchange notes issued pursuant to the exchange offer in exchange for outstanding notes may be offered for resale, resold and otherwise transferred by you (unless you are an "affiliate" of L-3 Communications Corporation, within the meaning of Rule 405 under the Securities Act) without compliance with the registration and prospectus delivery provisions of the Securities Act, provided that you are acquiring the exchange notes in the ordinary course of your business and that you have not engaged in, do not intend to engage in, and have no arrangement or understanding with any person to participate in, a distribution of the exchange notes. Each participating broker-dealer that receives exchange notes for its own account pursuant to the exchange offer in exchange for outstanding notes that were acquired as a result of market-making or other trading activity must acknowledge that it will deliver a prospectus in connection with any resale of the exchange notes. See "Plan of Distribution." Any holder of outstanding notes who: - is an affiliate of L-3 Communications Corporation;

o does not acquire exchange notes in the ordinary course of its business; or

o tenders in the exchange offer with the intention to participate, or for the purpose of participating, in a distribution of exchange notes;

cannot rely on the position of the staff of the SEC enunciated in Exxon Capital Holdings Corporation, Morgan Stanley & Co. Incorporated or similar no-action letters and, in the absence of an exemption therefrom, must comply with the registration and prospectus delivery requirements of the Securities Act in connection with the resale of the exchange notes.

Expiration Date; Withdrawal of Tender.....

The exchange offer will expire at 5:00 p.m., New York City time, on , 2003, or such later date and time to which we extend it (the "expiration date"). We do not currently intend to extend the expiration date. A tender of outstanding notes pursuant to the exchange offer may be withdrawn at any time prior to the expiration date. Any outstanding notes not accepted for exchange for any reason will be returned without expense to the tendering holder promptly after the expiration or termination of the exchange offer.

Certain Conditions to the Exchange Offer.....

The exchange offer is subject to customary conditions, which we may waive. Please read the section captioned "The Exchange Offer -- Certain Conditions to the Exchange Offer" of this prospectus for more information regarding the conditions to the exchange offer.

Procedures for Tendering Outstanding Notes.....

If you wish to accept the exchange offer, you must complete, sign and date the accompanying letter of transmittal, or a facsimile of the letter of transmittal according to the instructions contained in this prospectus and the letter of transmittal. You must also mail or otherwise deliver the letter of transmittal, or a facsimile of the letter of transmittal, together with the outstanding notes and any other required documents, to the exchange agent at the address set forth on the cover page of the letter of transmittal. If you hold outstanding notes through The Depository Trust Company, or DTC, and wish to participate in the exchange offer, you must comply with the Automated Tender Offer Program procedures of DTC, by which you will agree to be bound by the letter of transmittal. By signing, or agreeing to be bound by the letter of transmittal, you will represent to us that, among other things:

- any exchange notes that you receive will be acquired in the ordinary course of your business;

- you have no arrangement or understanding with any person or entity to participate in a distribution of the exchange notes;

- if you are a broker-dealer that will receive exchange notes for your own account in exchange for outstanding notes that were acquired as a result of market-making activities, that you will deliver a prospectus, as required by law, in connection with any resale of such exchange notes; and

- you are not an "affiliate," as defined in Rule 405 of the Securities Act, of L-3 or, if you are an affiliate, you will comply with any applicable registration and prospectus delivery requirements of the Securities Act.

Special Procedures for Beneficial Owners.....	If you are a beneficial owner of outstanding notes which are registered in the name of a broker, dealer, commercial bank, trust company or other nominee, and you wish to tender such outstanding notes in the exchange offer, you should contact such registered holder promptly and instruct such registered holder to tender on your behalf. If you wish to tender on your own behalf, you must, prior to completing and executing the letter of transmittal and delivering your outstanding notes, either make appropriate arrangements to register ownership of the outstanding notes in your name or obtain a properly completed bond power from the registered holder. The transfer of registered ownership may take considerable time and may not be able to be completed prior to the expiration date.
Guaranteed Delivery Procedures.....	If you wish to tender your outstanding notes and your outstanding notes are not immediately available or you cannot deliver your outstanding notes, the letter of transmittal or any other documents required by the letter of transmittal or comply with the applicable procedures under DTC's Automated Tender Offer Program prior to the expiration date, you must tender your outstanding notes according to the guaranteed delivery procedures set forth in this prospectus under "The Exchange Offer -- Guaranteed Delivery Procedures."
Effect on Holders of Outstanding Notes.....	As a result of the making of, and upon acceptance for exchange of all validly tendered outstanding notes pursuant to the terms of the exchange offer, we will have fulfilled a covenant contained in the registration rights agreement and, accordingly, there will be no increase in the interest rate on the outstanding notes under the circumstances

	described in the registration rights agreement. If you are a holder of outstanding notes and you do not tender your outstanding notes in the exchange offer, you will continue to hold such outstanding notes and you will be entitled to all the rights and limitations applicable to the outstanding notes in the indenture, except for any rights under the registration rights agreement that by their terms terminate upon the consummation of the exchange offer. To the extent that outstanding notes are tendered and accepted in the exchange offer, the trading market for outstanding notes could be adversely affected.
Consequences of Failure to Exchange.....	All untendered outstanding notes will continue to be subject to the restrictions on transfer provided for in the outstanding notes and in the indenture. In general, the outstanding notes may not be offered or sold, unless registered under the Securities Act, except pursuant to an exemption from, or in a transaction not subject to, the Securities Act and applicable state securities laws. Other than in connection with the exchange offer, we do not currently anticipate that we will register the outstanding notes under the Securities Act.
Certain Income Tax Considerations.....	The exchange of outstanding notes for exchange notes in the exchange offer will not be a taxable event for United States federal income tax purposes. See "Certain United States Federal Income Tax Considerations."
Use of Proceeds.....	We will not receive any cash proceeds from the issuance of exchange notes pursuant to the exchange offer.
Exchange Agent.....	The Bank of New York is the exchange agent for the exchange offer. The address and telephone number of the exchange agent are set forth in the section captioned "The Exchange Offer -- Exchange Agent" of this prospectus.

SUMMARY OF TERMS OF THE EXCHANGE NOTES

Issuer.....	L-3 Communications Corporation
Securities Offered.....	$400,000,000 in aggregate principal amount of 6 1/8% Series B Senior Subordinated Notes due 2013
Maturity.....	July 15, 2013
Interest Payment Dates.....	July 15 and January 15, beginning July 15, 2003. The initial interest payment will include accrued interest from May 21, 2003.
Interest Rate.....	6 1/8% per year
Ranking.....	The outstanding notes are, and the exchange notes will be, unsecured senior subordinated obligations of L-3 Communications Corporation. They rank behind all of our and the guarantors' current and future indebtedness (other than trade payables), except indebtedness that expressly provides that it is on parity with or subordinated in right of payment to these notes and the guarantees. As of March 31, 2003, on a pro forma basis giving effect to the offering of the outstanding notes and the application of the proceeds as intended, the exchange notes and the related guarantees would: o not have been subordinated to any senior debt (excluding outstanding letters of credit); and o have ranked equally with $1,670.0 million of other senior subordinated debt. As of March 31, 2003, L-3 Communications Corporation had the ability to borrow up to $676.4 million (after reductions for outstanding letters of credit of $73.6 million) under its senior credit facilities, all of which if borrowed or drawn upon would be senior debt. See "Description of the Notes -- Subordination."
Subsidiary Guarantees.....	The outstanding notes are, and the exchange notes will be, jointly and severally guaranteed on a senior subordinated basis by certain of our current and future domestic restricted subsidiaries as described under "Description of the Notes -- Subsidiary Guarantees." The guarantees of the outstanding notes are, and the guarantees of the exchange notes will be, subordinated in right of payment to all existing and future senior debt of the guarantors. The guarantees of the outstanding notes are, and the guarantees of the exchange notes will be, pari passu with other senior subordinated indebtedness of the guarantors, including (1) the 8% Senior Subordinated Notes due 2008 and the 7 5/8% Senior Subordinated Notes

	due 2012, in each case issued by L-3 Communications Corporation and guaranteed by the guarantors and (2) the 5 1/4% Convertible Senior Subordinated Notes due 2009 and the 4% Senior Subordinated Convertible Contingent Debt Securities (CODES) due 2011, in each case issued by L-3 Communications Holdings and guaranteed by L-3 Communications Corporation and the other guarantors. Information regarding the guarantors is included in the notes to the financial statements included elsewhere herein. As of March 31, 2003, we had $1,850.0 million of indebtedness outstanding, none of which was senior debt. In addition, as of March 31, 2003, we had the ability to borrow up to $676.4 million (after reductions for outstanding letters of credit of $73.6 million) under our senior credit facilities, all of which if borrowed or drawn upon would be senior debt and would be guaranteed on a senior basis by the guarantors. See "Description of the Notes -- Subsidiary Guarantees" and "-- Subordination."
Sinking Fund.....	None
Optional Redemption.....	On or after July 15, 2008, we may redeem some or all of the notes at the redemption prices set forth under "Description of the Notes -- Optional Redemption." Before July 15, 2006, we may redeem up to 35% of the outstanding notes and the exchange notes with the proceeds of certain equity offerings by L-3 Communications Corporation or L-3 Communications Holdings at the redemption prices set forth under "Description of the Notes -- Optional Redemption."
Mandatory Offer to Repurchase.....	If we experience specific kinds of changes in control, we must offer to repurchase the outstanding notes and the exchange notes at the prices set forth under "Description of the Notes -- Repurchase at Option of Holders."
Use of Proceeds.....	There will be no cash proceeds to us from the exchange offer.
Basic Covenants of Indenture...	The indenture governing the outstanding notes and the exchange notes, among other things, restricts our ability and the ability of our restricted subsidiaries to: o borrow money; o pay dividends on or purchase our stock or our restricted subsidiaries' stock; o make investments; o use assets as security in other transactions;

	o sell certain assets or merge with or into other companies; and o enter into transactions with affiliates. Certain of our subsidiaries are not subject to the covenants in the indenture. In the event that the notes are assigned a rating of Baa3 or better by Moody's and BBB-- or better by S&P and no event of default has occurred and is continuing, certain convenants in the indenture will be suspended. If the ratings should subsequently decline to below Baa3 or BBB--, the suspended covenants will be reinstituted. For more details, see the section "Description of the Notes -- Certain Covenants."
Absence of a Public Market for the Exchange Notes.....	The exchange notes generally will be freely transferable but will also be new securities for which there will not initially be a market. Accordingly, we cannot assure you whether a market for the exchange notes will develop or as to the liquidity of any market. We do not intend to apply for a listing of the exchange notes on any securities exchange or automated dealer quotation system. The initial purchasers in the private offering of the outstanding notes have advised us that they currently intend to make a market in the exchange notes. However, they are not obligated to do so, and any market making with respect to the exchange notes may be discontinued without notice.

Unless otherwise stated, all share and per share data with respect to L-3 Communications Holdings' common stock contained in this prospectus reflect a two-for-one stock split declared by L-3 Communications Holdings' board of directors on April 23, 2002.

SUMMARY FINANCIAL DATA

We derived the summary financial data presented below from our financial statements. The statement of operations and other data presented below for the years ended December 31, 2002, 2001 and 2000 and the balance sheet data presented below at December 31, 2002 and 2001, are derived from our audited consolidated financial statements included elsewhere in this prospectus. We derived the balance sheet data presented below at December 31, 2000 from our audited consolidated financial statements not included elsewhere in this prospectus. We derived the statement of operations and other data presented below for the twelve months ended March 31, 2003 from our audited consolidated financial statements and our unaudited condensed consolidated financial statements included elsewhere in this prospectus. The financial data for the twelve months ended March 31, 2003 is presented because we calculate the financial covenants for our debt based on our most recently completed four fiscal quarters. We derived the statement of operations and other data presented below for the three months ended March 31, 2003 and March 31, 2002 and the balance sheet data presented below at March 31, 2003 from our unaudited condensed consolidated financial statements included elsewhere in this prospectus. We derived the balance sheet data presented below at March 31, 2002 from our unaudited condensed consolidated financial statements not included elsewhere in this prospectus. Our unaudited condensed consolidated financial statements for the three months ended March 31, 2003 and March 31, 2002 include, in our opinion, all adjustments consisting of normal recurring adjustments, necessary for a fair presentation of the results for the period. The results of interim periods are not indicative of our results for the full year. Our results of operations are impacted significantly by our acquisitions, some of which are described elsewhere in this prospectus.

	HISTORICAL		
	TWELVE MONTHS ENDED MARCH 31,	THREE MONTHS ENDED MARCH 31,	
	2003	2003	2002
	(in millions)		
STATEMENT OF OPERATIONS DATA:			
Sales	$ 4,403.4	$ 1,089.0	$ 696.8
Operating income	491.5	108.8	71.3
Interest and other income	5.4	1.4	1.0
Interest expense	128.6	32.2	26.1
Minority interest	5.6	0.3	0.9
Loss on retirement of debt(1)	16.2	--	--
Provision for income taxes	123.6	28.0	16.0
Income before cumulative effect of a change in accounting principle	222.9	49.7	29.3
Income before cumulative effect of a change in accounting principle, as adjusted(2)	222.9	49.7	29.3
BALANCE SHEET DATA (AT PERIOD END):			
Cash and cash equivalents	$ 34.4	$ 34.4	$ 46.0
Working capital		853.9	807.3
Total assets		5,320.8	4,357.8
Total debt	1,843.7	1,843.7	2,161.3
Minority interest		73.5	70.6
Shareholders' equity		2,270.0	1,266.5
OTHER DATA:			
Net cash from operating activities	$ 383.2	$ 106.1	$ 41.4
Net cash (used in) investing activities	(811.7)	(213.4)	(1,212.2)
Net cash from financing activities	416.9	6.8	855.8
EBITDA(3)	575.0	131.6	86.5
Depreciation	71.7	18.4	12.9
Goodwill amortization	--	--	--
Amortization of intangibles and other assets	11.8	4.4	2.3
Amortization of deferred debt issue costs (included in interest expense)	7.7	2.0	1.7
Capital expenditures	68.2	16.5	10.4
BALANCE SHEET DATA, AS ADJUSTED FOR THE OFFERING OF THE OUTSTANDING NOTES (AT PERIOD END):(4)			
Cash and cash equivalents	$ 237.8		
Total debt	2,061.9		

	HISTORICAL		
	YEAR ENDED DECEMBER 31,		
	2002	2001	2000
	(in millions)		
STATEMENT OF OPERATIONS DATA:			
Sales	$ 4,011.2	$ 2,347.4	$ 1,910.1
Operating income	454.0	275.3	222.7

Interest and other income	5.0	1.8	4.4
Interest expense	122.5	86.4	93.0
Minority interest	6.2	4.4	--
Loss on retirement of debt(1)	16.2	--	--
Provision for income taxes	111.6	70.8	51.4
Income before cumulative effect of a change in accounting principle	202.5	115.5	82.7
Income before cumulative effect of a change in accounting principle, as adjusted(2)	202.5	149.4	112.3
BALANCE SHEET DATA (AT PERIOD END):			
Cash and cash equivalents	$ 134.9	$ 361.0	$ 32.7
Working capital	942.7	717.8	360.9
Total assets	5,242.3	3,339.2	2,463.5
Total debt	1,847.8	1,315.3	1,095.0
Minority interest	73.2	69.9	--
Shareholders' equity	2,202.2	1,213.9	692.6
OTHER DATA:			
Net cash from operating activities	$ 318.5	$ 173.0	$ 113.8
Net cash (used in) investing activities	(1,810.5)	(424.9)	(608.2)
Net cash from financing activities	1,265.9	580.3	484.3
EBITDA(3)	529.9	362.3	297.0
Depreciation	66.2	40.4	36.2
Goodwill amortization	--	42.4	35.0
Amortization of intangibles and other assets	9.7	4.2	3.1
Amortization of deferred debt issue costs (included in interest expense)	7.4	6.4	5.7
Capital expenditures	62.1	48.1	33.6
BALANCE SHEET DATA, AS ADJUSTED FOR THE OFFERING OF THE OUTSTANDING NOTES (AT PERIOD END):(4)			
Cash and cash equivalents			
Total debt			

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(1) In accordance with the provisions of SFAS No. 145, we have reclassified our loss on retirement of debt incurred in June 2002; such loss is now reflected as a component of income from continuing operations.

(2) Income before cumulative effect of a change in accounting principle, as adjusted, excludes goodwill amortization expense, net of any income tax effects, recognized for the years ended December 31, 2001 and 2000.

(3) We define EBITDA as operating income plus depreciation expense and amortization expense. We believe that the most directly comparable GAAP financial measure to EBITDA is net cash from operating activities. The table below presents a reconciliation of net cash from operating activities to EBITDA.

	TWELVE MONTHS ENDED MARCH 31, 2003	THREE MONTHS ENDED MARCH 31, 2003	THREE MONTHS ENDED MARCH 31, 2002
	(in millions)		
Net cash from operating activities	$ 383.2	$ 106.1	$ 41.4
Less: Adjustments to reconcile net income to net cash from operating activities	(160.3)	(56.4)	(36.5)
Add: Cumulative effect of a change in accounting principle, net of income taxes	--	--	24.4
Income before cumulative effect of a change in accounting principle	222.9	49.7	29.3
Less: Interest and other income	(5.4)	(1.4)	(1.0)
Add: Loss on retirement of debt	16.2	--	--
Provision for income taxes	123.6	28.0	16.0
Interest expense	128.6	32.2	26.1
Minority interest	5.6	0.3	0.9
Depreciation and amortization	83.5	22.8	15.2
EBITDA	$ 575.0	$ 131.6	$ 86.5

	YEAR ENDED DECEMBER 31, 2002	2001	2000
	(in millions)		
Net cash from operating activities	$ 318.5	$ 173.0	$ 113.8
Less: Adjustments to reconcile net income to net cash from operating activities	(140.4)	(57.5)	(31.1)
Add: Cumulative effect of a change in accounting principle, net of income taxes	24.4	--	--
Income before cumulative effect of a change in accounting principle	202.5	115.5	82.7
Less: Interest and other income	(5.0)	(1.8)	(4.4)
Add: Loss on retirement of debt	16.2	--	--
Provision for income taxes	111.6	70.8	51.4
Interest expense	122.5	86.4	93.0
Minority interest	6.2	4.4	--
Depreciation and amortization	75.9	87.0	74.3
EBITDA	$ 529.9	$ 362.3	$ 297.0

Other than our amount of debt and interest expense, EBITDA is the major component in the calculation of the debt ratio and interest coverage ratio which are part of the financial covenants for our debt. The debt ratio is defined as the ratio of consolidated total debt to consolidated EBITDA. The interest coverage ratio is equal to the ratio of consolidated EBITDA to consolidated cash interest expense. The higher our EBITDA is on a relative basis to our outstanding debt, the lower our debt ratio will be. A lower debt ratio indicates a higher borrowing capacity. Similarly, an increase in our EBITDA on a relative basis to consolidated cash interest expense results in a higher interest coverage ratio, which indicates a greater capacity to service debt.

EBITDA is presented as additional information because we believe it to be a useful indicator of an entity's debt capacity and its ability to service its debt. EBITDA is not a substitute for operating income, net income or net cash from operating activities as determined in accordance with generally accepted accounting principles in the United States of America. EBITDA is not a complete net cash flow measure because EBITDA is a financial measure that does not include reductions for cash payments for an entity's obligation to service its debt, fund its working capital and capital expenditures and pay its income taxes. Rather, EBITDA is one potential indicator of an entity's ability to fund these cash requirements. EBITDA as we define it may differ from similarly named measures used by other entities and, consequently could be misleading unless all entities calculate and define EBITDA in the same manner. EBITDA is also not a complete measure of an entity's profitability because it does not include costs and expenses for depreciation and amortization, interest and income taxes.

(4) The balance sheet data has been adjusted to reflect the issuance of our 6 1/8% Senior Subordinated Notes due 2013 and the related net proceeds received, reduced for the expected redemption of our 8 1/2% Senior Subordinated Notes due 2008.

RATIO OF EARNINGS TO FIXED CHARGES

The ratio of earnings to fixed charges presented below should be read together with our consolidated financial statements and related notes and "Management's Discussion and Analysis of Results of Operations and Financial Condition" included elsewhere herein. In calculating the ratio of earnings to fixed charges, earnings consist of income before income taxes and extraordinary items plus fixed charges. Fixed charges consist of interest on indebtedness plus the amortization of deferred debt issuance costs and that portion of lease rental expense representative of the interest element.

	THREE MONTHS ENDED	YEAR ENDED DECEMBER 31,				
	MARCH 31, 2003	2002	2001	2000	1999	1998
Ratio of Earnings to Fixed Charges:	3.0x	3.3x	2.8x	2.3x	2.4x	2.0x

RISK FACTORS

You should carefully consider the following factors and other information contained in this prospectus before deciding to tender outstanding notes in the exchange offer. The risk factors set forth below are generally applicable to the outstanding notes as well as the exchange notes. Any of these risks could materially adversely affect our business, financial condition and results of operations, which could in turn materially adversely affect the price of the notes.

RISKS RELATED TO THE EXCHANGE OFFER

IF YOU CHOOSE NOT TO EXCHANGE YOUR OUTSTANDING NOTES, THE PRESENT TRANSFER RESTRICTIONS WILL REMAIN IN FORCE AND THE MARKET PRICE OF YOUR OUTSTANDING NOTES COULD DECLINE.

If you do not exchange your outstanding notes for exchange notes under the exchange offer, then you will continue to be subject to the transfer restrictions on the outstanding notes as set forth in the offering memorandum distributed in connection with the private offering of the outstanding notes. In general, the outstanding notes may not be offered or sold unless they are registered or exempt from registration under the Securities Act and applicable state securities laws. Except as required by the registration rights agreement, we do not intend to register resales of the outstanding notes under the Securities Act. You should refer to "Prospectus Summary -- Summary of Terms of the Exchange Offer" and "The Exchange Offer" for information about how to tender your outstanding notes.

The tender of outstanding notes under the exchange offer will reduce the principal amount of the outstanding notes outstanding, which may have an adverse effect upon, and increase the volatility of, the market price of the outstanding notes due to reduction in liquidity.

RISKS RELATED TO L-3

OUR SIGNIFICANT LEVEL OF DEBT MAY ADVERSELY AFFECT OUR FINANCIAL AND OPERATING ACTIVITY.

We have incurred substantial indebtedness to finance our acquisitions. As of March 31, 2003, we had $1,850.0 million of outstanding debt, excluding outstanding letters of credit (which aggregated approximately $73.6 million) under our 364-day and five-year revolving credit facilities. In addition, available borrowings under our senior credit facilities, after reductions for outstanding letters of credit, were $676.4 million as of March 31, 2003. For the three months ended March 31, 2003, our ratio of earnings to fixed charges, adjusted on a pro forma basis to give effect to the offering of the outstanding notes and the use of the proceeds therefrom, would have been 2.9 to 1.0. In the future we may borrow more money, subject to limitations imposed on us by our debt agreements.

Our ability to make scheduled payments of principal and interest on our indebtedness and to refinance our indebtedness depends on our future performance. We do not have complete control over our future performance because it is subject to economic, political, financial, competitive, regulatory and other factors affecting the aerospace and defense industry. It is possible that in the future our business may not generate sufficient cash flow from operations to allow us to service our debt and make necessary capital expenditures. If this situation occurs, we may have to sell assets, restructure debt or obtain additional equity capital. We may not be able to do so or do so without additional expense.

Our level of indebtedness has important consequences to you and your investment in the notes. These consequences may include:

- requiring a substantial portion of our net cash flow from operations to be used to pay interest and principal on our debt and therefore be unavailable for other purposes, including capital expenditures, research and development and other investments;

- limiting our ability to obtain additional financing for acquisitions or working capital to make investments or other expenditures, which may limit our ability to carry out our acquisition strategy;

- higher interest expenses due to increases in interest rates on our borrowings that have variable interest rates;

- heightening our vulnerability to downturns in our business or in the general economy and restricting us from making acquisitions, introducing new technologies and products or exploiting business opportunities; and

- covenants that limit our ability to borrow additional funds, dispose of assets or pay cash dividends. Failure to comply with such covenants could result in an event of default which, if not cured or waived, could result in the acceleration of our outstanding indebtedness.

Additionally, on December 31, 2002, we had $2,417.3 million of contractual obligations, including outstanding indebtedness, and $200.8 million of contingent commitments, including outstanding letters of credit under our senior credit facilities. These contractual obligations and contingent commitments are described elsewhere herein.

OUR ACQUISITION STRATEGY INVOLVES RISKS, AND WE MAY NOT SUCCESSFULLY IMPLEMENT OUR STRATEGY.

We seek to acquire companies that complement our businesses. We may not be able to continue to identify acquisition candidates on commercially reasonable terms or at all. If we make additional acquisitions, we may not realize the benefits anticipated from the acquisitions. Likewise, we may not be able to obtain additional financing for acquisitions. Such additional financing could be restricted by the terms of our debt agreements.

The process of integrating acquired operations, including our recent acquisitions, into our existing operations may result in unforeseen operating difficulties and may require significant financial and managerial resources that would otherwise be available for the ongoing development or expansion of our existing operations. Possible future acquisitions could result in the incurrence of additional debt and related interest expense and contingent liabilities, each of which could result in an increase to our already significant level of outstanding debt. We consider and execute strategic acquisitions on an ongoing basis and may be evaluating acquisitions or engaged in acquisition negotiations at any given time. We regularly evaluate potential acquisitions and joint venture transactions, and, except as disclosed elsewhere herein, we have not entered into any agreements with respect to any material transactions.

WE RELY ON SALES TO U.S. GOVERNMENT ENTITIES, AND THE LOSS OF SUCH CONTRACTS WOULD HAVE A MATERIAL ADVERSE EFFECT ON OUR RESULTS OF OPERATIONS AND CASH FLOWS.

Our government sales are predominantly derived from contracts with agencies of, and prime contractors to, the U.S. Government. Approximately 78.0%, or $3,128.8 million, of our sales for the year ended December 31, 2002 were made directly or indirectly to U.S. Government agencies, including the Department of Defense. At December 31, 2002, we had approximately 800 contracts with a value exceeding $1.0 million. Our largest program represented 8.2% of our sales for the year ended December 31, 2002 and is a firm fixed-price contract with the U.S. Transportation Security Administration (TSA) for explosives detection systems (EDS) used at airports. No other program represented more than 3.7% of sales for the year ended December 31, 2002. For the year ended December 31, 2002, sales from our five largest programs amounted to $815.7 million, or 20.3% of our sales. We expect our full-year 2003 sales for EDS systems, including those to the TSA, to decline to about $175 million from $339 million for 2002 because the initial installation of EDS systems by the TSA for major U.S. airports was substantially completed in 2002. The loss of all or a substantial portion of our sales to the U.S. Government would have a material adverse effect on our results of operations and cash flows.

OUR RESULTS OF OPERATIONS AND CASH FLOWS, AS WELL AS OUR VALUATION OF CONTRACTS IN PROCESS ARE SUBSTANTIALLY AFFECTED BY OUR FIXED-PRICE AND COST REIMBURSABLE CONTRACTS.

The substantial majority of our sales require us to design, develop, manufacture and/or modify complex products, and/or to perform services according to specifications provided by our customers.

These sales are made pursuant to written contractual arrangements or contracts, which are generally either fixed-price or cost-reimbursable. These contracts are within the scope of the American Institute of Certified Public Accountants Statement of Position 81-1, Accounting for Performance of Construction-Type and Certain Production-Type Contracts (SOP 81-1). In addition, cost-reimbursable contracts are also specifically within the scope of Accounting Research Bulletin No. 43, Chapter 11, Section A, Government Contracts, Cost-Plus-Fixed Fee Contracts (ARB 43). For the year ended December 31, 2002, approximately 65.8% of our sales were generated from fixed-price contracts and approximately 34.2% of our sales were generated from cost-reimbursable contracts. Substantially all of our cost-reimbursable contracts are with the U.S. Government, including the DoD. Substantially all of our sales to commercial customers are transacted under fixed-price sales arrangements, and are included in our fixed-price contract sales.

Under a fixed-price contract, we agree to perform the scope of work required by the contract for a predetermined contract price. Although a fixed-price contract generally permits us to retain profits if the total actual contract costs are less than the estimated contract costs, we bear the risk that increased or unexpected costs may reduce our profit or cause us to sustain losses on the contract. Accounting for the sales and profit on a fixed-price contract requires estimates of (1) the total contract revenue, (2) the total costs at completion, which is equal to the sum of the actual incurred costs to date on the contract and the estimated costs to complete the contract's scope of work, and (3) the measurement of progress towards completion. Adjustments to original estimates for a contract's revenue, estimated costs at completion and estimated total profit are often required as work progresses under a contract, as experience is gained and as more information is obtained, even though the scope of work required under the contract may not change, or if contract modifications occur.

Under a cost-reimbursable contract we are paid our allowable incurred costs plus a profit which can be fixed or variable depending on the contract's fee arrangement up to predetermined funding levels determined by our customers. Therefore, on a cost-reimbursable contract we do not bear the risks of unexpected cost overruns, provided that we do not incur costs that exceed the predetermined funded amounts.

The impact of revisions in profit estimates in both fixed-price and cost-reimbursable contracts are recognized on a cumulative catch-up basis in the period in which the revisions are made and could be material. Provisions for anticipated losses on contracts are recorded in the period in which they become evident. Amounts representing contract change orders or claims are included in sales only when they can be reliably estimated and their realization is reasonably assured. The revisions in contract estimates, if significant, can materially affect our results of operations and cash flows, as well as our valuations of contracts in process.

OUR GOVERNMENT CONTRACTS ENTAIL CERTAIN RISKS.

- Government contracts are dependent upon the U.S. defense budget.

The reduction in the U.S. defense budget in the early 1990s caused most defense-related government contractors to experience decreased sales, increased downward pressure on operating margins and, in certain cases, net losses. Our predecessor company experienced a substantial decline in sales during that period. A significant decline in U.S. military expenditures in the future could result in a material decrease to our sales, earnings and cash flow. The loss or significant reduction in government funding of a large program in which we participate could also result in a material decrease to our future sales, earnings and cash flows and thus limit our ability to satisfy our financial obligations, including those relating to the notes. U.S. Government contracts are also conditioned upon the continuing approval by Congress of the amount of necessary spending. Congress usually appropriates funds for a given program each fiscal year even though contract periods of performance may exceed one year. Consequently, at the beginning of a major program, the contract is usually partially funded, and additional monies are normally committed to the contract only if appropriations are made by Congress for future fiscal years.

- Government contracts contain unfavorable termination provisions and are subject to audit and modification.

Companies engaged primarily in supplying defense-related equipment and services to U.S. Government agencies are subject to certain business risks peculiar to the defense industry. These risks include the ability of the U.S. Government to unilaterally:

- suspend us from receiving new contracts pending resolution of alleged violations of procurement laws or regulations;
- terminate existing contracts;
- reduce the value of existing contracts;
- audit our contract-related costs and fees, including allocated indirect costs; and
- control and potentially prohibit the export of our products.

All of our U.S. Government contracts can be terminated by the U.S. Government either for its convenience or if we default by failing to perform under the contract. Termination for convenience provisions provide only for our recovery of costs incurred or committed, settlement expenses and profit on the work completed prior to termination. Termination for default provisions provide for the contractor to be liable for excess costs incurred by the U.S. Government in procuring undelivered items from another source. Our contracts with foreign governments generally contain similar provisions relating to termination at the convenience of the customer.

The U.S. Government may review our costs and performance on their contracts, as well as our accounting and general business practices. Based on the results of such audits, the U.S. Government may adjust our contract-related costs and fees, including allocated indirect costs. In addition, under U.S. Government purchasing regulations, some of our costs, including most financing costs, amortization of goodwill, portions of research and development costs, and certain marketing expenses may not be reimbursable under U.S. Government contracts. Further, as a U.S. Government contractor, we are subject to investigation, legal action and/or liability that would not apply to a commercial company.

- Government contracts are subject to competitive bidding and we are required to obtain licenses for non-U.S. sales.

We obtain many of our U.S. Government contracts through a competitive bidding process. We may not be able to continue to win competitively awarded contracts. In addition, awarded contracts may not generate sales sufficient to result in our profitability. We are also subject to risks associated with the following:

- the frequent need to bid on programs in advance of the completion of their design, which may result in unforeseen technological difficulties and/or cost overruns;
- the substantial time and effort including the relatively unproductive design and development required to prepare bids and proposals for competitively awarded contracts that may not be awarded to us;
- design complexity and rapid technological obsolescence; and
- the constant need for design improvement.

In addition to these U.S. Government contract risks, we are required to obtain licenses from U.S. Government agencies to export many of our products and systems. Additionally, we are not permitted to export some of our products. Failure to receive required licenses would eliminate our ability to sell our products outside the United States.

OUR OPERATIONS INVOLVE RAPIDLY EVOLVING PRODUCTS AND TECHNOLOGICAL CHANGE.

The rapid change of technology is a key feature of all of the industries in which our businesses operate, including commercial communications in particular. To succeed in the future, we will need to

continue to design, develop, manufacture, assemble, test, market and support new products and enhancements on a timely and cost-effective basis. Historically, our technology has been developed through both customer-funded and internally funded research and development. We may not be able to continue to maintain comparable levels of research and development. In the past we have allocated substantial funds to capital expenditures, programs and other investments. This practice will continue to be required in the future. Even so, we may not be able to successfully identify new opportunities and may not have the needed financial resources to develop new products in a timely or cost-effective manner. At the same time, products and technologies developed by others may render our products and systems obsolete or non-competitive.

WE MAY NOT SUCCESSFULLY IMPLEMENT OUR PLAN TO INCREASE OUR COMMERCIAL SALES.

Our revenues have primarily come from business with the U.S. Department of Defense and other U.S. Government agencies. In addition to continuing to pursue these market areas, we will continue applying our technical capabilities and expertise to certain commercial markets. Some of our commercial products, such as airport security equipment, voyage recorders and PrimeWave communication products, have been recently introduced.

These new commercial products are subject to certain risks and may require us to:

- develop and maintain marketing and distribution, sales and customer support capabilities;
- spend additional research and development costs to sustain and enhance our existing products and to develop new products;
- obtain customer and/or regulatory certification;
- respond to rapidly changing technologies including those developed by others that may render our products and systems obsolete or non-competitive; and
- obtain customer acceptance of these products and product performance.

Our efforts to expand our presence in commercial markets require significant resources, including additional working capital and capital expenditures, as well as the use of our management's time. Our ability to sell certain commercial products, particularly our broadband wireless communications products, depends to a significant degree on the efforts of independent distributors or communications service providers and on the financial viability of our existing and target customers, including their ability to obtain financing. Certain of our existing and target customers are agencies or affiliates of governments of emerging and under-developed countries or private business enterprises operating in those countries. In addition, we have made equity investments in entities that plan to commence operations as communications service providers using some of our commercial products. We can give no assurance that these distributors and service providers will be able to market our products or their services successfully or that we will be able to realize a return on our investment in them. We also cannot assure you that we will be successful in addressing these risks or in developing these commercial and civil business opportunities.

CONSOLIDATION AND INTENSE COMPETITION IN THE INDUSTRIES IN WHICH OUR BUSINESSES OPERATE COULD LIMIT OUR ABILITY TO ATTRACT AND RETAIN CUSTOMERS.

The communications equipment industry and the other industries in which our businesses operate, and the market for defense applications, is highly competitive. We expect that the U.S. Department of Defense's increased use of commercial off-the-shelf products and components in military equipment will continue to encourage new competitors to enter the market. We also expect that competition for original equipment manufacturing business will increase due to the continued emergence of merchant suppliers. Our ability to compete for defense contracts largely depends on the following factors:

- the effectiveness and innovation of our technologies and research and development programs;
- our ability to offer better program performance than our competitors at a lower cost; and
- the capabilities of our facilities, equipment and personnel to undertake the programs for which we compete.

We are the incumbent supplier or have been the sole provider for many years for certain programs. We refer to such contracts as "sole-source" contracts. In such cases, there may be other suppliers who have the capability to compete for the programs involved, but they can only enter or reenter the market if the customer chooses to reopen or recompete the particular program to competition. The majority of our sales are derived from contracts with the U.S. Government and its prime contractors, which are principally awarded on the basis of negotiations or competitive bids. Additionally, many of our competitors are larger than us and have substantially greater financial and other resources than we have.

OUR DEBT AGREEMENTS RESTRICT OUR ABILITY TO FINANCE OUR FUTURE OPERATIONS AND, IF WE ARE UNABLE TO MEET OUR FINANCIAL RATIOS, COULD CAUSE OUR EXISTING DEBT TO BE ACCELERATED.

Our debt agreements contain a number of significant provisions that, among other things, restrict our ability to:

- sell assets;
- incur more indebtedness;
- repay certain indebtedness;
- pay dividends;
- make certain investments or acquisitions;
- repurchase or redeem capital stock;
- engage in mergers or consolidations; and
- engage in certain transactions with subsidiaries and affiliates.

These restrictions could hurt our ability to finance our future operations or capital needs or engage in other business activities that may be in our interest. In addition, some of our debt agreements also require us to maintain compliance with certain financial ratios, including total consolidated earnings before interest, taxes, depreciation and amortization to total consolidated cash interest expense and total consolidated debt to total consolidated earnings before interest, taxes, depreciation and amortization, and to limit our capital expenditures. Our ability to comply with these ratios and limits may be affected by events beyond our control. A breach of any of these agreements or our inability to comply with the required financial ratios or limits could result in a default under those debt agreements. In the event of any such default, the lenders under those debt agreements could elect to:

- declare all outstanding debt, accrued interest and fees to be due and immediately payable;
- require us to apply all of our available cash to repay our outstanding senior debt; and
- prevent us from making debt service payments on our other debt.

If we were unable to repay any of these borrowings when due, the lenders under our senior credit facilities could proceed against their collateral, which consists of a first priority security interest in our outstanding shares of common stock and the capital stock of our material subsidiaries. If the indebtedness under the existing debt agreements were to be accelerated, our assets may not be sufficient to repay such indebtedness in full.

IF WE ARE UNABLE TO ATTRACT AND RETAIN KEY MANAGEMENT AND PERSONNEL, WE MAY BECOME UNABLE TO OPERATE OUR BUSINESS EFFECTIVELY.

Our future success depends to a significant degree upon the continued contributions of our management, including Messrs. Lanza and LaPenta, and our ability to attract and retain other highly qualified management and technical personnel. We do not maintain any key person life insurance policies for members of our management. As of May 31, 2003, Messrs. Lanza and LaPenta beneficially owned, in the aggregate, 10.3% of the outstanding common stock of L-3 Communications Holdings.

We have an employment agreement with Mr. Lanza. We face competition for management and technical personnel from other companies and organizations. Failure to attract and retain such personnel would damage our prospects.

ENVIRONMENTAL LAWS AND REGULATION MAY SUBJECT US TO SIGNIFICANT LIABILITY.

Our operations are subject to various U.S. federal, state and local as well as certain foreign environmental laws and regulations within the countries in which we operate relating to the discharge, storage, treatment, handling, disposal and remediation of certain materials, substances and wastes used in our operations.

New laws and regulations, stricter enforcement of existing laws and regulations, the discovery of previously unknown contamination or the imposition of new clean-up requirements may require us to incur a significant amount of additional costs in the future and could decrease the amount of free cash flow available to us for other purposes, including capital expenditures, research and development and other investments.

TERMINATION OF OUR BACKLOG OF ORDERS COULD NEGATIVELY IMPACT OUR SALES.

We currently have a backlog of orders, primarily under contracts with the U.S. Government. Our total funded backlog was $3,395.3 million at March 31, 2003. The U.S. Government may unilaterally modify or terminate its contracts. Accordingly, most of our backlog could be modified or terminated by the U.S. Government and, therefore, may not result in sales.

RISKS RELATED TO THE NOTES

WE CANNOT ASSURE YOU THAT AN ACTIVE TRADING MARKET WILL DEVELOP FOR THE EXCHANGE NOTES, WHICH MAY REDUCE THEIR MARKET PRICE.

We are offering the exchange notes to the holders of the outstanding notes. The outstanding notes were offered and sold in May 2003 to a small number of institutional investors and are eligible for trading in the Private Offerings, Resale and Trading through Automatic Linkages (PORTAL) Market.

We do not intend to apply for a listing of the exchange notes on a securities exchange or on any automated dealer quotation system. There is currently no established market for the exchange notes and we cannot assure you as to the liquidity of markets that may develop for the exchange notes, your ability to sell the exchange notes or the price at which you would be able to sell the exchange notes. If such markets were to exist, the exchange notes could trade at prices that may be lower than their principal amount or purchase price depending on many factors, including prevailing interest rates and the markets for similar securities. The initial purchasers have advised us that they currently intend to make a market with respect to the exchange notes. However, the initial purchasers are not obligated to do so, and any market making with respect to the exchange notes may be discontinued at any time without notice. In addition, such market making activity may be limited during the pendency of the exchange offer or the effectiveness of a shelf registration statement in lieu thereof.

The liquidity of, and trading market for, the exchange notes also may be adversely affected by general declines in the market for similar securities. Such a decline may adversely affect such liquidity and trading markets independent of our financial performance and prospects.

THE NOTES ARE SUBORDINATED TO ALL OUR EXISTING AND FUTURE SENIOR INDEBTEDNESS, WHICH MAY INHIBIT OUR ABILITY TO REPAY YOU.

The notes are contractually subordinated in right of payment to our existing and future senior indebtedness. As of March 31, 2003, we had no outstanding senior debt, and had the ability to borrow up to $676.4 million (after reductions for outstanding letters of credit of $73.6 million) under our senior credit facilities, all of which, if borrowed or drawn upon, would be senior debt.

Any incurrence of additional indebtedness may materially adversely impact our ability to service our debt, including the notes. Due to the subordination provisions of our senior subordinated indebtedness, including the notes, in the event of our insolvency, funds that would otherwise be used to pay the holders of the notes and other senior subordinated indebtedness will be used to pay the holders of senior indebtedness to the extent necessary to pay the senior indebtedness in full. As a result of these payments, general creditors may recover less, ratably, than the holders of senior indebtedness and the general creditors may recover more, ratably, than the holders of the notes or other subordinated indebtedness. In addition, the holders of senior indebtedness may, under certain circumstances, restrict or prohibit us from making payments on the notes.

THE TERMS OF OUR INDEBTEDNESS COULD RESTRICT OUR FLEXIBILITY AND LIMIT OUR ABILITY TO SATISFY OBLIGATIONS UNDER THE NOTES.

We are subject to operational and financial covenants and other restrictions contained in the bank loan documents evidencing our senior indebtedness and the indentures evidencing our senior subordinated notes. These covenants could limit our operational flexibility and restrict our ability to borrow additional funds, if necessary, to finance operations and to make principal and interest payments on the notes. Additionally, failure to comply with these operational and financial covenants could result in an event of default under the terms of this indebtedness which, if not cured or waived, could result in this indebtedness becoming due and payable. The effect of these covenants, or our failure to comply with them, could have a material adverse effect on our business, financial condition and results of operations.

OUR ABILITY TO REPURCHASE NOTES WITH CASH UPON A CHANGE OF CONTROL MAY BE LIMITED.

In specific circumstances involving a change of control, you may require us to repurchase some or all of your notes. We cannot assure you that we will have sufficient financial resources at such time or would be able to arrange financing to pay the repurchase price of the notes in cash. Our ability to repurchase the notes in such event may be limited by law, by our indentures, by the terms of other agreements relating to our senior indebtedness and by such indebtedness and agreements as may be entered into, replaced, supplemented or amended from time to time. We may be required to refinance our senior indebtedness in order to make such payments. We may not have the financial ability to repurchase the notes in cash if payment for our senior indebtedness is accelerated.

THE GUARANTEES MAY BE UNENFORCEABLE DUE TO FRAUDULENT CONVEYANCE STATUTES, AND ACCORDINGLY, YOU COULD HAVE NO CLAIM AGAINST THE GUARANTORS.

Although laws differ among various jurisdictions, a court could, under fraudulent conveyance laws, further subordinate or avoid the guarantees if it found that the guarantees were incurred with actual intent to hinder, delay or defraud creditors, or the guarantor did not receive fair consideration or reasonably equivalent value for the guarantees and that the guarantor was any of the following:

- insolvent or rendered insolvent because of the guarantees;
- engaged in a business or transaction for which its remaining assets constituted unreasonably small capital; or
- intended to incur, or believed that it would incur, debts beyond its ability to pay at maturity.

If a court voided a guaranty by one or more of our subsidiaries as the result of a fraudulent conveyance, or held it unenforceable for any other reason, holders of the notes would cease to have a claim against the subsidiary based on the guaranty and would solely be creditors of L-3 Communications Corporation and any guarantor whose guarantee was not similarly held unenforceable.

NOT ALL OF OUR SUBSIDIARIES ARE GUARANTORS, AND YOUR CLAIMS WILL BE SUBORDINATED TO ALL OF THE CREDITORS OF THE NON-GUARANTOR SUBSIDIARIES.

Many, but not all, of our direct and indirect subsidiaries will guarantee the notes. In the event of a bankruptcy, liquidation or reorganization of any of the non-guarantor subsidiaries, holders of their

indebtedness and their trade creditors will generally be entitled to payment of their claims from the assets of those non-guarantor subsidiaries before any assets of the non-guarantor subsidiaries are made available for distribution to us. Assuming the exchange of the outstanding notes for the exchange notes was completed on March 31, 2003, the exchange notes would have been effectively junior to $99.9 million of indebtedness and other liabilities (including trade payables) of these non-guarantor subsidiaries. The non-guarantor subsidiaries generated 8.5% of our sales, generated earnings of $2.4 million and used cash in operating activities of $5.5 million for the three months ended March 31, 2003. The non-guarantor subsidiaries held 11.9% of our consolidated assets as of March 31, 2003.

THE GUARANTEES WILL BE SUBORDINATED TO THE SENIOR DEBT OF THE GUARANTORS.

The guarantees are subordinated to all existing and future senior debt of the guarantors, which shall consist of all of the indebtedness and other liabilities of the guarantors designated as senior, including guarantees of borrowings under the senior credit facilities. The guarantees issued in connection with the offering of the outstanding notes and the exchange of the exchange notes will be pari passu with the guarantees of the senior subordinated notes sold by L-3 Communications Corporation in December 1998 and June 2002, and with the guarantees, including the guarantee by L-3 Communications Corporation, of the 5 1/4% Convertible Senior Subordinated Notes due 2009 sold by L-3 Communications Holdings in November 2000 and of the 4% Senior Subordinated Convertible Contingent Notes due 2011 sold by L-3 Communications Holdings in October 2001. As of March 31, 2003, we had no senior debt outstanding under our senior credit facilities, but any future amounts outstanding under those facilities would be guaranteed by our subsidiaries on a senior basis. As of March 31, 2003, L-3 Communications Corporation had availability of $676.4 million (after reduction for outstanding letters of credit of $73.6 million) under its senior credit facilities, all of which, if borrowed or drawn upon, would be senior debt. Any right of L-3 Communications Corporation to receive the assets of any of its subsidiaries upon their liquidation or reorganization (and the consequent right of the holders of the notes to participate in those assets) will be subject to the claims of that subsidiary's creditors, including trade creditors. To the extent that L-3 Communications Corporation is recognized as a creditor of that subsidiary, L-3 Communications Corporation may have such claim, but it would still be subordinate to any security interests in the assets of that subsidiary and any indebtedness and other liabilities of that subsidiary senior to that held by L-3 Communications Corporation.

THIS PROSPECTUS CONTAINS FORWARD-LOOKING STATEMENTS, WHICH MAY NOT BE CORRECT.

Certain of the matters discussed concerning our operations, economic performance and financial condition, including in particular, the likelihood of our success in developing and expanding our business and the realization of sales from backlog, include forward-looking statements within the meaning of Section 27A of the Securities Act and Section 21E of the Exchange Act. Statements that are predictive in nature, that depend upon or refer to future events or conditions or that include words such as "expects," "anticipates," "intends," "plans," "believes," "estimates" and similar expressions are forward-looking statements. Although we believe that these statements are based upon reasonable assumptions, we can give no assurance that their goals will be achieved.

FORWARD-LOOKING STATEMENTS

Our disclosure and analysis in this prospectus contain some forward-looking statements. Certain of the matters discussed concerning our operations, cash flows, financial position, economic performance, and financial condition, including in particular, the likelihood of our success in developing and expanding our business and the realization of sales from backlog, include forward-looking statements within the meaning of section 27A of the Securities Act and Section 21E of the Exchange Act.

Statements that are predictive in nature, that depend upon or refer to events or conditions or that include words such as "expects," "anticipates," "intends," "plans," "believes," "estimates" and similar expressions are forward-looking statements. Although we believe that these statements are based upon reasonable assumptions, including projections of orders, sales, operating margins, earnings, cash flow, research and development costs, working capital, capital expenditures and other projections, they are subject to several risks and uncertainties, and therefore, we can give no assurance that these statements will be achieved. Such statements will also be influenced by factors such as:

- our dependence on the defense industry and the business risks peculiar to that industry, including changing priorities or reductions in the U.S. Government defense budget;
- our reliance on contracts with a limited number of agencies of, or contractors to, the U.S. Government and the possibility of termination of government contracts by unilateral government action or for failure to perform;
- our ability to obtain future government contracts on a timely basis;
- the availability of government funding and changes in customer requirements for our products and services;
- our significant amount of debt and the restrictions contained in our debt agreements;
- collective bargaining agreements and labor disputes;
- the business and economic conditions in the markets we operate in, including those for the commercial aviation and communications markets;
- economic conditions, competitive environment, international business and political conditions, timing of international awards and contracts;
- our extensive use of fixed-price contracts as compared to cost-reimbursable contracts;
- our ability to identify future acquisition candidates or to integrate acquired operations;
- the rapid change of technology and high level of competition in the communication equipment industry;
- our introduction of new products into commercial markets or our investments in commercial products or companies;
- pension, environmental or legal matters or proceedings and various other market, competition and industry factors, many of which are beyond our control; and
- the fair values of our assets, including identifiable intangible assets and the estimated fair value of the goodwill balances for our reporting units, which can be impaired or reduced by the other factors discussed above.

Readers of this prospectus are cautioned that our forward-looking statements are not guarantees of future performance and the actual results or developments may differ materially from the expectations expressed in the forward-looking statements.

As for the forward-looking statements that relate to future financial results and other projections, actual results will be different due to the inherent uncertainties of estimates, forecasts and projections and may be better or worse than projected. Given these uncertainties, you should not place any reliance on these forward-looking statements. These forward-looking statements also represent our

estimates and assumptions only as of the date that they were made. We expressly disclaim a duty to provide updates to these forward-looking statements, and the estimates and assumptions associated with them, after the date of this prospectus to reflect events or changes or circumstances or changes in expectations or the occurrence of anticipated events.

USE OF PROCEEDS

We will not receive any cash proceeds from the issuance of the exchange notes. In consideration for issuing the exchange notes as contemplated in this prospectus, we will receive in exchange a like principal amount of outstanding notes, the terms of which are identical in all material respects to the exchange notes. The outstanding notes surrendered in exchange for the exchange notes will be retired and canceled and cannot be reissued. Accordingly, issuance of the exchange notes will not result in any change in our capitalization.

We received net proceeds of approximately $391.0 million from the offering of the outstanding notes, after deducting the discounts, commissions and estimated expenses payable by us.

The net proceeds from the offering of the outstanding notes will be used to: (1) redeem the $180.0 million 8 1/2% Senior Subordinated Notes due 2008 for approximately $187.7 million, including the 4.25% redemption premium, but excluding accrued and unpaid interest from May 15, 2003 to the date of redemption (June 20, 2003) and (2) increase our cash and cash equivalents by approximately $203.4 million, which will be used for general corporate purposes, including the acquisitions of businesses.

CAPITALIZATION

The following table sets forth our capitalization: (1) on an actual basis as of March 31, 2003 and (2) as adjusted for the offering of the outstanding notes and the application of the net proceeds therefrom discussed above.

	AS OF MARCH 31, 2003	
	ACTUAL	AS ADJUSTED FOR THE OFFERING OF THE OUTSTANDING NOTES
	(in millions)	
Cash and cash equivalents	$ 34.4	$ 237.8
Long-term debt:		
Senior credit facilities(1)	$ --	$ --
8 1/2% Senior Subordinated Notes due 2008	180.0	--
8% Senior Subordinated Notes due 2008	200.0	200.0
7 5/8% Senior Subordinated Notes due 2012	750.0	750.0
6 1/8% Senior Subordinated Notes due 2013	--	400.0
5 1/4% Convertible Senior Subordinated Notes due 2009(2)	300.0	300.0
4% Senior Subordinated Convertible Contingent Debt Securities due 2011(3)	420.0	420.0
Principal amount of long-term debt	1,850.0	2,070.0
Less: Unamortized discounts	(2.2)	(4.0)
Fair value of interest rate swaps	(4.1)	(4.1)
Total debt	$1,843.7	$2,061.9
Minority interest	73.5	73.5
Shareholders' equity:		
Common stock	1,815.5	1,815.5
Retained earnings	529.6	522.8 (4)
Unearned compensation	(6.4)	(6.4)
Accumulated other comprehensive loss	(68.7)	(68.7)
Total shareholders' equity	2,270.0	2,263.2
Total capitalization	$4,187.2	$4,398.6

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(1) As of March 31, 2003, our availability under the senior credit facilities at any given time was $750.0 million (subject to compliance with covenants), less the amount of outstanding borrowings and outstanding letters of credit (which amounted to zero for outstanding borrowings and $73.6 million for outstanding letters of credit at March 31, 2003).

(2) The 5 1/4% Convertible Senior Subordinated Notes due June 1, 2009 were issued by L-3 Communications Holdings in November 2000. The 5 1/4% Convertible Senior Subordinated Notes are, subject to adjustment, convertible into 7,361,964 shares of common stock of L-3 Communications Holdings and are unconditionally guaranteed, on an unsecured senior subordinated basis, jointly and severally by L-3 Communications Corporation and substantially all of L-3 Communications Corporation's domestic restricted subsidiaries.

(3) The 4% Senior Subordinated Convertible Contingent Debt Securities (CODES) due September 15, 2011 were issued by L-3 Communications Holdings in October 2001. The CODES are, subject to adjustment, convertible into 7,804,878 shares of common stock of L-3 Communications Holdings and are unconditionally guaranteed, on an unsecured senior subordinated basis, jointly and severally by L-3 Communications Corporation and substantially all of L-3 Communications Corporation's domestic restricted subsidiaries.

(4) In connection with the redemption of our 8 1/2% Senior Subordinated Notes due 2008, we estimate that we will incur a pre-tax loss of approximately $11.2 million, or $6.8 million after-tax.

SELECTED FINANCIAL DATA

We derived the selected financial data presented below at December 31, 2002 and 2001 and for each of the three years in the period ended December 31, 2002 from our audited consolidated financial statements included elsewhere herein. We derived the selected financial data presented below at March 31, 2003 and for the three months ended March 31, 2003 and 2002 from our unaudited condensed consolidated financial statements included elsewhere herein. We derived the selected financial data presented below at March 31, 2002 from our unaudited condensed consolidated financial statements not included elsewhere herein. We derived the selected financial data presented below at December 31, 2000, 1999 and 1998 and for the years ended December 31, 1999 and 1998 from our audited consolidated financial statements not included elsewhere herein. You should read the selected financial data together with our "Management's Discussion and Analysis of Results of Operations and Financial Condition" and our consolidated financial statements and condensed consolidated financial statements both included elsewhere herein. The results of operations are impacted significantly by our acquisitions, some of which are described elsewhere herein.

	THREE MONTHS ENDED MARCH 31,	
	2003	2002
	(in millions)	
STATEMENT OF OPERATIONS DATA:		
Sales	$ 1,089.0	$ 696.8
Operating income	108.8	71.3
Interest and other income	1.4	1.0
Interest expense	32.2	26.1
Minority interest	0.3	0.9
Loss on retirement of debt(1)	--	--
Provision for income taxes	28.0	16.0
Income before cumulative effect of a change in accounting principle	49.7	29.3
Income before cumulative effect of a change in accounting principle, as adjusted(2)	49.7	29.3
BALANCE SHEET DATA (AT PERIOD END):		
Working capital	$ 853.9	$ 807.3
Total assets	5,320.8	4,357.8
Total debt	1,843.7	2,161.3
Minority interest	73.5	70.6
Shareholders' equity	2,270.0	1,266.5

	YEAR ENDED DECEMBER 31,				
	2002	2001	2000	1999	1998
	(in millions)				
STATEMENT OF OPERATIONS DATA:					
Sales	$ 4,011.2	$ 2,347.4	$ 1,910.1	$ 1,405.5	$ 1,037.0
Operating income	454.0	275.3	222.7	150.5	100.3
Interest and other income	5.0	1.8	4.4	5.5	2.7
Interest expense	122.5	86.4	93.0	60.6	49.5
Minority interest	6.2	4.4	--	--	--
Loss on retirement of debt(1)	16.2	--	--	--	--
Provision for income taxes	111.6	70.8	51.4	36.7	20.9
Income before cumulative effect of a change in accounting principle	202.5	115.5	82.7	58.7	32.6
Income before cumulative effect of a change in accounting principle, as adjusted(2)	202.5	149.4	112.3	76.2	43.7
BALANCE SHEET DATA (AT PERIOD END):					
Working capital	$ 942.7	$ 717.8	$ 360.9	$ 255.5	$ 157.8
Total assets	5,242.3	3,339.2	2,463.5	1,628.7	1,285.4
Total debt	1,847.8	1,315.3	1,095.0	605.0	605.0
Minority interest	73.2	69.9	--	--	--
Shareholders' equity	2,202.2	1,213.9	692.6	583.2	300.0

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(1) In accordance with the provisions of SFAS No. 145, we have reclassified our loss on retirement of debt incurred in June 2002; such loss is now reflected as a component of income from continuing operations.

(2) Income before cumulative effect of a change in accounting principle, as adjusted, excludes goodwill amortization expense, net of any income tax

effects, recognized for the years ended December 31, 2001, 2000, 1999 and 1998.

OVERVIEW

We are a leading merchant supplier of secure communications and intelligence, surveillance and reconnaissance (ISR) systems, training, simulation and support services, aviation products and aircraft modernization, as well as specialized products. Our customers include the DoD and prime contractors thereof, certain U.S. Government intelligence agencies, major aerospace and defense contractors, foreign governments, commercial customers and certain other U.S. federal, state and local government agencies. We have the following four reportable segments: (1) Secure Communications & ISR; (2) Training, Simulation & Support Services; (3) Aviation Products & Aircraft Modernization; and (4) Specialized Products.

Our Secure Communications & ISR segment provides products and services for the global ISR market as well as secure, high data rate communications systems and equipment primarily for military and other U.S. Government reconnaissance and surveillance applications. We believe our systems and products are critical elements of virtually all major communication, command and control, intelligence gathering and space systems. Our systems and products are used to connect a variety of airborne, space, ground and sea-based communication systems and are used in the transmission, processing, recording, monitoring and dissemination functions of these communication systems. Our Training, Simulation & Support Services segment produces training systems and related support services, and provides a wide range of engineering development and integration support, a full range of teaching, training, logistics and communication software support services, crisis management software and custom ballistic targets. Our Aviation Products & Aircraft Modernization segment provides our TCAS products, cockpit voice, flight data and cruise ship hardened voyage recorders, ruggedized custom displays and specialized aircraft modernization, upgrade and maintenance services. Our Specialized Products segment provides ocean products, telemetry, instrumentation, space and navigation products, premium fuzing products, security systems, training devices and motion simulators, video security and surveillance and electro-optic surveillance systems, ruggedized commercial off-the-shelf technology and microwave components.

In recent years, domestic and worldwide political and economic developments have significantly affected the markets for defense systems, products and services. Two events in 2001 had a dramatic impact on the domestic and international political and economic landscape. They impacted L-3 and the defense industry generally. First, the events of September 11 created uncertainty and exposed vulnerabilities in the security and the overall defense of the U.S. homeland. Second, in the conclusions of the U.S. Quadrennial Defense Review (QDR) completed during 2001 there was a fundamental and philosophical shift in focus from a "threat-based" model to one that emphasizes the capabilities needed to defeat a full spectrum of adversaries. Transforming the nation's defense posture to a capabilities-based approach involves creating the ability for a more flexible response, with greater force mobility, stronger space capabilities, missile defense, improved and network-centric communications and information systems security and an increased emphasis on homeland defense.

The actual fiscal 2003 DoD budget authority was $365 billion and the DoD budget request for fiscal years 2004 through 2009 indicate a compounded annual growth rate from fiscal year 2002 to 2009 of 5.8% with $484 billion for fiscal 2009. More important to L-3 are the trends for the "investment account" which is comprised of the procurement and research, development, test and evaluation (RDT&E) components of the DoD budget. We believe the investment account is a better indicator of the portion of the DoD budget that is applicable to defense contractors. The investment account increased 15% in fiscal year 2003 to $127 billion and the DoD budget investment account requests for fiscal years 2004 to 2009 indicate a compounded annual growth rate from fiscal year 2002 to 2009 of 7.5% with $182 billion in fiscal year 2009. Additionally, the DoD budgets have experienced increased focus on command, control, communications, intelligence, surveillance and reconnaissance (C(3)ISR), precision-guided weapons, unmanned aerial vehicles (UAVs), network-centric communications, Special Operations Forces (SOF) and missile defense. We believe L-3 is well positioned to benefit from increased spending in those areas. In addition, increased emphasis on homeland defense may increase demand for our capabilities in areas such as security systems, information security, crisis management, preparedness and prevention services, and civilian security

operations. While there is no assurance that the requested DoD budget increases will be approved by Congress, after over a decade of downward trends, the current outlook is one of continued increased DoD spending, which we believe would positively affect our future orders and sales and favorably affect our future operating profits because of increased sale volumes.

All of our domestic government contracts and subcontracts are subject to audit and various cost controls, and include standard provisions for termination for the convenience of the U.S. Government. Multiyear U.S. Government contracts and related orders are subject to cancellation if funds for contract performance for any subsequent year become unavailable. Foreign government contracts generally include comparable provisions relating to termination for the convenience of the relevant foreign government.

ACQUISITIONS

The table below summarizes the more significant acquisitions that we have completed during the year ended December 31, 2002 and the three-month period ended March 31, 2003.

ACQUIRED BUSINESS	DATE ACQUIRED	PURCHASE PRICE(1) (IN MILLIONS)
Aircraft Integration Systems (AIS) business of Raytheon Company	March 8, 2002	$1,148.7 (2)
Detection Systems	June 14, 2002	$ 110.0 (3)
Telos Corporation (a California Corporation)	July 19, 2002	$ 22.3
ComCept, Inc.	July 31, 2002	$ 25.1 (4)
Technology, Management and Analysis Corporation (TMA)	September 23, 2002	$ 51.4 (5)(6)
Electron Devices and Displays-Navigation Systems -- San Diego businesses of Northrop Grumman	October 25, 2002	$ 135.6 (7)
Wolf Coach, Inc.	October 31, 2002	$ 4.2 (8)
International Microwave Corporation (IMC)	November 8, 2002	$ 40.9 (9)
Westwood Corporation	November 13, 2002	$ 22.1
Wescam Inc.	November 21, 2002	$ 124.3
Ship Analytics, Inc.	December 19, 2002	$ 12.5 (5)(10)
Avionics Systems business of Goodrich Corporation	March 28, 2003	$ 188.5 (5)

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(1) The purchase price represents the contractual consideration for the acquired business excluding adjustments for net cash acquired and acquisition costs.

(2) Includes $18.7 million related to additional assets contributed by Raytheon Company (Raytheon) to AIS. Following the acquisition, we changed AIS's name to L-3 Communications Integrated Systems (IS). The purchase price is subject to adjustment based on actual closing date tangible net assets.

(3) Includes a $10.0 million preliminary purchase price adjustment. The purchase price is subject to further adjustment based on actual closing date net working capital.

(4) The purchase price consists of $14.9 million of cash and 229,494 shares of L-3 Holdings common stock valued at $10.6 million. Excludes additional purchase price in the form of L-3 Holdings common stock, which is contingent upon the financial performance of ComCept for the fiscal years ending June 30, 2003 and 2004. The maximum additional L-3 Holdings common stock payable is 219,088 shares.

(5) The purchase price is subject to adjustment based on actual closing date net assets or net working capital of the acquired business.

(6) Excludes additional purchase price, not to exceed $7.0 million, which is contingent upon the financial performance of TMA for the twelve months ending September 30, 2003. Following the acquisition, we changed TMA's name to L-3 Communications TMA Corporation.

(7) Following the acquisition, we changed the name of the Displays-Navigation Systems -- San Diego business to L-3 Ruggedized Command & Control.

(8) Excludes additional purchase price, not to exceed $4.1 million, which is contingent upon the financial performance of Wolf Coach for the years ending December 31, 2003, 2004 and 2005.

(9) Excludes additional purchase price, not to exceed $5.0 million, which is contingent upon the financial performance of IMC for the year ending December 31, 2003.

(10) Excludes additional purchase price, not to exceed $13.5 million, which is contingent upon the financial performance of Ship Analytics for the years ending December 31, 2003, 2004 and 2005.

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Additionally, we purchased other businesses during the three months ended March 31, 2003 and during the year ended December 31, 2002, which individually and in the aggregate were not material to our consolidated results of operations, financial position or cash flows for the period acquired. All of our acquisitions have been accounted for as purchase business combinations and are included in our consolidated results of operations from their respective effective dates.

On May 30, 2003, we acquired all of the outstanding stock of Aeromet Inc. for $17.5 million in cash.

We regularly evaluate potential acquisitions and joint venture transactions, but we have not entered into any agreements with respect to any material transactions at this time except for a purchase agreement with respect to the acquisition of the Military Aviation Services business of Bombardier Inc.

CRITICAL ACCOUNTING POLICIES

Our significant accounting policies are described in Note 2 to the consolidated financial statements. The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires us to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of sales and costs and expenses during the reporting period. The most significant of these estimates and assumptions relate to contract estimates of sales and estimated costs to complete contracts in process, estimates of market values for inventories reported at lower of cost or market, estimates of pension and postretirement benefit obligations, recoverability of recorded amounts of fixed assets, identifiable intangible assets and goodwill, income taxes, including the valuations of deferred tax assets, litigation and environmental obligations. Actual amounts will differ from these estimates. We believe that critical accounting estimates have the following attributes: (1) we are required to make assumptions about matters that are highly uncertain at the time of the estimate; and (2) different estimates we could reasonably have used, or changes in the estimate that are reasonably likely to occur, would have a material effect on our financial condition or results of operations. We believe the following critical accounting policies contain the more significant judgements and estimates used in the preparation of our financial statements.

Contract Revenue Recognition and Contract Estimates. The substantial majority of our sales require us to design, develop, manufacture and/or modify complex products, and/or to perform related services according to specifications provided by our customers. These sales are made pursuant to written contractual arrangements or contracts, which are generally either fixed-price or cost-reimbursable. These contracts are within the scope of the American Institute of Certified Public Accountants Statement of Position 81-1, Accounting for Performance of Construction-Type and Certain Production-Type Contracts (SOP 81-1). In addition, cost-reimbursable contracts with the U.S. Government are also specifically within the scope of Accounting Research Bulletin No. 43, Chapter 11, Section A, Government Contracts, Cost-Plus-Fixed Fee Contracts (ARB 43). Certain of our contracts with the U.S. Government are multi-year contracts that are funded annually by the customer, and sales on these multi-year contracts are based on amounts appropriated (funded) by the U.S. Government.

Sales and profits on fixed-price contracts are recognized using percentage-of-completion methods of accounting. Sales and profits on fixed-price production contracts whose units are produced and delivered in a continuous or sequential process are recorded as units are delivered based on their selling prices (the "units-of-delivery" method). Sales and profits on other fixed-price contracts are recorded based on the ratio of total actual incurred costs to date to the total estimated costs at completion of the contract for each contract (the "cost-to-cost method"). Under the percentage-of-completion methods of accounting, a single estimated total profit margin is used to recognize profit for each contract over its entire period of performance which can exceed one year.

Accounting for the sales and profit on a fixed-price contract requires estimates of (1) the contract value or total contract revenue, (2) the total costs at completion, which is equal to the sum of the actual

incurred costs to date on the contract and the estimated costs to complete the contract's scope of work and (3) the measurement of progress towards completion. The estimated profit or loss on a contract is equal to the difference between the total contract value and the estimated total cost at completion. Under the units-of-delivery percentage-of-completion method, sales on a fixed-price contract are recorded as the units are delivered during the period at an amount equal to the contractual selling price of those units. Under the cost-to-cost percentage-of-completion method, sales on a fixed-price contract are recorded at amounts equal to the ratio of cumulative costs incurred to date to total estimated costs at completion multiplied by the contract value, less the cumulative sales recognized in prior periods. The profit recorded on a contract in any period under both the units-of-delivery method and cost-to-cost method is equal to the current estimated total profit margin for the contract stated as a percentage of contract revenue multiplied by the cumulative sales recorded less the cumulative profit previously recorded. Adjustments to original estimates for a contract's revenues, estimated costs at completion and estimated total profit are often required as work progresses under a contract, as experience is gained and as more information is obtained, even though the scope of work required under the contract may not change, or if contract modifications occur. These changes are recorded on a cumulative catch-up basis in the period they are determined to be necessary.

Sales and profits on a cost-reimbursable contract are recognized as allowable costs are incurred on the contract and become billable to the customer, in an amount equal to the allowable costs plus the profit on those cost which is generally fixed or variable based on the contract fee arrangement. Thus, cost- reimbursable contracts are generally not subject to the same estimation risks that affect fixed price contracts.

The impact of revisions in profit estimates on both fixed-price and cost-reimbursable contracts are recognized on a cumulative catch-up basis in the period in which the revisions are made. Provisions for anticipated losses on contracts are recorded in the period in which they become evident. Amounts representing contract change orders or claims are included in sales only when they can be reliably estimated and their realization is reasonably assured. The revisions in contract estimates, if significant, can materially affect our results of operations and cash flows, as well as our valuations of contracts in process.

For the year ended December 31, 2002: (1) sales on fixed-price contracts recognized using the units-of-delivery percentage-of-completion method accounted for approximately 22.4% of total sales, (2) sales on fixed-price contracts recognized using the cost-to-cost percentage of completion method accounted for approximately 32.7% of total sales, and (3) sales on cost-reimbursable contracts, which are recognized as costs are incurred, accounted for approximately 34.2% of total sales. The remaining 10.7% of sales for the year ended December 31, 2002 pertain to fixed-price sales arrangements principally with commercial customers, which were not within the scope of SOP 81-1 or ARB 43 and were recorded as products are delivered and services are performed.

Goodwill and Intangible Assets. L-3 reviews goodwill and intangible assets for impairment whenever events or changes in circumstances indicate that the carrying amount of these assets may not be recoverable, and also reviews goodwill annually in accordance with SFAS No. 142, Goodwill and Other Intangible Assets. In accordance with SFAS No. 141, Business Combinations, L-3 recorded identifiable intangible assets, such as customer relationships, that are acquired in connection with a business acquisition. The value assigned to identifiable intangible assets are determined based on estimates and judgements regarding expectations for future contract renewals and their related cash flows and the life cycle of acquired products and their related cash flows. If actual future contract renewals, differ significantly from the estimates, we may be required to record an impairment charge to write down the identifiable intangible asset to its realizable value. In addition, SFAS No. 142 requires that goodwill be tested annually using a two-step process. The first step is to identify any potential impairment by comparing the carrying value of the reporting unit to its fair value. If a potential impairment is identified, the second step is to compare the implied fair value of goodwill with its carrying amount to measure the impairment loss. The fair value of a reporting unit is estimated using a discounted cash flow valuation approach, and is dependent on estimates for future sales, operating income, depreciation and amortization, income tax payments, working capital changes, and capital expenditures, as well as, expected growth rates for cash flows and long-term interest rates, all of which are impacted by economic conditions related to the industries in which we operate as well as conditions in the U.S. capital markets. A decline in

estimated fair value of a reporting unit could result in an unexpected impairment charge to goodwill, which could have a material adverse effect on our business, financial condition and results of operations.

Pension Plan and Postretirement Benefit Plan Obligations. The obligations for our pension plans and postretirement benefit plans and the related annual costs of employee benefits are calculated based on several long-term assumptions, including discount rates, rates of return on plan assets, expected annual rates for salary increases for employee participants in the case of pension plans, and expected annual increases in the costs of medical and other health care benefits in the case of postretirement benefit obligations. These long-term assumptions are subject to revision based on changes in interest rates, financial market conditions, expected versus actual returns on plan assets, participant mortality rates and other actuarial assumptions, future rates of salary increases, benefit formulas and levels, and rates of increase in the costs of benefits. Such changes, if significant, can materially affect the amount of annual net periodic benefit costs recognized in results of operations, our liabilities for the pension plans and postretirement benefit plans, and our annual cash requirements to fund these plans.

Valuation of Deferred Income Tax Assets and Liabilities. At December 31, 2002, we had net deferred tax assets of $290.8 million, including $6.6 million for net operating loss carryforwards and $38.4 million for tax credit carryforwards which are subject to various limitations and will expire if unused within their respective carryforward periods. Deferred income taxes are determined separately for each of our tax-paying entities in each tax jurisdiction. The future realization of our deferred income tax assets ultimately depends on our ability to generate sufficient taxable income of the appropriate character (for example, ordinary income or capital gain) within the carryback and carryforward periods available under the tax law, and to a lesser extent, our ability to execute successful tax planning strategies. Based on our estimates of the amounts and timing of future taxable income and tax planning strategies, we believe that we will realize our recorded deferred tax assets. A change in the ability of our operations to continue to generate future taxable income, or our ability to implement desired tax planning strategies, could affect our ability to realize the future tax deductions underlying our net deferred tax assets, and require us to provide a valuation allowance against our net deferred tax assets. Such changes, if significant, could have a material impact in our effective tax rate, results of operations and financial position in any given period.

RESULTS OF OPERATIONS

The following information should be read in conjunction with our audited consolidated financial statements and unaudited condensed consolidated financial statements included elsewhere herein. Our results of operations for the periods presented are impacted significantly by our acquisitions. See Note 4 to the unaudited condensed consolidated financial statements for a discussion of our acquisitions, including pro forma sales, net income and diluted earnings per share data for the three months ended March 31, 2003 (2003 First Quarter) and March 31, 2002 (2002 First Quarter). See Note 3 to our audited consolidated financial statements for the same discussion of our acquisitions for the years ended December 31, 2002 and 2001.

We present our sales and costs and expenses in two categories on the statement of operations, "Contracts, primarily U.S. Government" and "Commercial, primarily products," which are based on how we recognize revenue. Sales and costs and expenses for L-3's businesses that are primarily U.S. Government contractors are presented as "Contracts, primarily U.S. Government." The sales for L-3's U.S. Government contractor businesses are transacted using written contractual arrangements or contracts for products and services according to the specifications provided by the customer and are within the scope of SOP 81-1 and ARB 43. Sales reported under "Contracts, primarily U.S. Government" also include certain sales by L-3's U.S. Government contractor businesses transacted using contracts for domestic and foreign commercial customers which also are within the scope of SOP 81-1. Sales and costs and expenses for L-3's businesses whose customers are primarily commercial customers are presented as "Commercial, primarily products". These sales to commercial customers are not within the scope of SOP 81-1 or ARB 43, and are recognized in accordance with SEC SAB No. 101. L-3's commercial businesses are substantially comprised of Aviation Communication & Surveillance Systems (ACSS), Aviation Recorders, Microwave components, the Detection Systems business acquired from PerkinElmer, Inc., Satellite Networks, and PrimeWave Communications.

STATEMENT OF OPERATIONS DATA FOR THE THREE MONTHS ENDED MARCH 31, 2003 AND 2002

The tables below provide two presentations of L-3's selected statement of operations data for the 2003 and 2002 First Quarter. The first table presents the sales and operating income data segregated between L-3's U.S. Government contractor businesses and L-3's commercial businesses. See Note 2 to the unaudited condensed consolidated financial statements. The second table presents the sales and operating income data on a reportable segments basis. See Note 12 to the unaudited condensed consolidated financial statements.

	THREE MONTHS ENDED MARCH 31,	
	2003	2002
	(in millions)	
U.S. GOVERNMENT CONTRACTORS AND COMMERCIAL BUSINESSES DATA		
Sales:		
Contracts, primarily U.S. Government	$ 964.8	$618.6
Commercial, primarily products	124.2	78.2
Consolidated	$1,089.0	$696.8
Operating income:		
Contracts, primarily U.S. Government	$ 106.2	$ 72.0
Commercial, primarily products	2.6	(0.7)
Consolidated	$ 108.8	$ 71.3
REPORTABLE SEGMENT DATA(1)		
Sales:		
Secure Communications & ISR	$ 321.3	$157.4
Training, Simulation & Support Services	231.4	194.8
Aviation Products & Aircraft Modernization	158.9	107.3
Specialized Products	377.4	237.3
Consolidated	$1,089.0	$696.8
Operating income:		
Secure Communications & ISR	$ 33.3	$ 16.4
Training, Simulation & Support Services	28.5	21.5
Aviation Products & Aircraft Modernization	19.9	17.5
Specialized Products	27.1	15.9
Consolidated	$ 108.8	$ 71.3

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(1) Sales are after intersegment eliminations. See Note 12 to the unaudited condensed consolidated financial statements.

THREE MONTHS ENDED MARCH 31, 2003 COMPARED WITH THREE MONTHS ENDED MARCH 31, 2002

Consolidated sales increased $392.2 million to $1,089.0 million for the 2003 First Quarter from sales of $696.8 million for the 2002 First Quarter. Sales grew $69.4 million, or 10.0%, excluding the increase in sales from acquired businesses of $322.8 million discussed below. We expect our consolidated sales growth excluding acquisitions for the full year 2003 to be between 8% and 10%, after adjusting for the expected decline in sales of explosive detection systems (EDS) for 2003 to $175 million from $339 million for 2002 as discussed below. We expect our Secure Communications & ISR businesses to be the largest contributor to L-3's sales growth for 2003.

Sales from "Contracts, primarily U.S. Government" increased $346.2 million to $964.8 million for the 2003 First Quarter from $618.6 million for the 2002 First Quarter. The IS, Telos, ComCept, TMA,

Electron Devices, Ruggedized Command & Control, Westwood, Wescam and Ship Analytics acquired businesses contributed $270.5 million of the increase in sales. Excluding these acquisitions, sales grew $75.7 million, or 12.2%, primarily because of volume increases of $55.6 million from secure communications systems, $25.2 million from security products, $11.2 million from aircraft modifications, $7.0 million from naval power equipment, and $5.6 million from communications software and engineering support services. These increases were partially offset by volume declines of $18.5 million from fuzing products, $4.6 million from acoustic undersea warfare products, and $5.8 million primarily from telemetry, space and navigation products.

Sales from "Commercial, primarily products" increased $46.0 million to $124.2 million for the 2003 First Quarter from $78.2 million for the 2002 First Quarter. The Detection Systems, IMC and Wolf Coach acquired businesses contributed $52.3 million of the increase in sales. Excluding these acquisitions, sales declined $6.3 million or 8.1%. This decrease in sales was due to volume declines of $4.5 million for commercial aviation products and $5.0 million for microwave components. These declines were partially offset by increases of $3.2 million primarily for maritime voyage recorders.

Consolidated costs and expenses increased $354.7 million to $980.2 million for the 2003 First Quarter from $625.5 million for the 2002 First Quarter, primarily as a result of the increase in sales.

Costs and expenses for "Contracts, primarily U.S. Government" increased $312.0 million to $858.6 million for the 2003 First Quarter from $546.6 million for the 2002 First Quarter. Approximately 77% of the increase is attributable to our acquired businesses. The remaining increase is primarily attributed to internal sales growth from security products and secure communications systems partially offset by declines from fuzing products and acoustic undersea warfare products due to lower volume. Costs and expenses from sales on our direct and indirect contracts with the U.S. Government include selling, general and administrative (SG&A) costs, including independent research and development and bid and proposal costs, because SG&A costs are allowable, indirect contract costs that we allocate to our U.S. Government contracts in accordance with U.S. Government regulations. Accordingly, we do not report SG&A costs on U.S. Government contracts as period expenses. SG&A costs allocated to our U.S. Government contracts were $116.4 million for the 2003 First Quarter and $84.1 million for the 2002 First Quarter (see Note 5 to our unaudited condensed consolidated financial statements).

Costs and expenses for "Commercial, primarily products" increased $42.7 million to $121.6 million for the 2003 First Quarter from $78.9 million for the 2002 First Quarter. The increase was primarily due to increased sales attributable to our acquired businesses, which was partially offset by lower expenses for microwave components products due to lower sales volume. SG&A expenses, increased $6.3 million to $31.8 million for the 2003 First Quarter from $25.5 million for the 2002 First Quarter, primarily because of expenses incurred by our acquired businesses, which were partially offset by lower SG&A expenses for our PrimeWave, microwave components and commercial aviation products businesses arising from cost reductions. As expected, research and development (R&D) expenses decreased by $1.1 million to $8.8 million for the 2003 First Quarter from $9.9 million for the 2002 First Quarter primarily because of lower R&D expenses incurred by ACSS, because the development of our new T(2)CAS product was substantially completed in 2002, and by PrimeWave because of cost reductions. These declines in R&D expenses were partially offset by expenses incurred by our acquired businesses.

Consolidated operating income increased by $37.5 million to $108.8 million for the 2003 First Quarter from $71.3 million for the 2002 First Quarter. The increase was primarily due to higher sales from all of our segments. Consolidated operating income as a percentage of sales (operating margin) declined slightly by 0.2 percentage points to 10.0% for the 2003 First Quarter from 10.2% for the 2002 First Quarter. The changes in the operating margins for our segments are discussed below.

Operating income for "Contracts, primarily U.S Government" increased $34.2 million to $106.2 million for the 2003 First Quarter from $72.0 million for the 2002 First Quarter. Operating margin declined 0.6 percentage points to 11.0% for the 2003 First Quarter from 11.6% for the 2002 First Quarter. The decline was primarily because of lower margins for secure communications systems due to changes in sales mix between fixed-price and cost-reimbursable contracts and lower margins for telemetry and space products due to volume declines, as well as continued losses from naval power equipment.

Operating income for "Commercial, primarily products" increased $3.3 million to $2.6 million for the 2003 First Quarter from a loss of $0.7 million for the 2002 First Quarter. Operating margin improved 3.0 percentage points to 2.1% for the 2003 First Quarter from a negative margin of 0.9% for the 2002 First Quarter. The improvement was primarily related to the Detection Systems acquired business, which was partially offset by lower margins on commercial aviation products and commercial communication products because of lower volume as well as continued losses for the PrimeWave Communications business.

Interest expense increased $6.1 million to $32.2 million for the 2003 First Quarter from $26.1 million for the 2002 First Quarter because of the higher average outstanding debt principally related to the borrowings incurred during March 2002 to finance the IS acquisition. The 2003 First Quarter also included $0.4 million of accrued contingent interest expense on the CODES.

Interest and other income increased $0.4 million to $1.4 million in the 2003 First Quarter from $1.0 million in the 2002 First Quarter. The increase is due to the reduction in the liability that represents the fair value assigned to the embedded derivatives related to the CODES, partially offset by lower interest income because of higher average cash and cash equivalents balances during the 2002 First Quarter compared with the 2003 First Quarter.

The income tax provision for the 2003 First Quarter is based on the estimated effective income tax rate for 2003 of 36.0%, compared with the effective income tax rate of 35.3% for the 2002 First Quarter.

Basic earnings per share of L-3 Holdings (EPS) before cumulative effect of a change in accounting principle increased $0.15 to $0.52 for the 2003 First Quarter from $0.37 for the 2002 First Quarter. Diluted EPS before cumulative effect of a change in accounting principle increased $0.14 to $0.50 for the 2003 First Quarter from $0.36 for the 2002 First Quarter. Net income for the 2002 First Quarter includes a charge, net of income taxes, of $24.4 million ($0.31 per basic share and $0.30 per diluted share) for the cumulative effect of a change in accounting principle for goodwill impairment in connection with the adoption of SFAS No. 142. Including the effect of a change in accounting principle, basic and diluted EPS for the 2002 First Quarter was $0.06.

Diluted weighted-average common shares outstanding of L-3 Holdings increased 27.4% to 105.0 million for the 2003 First Quarter from 82.4 million for the 2002 First Quarter. The increase principally reflects the additional shares outstanding from the sale by L-3 Holdings of 14.0 million shares of its common stock on June 28, 2002, as well as the dilutive effect of L-3 Holdings' convertible notes.

The 2003 and 2002 First Quarters diluted EPS computation did not include the effect of the 7.8 million shares of L-3 Holdings common stock that are issuable upon conversion of the CODES because the conditions required for the CODES to become convertible were not satisfied. However, if the CODES had been convertible, reported diluted EPS would have decreased by approximately $0.01 for the 2003 First Quarter and reported diluted EPS before cumulative effect of a change in accounting principle for the 2002 First Quarter would have remained unchanged.

Pro Forma Sales Data. Had we completed the acquisitions discussed above on January 1, 2002, using various assumptions, L-3's pro forma consolidated sales for the 2003 First Quarter would have been $1,113.3 million, an increase of 1.5% over pro forma consolidated sales for the 2002 First Quarter of $1,096.8 million (see Note 4 to the unaudited condensed consolidated financial statements). As we expected, L-3's pro forma consolidated sales growth would have been less than L-3's actual consolidated sales growth excluding acquisitions of 10.0% (discussed above), primarily because the AIS pre-acquisition sales for the two months ended February 2002 included sales that we do not expect to recur. Such sales related to the procurement of commercial aircraft which were modified for a certain customer. Historically customers have provided AIS with the aircraft to be modified as "customer-furnished" equipment, and AIS has not had revenues related to the procurement of aircraft. We do not believe that pro forma sales growth is the best operating measure of L-3's sales growth because it includes sales for our acquired businesses for periods prior to their dates of acquisition, before the acquired businesses were managed by L-3. We believe that L-3's sales growth excluding acquisitions (discussed above) is the appropriate operating measure of sales growth for L-3's businesses.

SECURE COMMUNICATIONS & ISR

Sales within our Secure Communications & ISR (SC&ISR) segment increased $163.9 million, or 104.1%, to $321.3 million for the 2003 First Quarter from $157.4 million for the 2002 First Quarter. The increase in sales was principally attributable to $105.2 million from the IS and ComCept acquired businesses. Excluding these acquisitions, sales increased $58.7 million, or 37.3%. This increase was primarily due to continued strong demand from the DoD and other U.S. Government agencies for the Company's secure communications systems, including Secure Terminal Equipment (STE) and secure communications data links and related equipment for both manned aircraft and unmanned aerial vehicles (UAVs).

Operating income increased by $16.9 million to $33.3 million for the 2003 First Quarter from $16.4 million for the 2002 First Quarter because of higher sales. Operating margin was unchanged at 10.4% despite the increase in sales primarily because of the changes in sales mix between fixed-price and cost-reimbursable contracts.

TRAINING, SIMULATION & SUPPORT SERVICES

Sales within our Training, Simulation & Support Services (TS&SS) segment increased $36.6 million, or 18.8%, to $231.4 million for the 2003 First Quarter from $194.8 million for the 2002 First Quarter. The increase in sales was principally attributable to $36.2 million from the Telos, TMA and Ship Analytics acquired businesses. Excluding these acquisitions, sales increased $0.4 million, or 0.2%. This increase was due to increases in sales for communications software and engineering support services which were offset by timing differences between contracts approaching their scheduled completion and new contracts, which caused sales declines for training services. Sales for ballistic missile targets and services were unchanged from year ago levels.

Operating income increased by $7.0 million to $28.5 million for the 2003 First Quarter from $21.5 million for the 2002 First Quarter because of higher sales and operating margin. Operating margin increased 1.3 percentage points to 12.3% for the 2003 First Quarter from 11.0% for the 2002 First Quarter principally due to higher volumes and operating margin from military communications software and engineering support services.

AVIATION PRODUCTS & AIRCRAFT MODERNIZATION

Sales within our Aviation Products & Aircraft Modernization (AP&AM) segment increased $51.6 million, or 48.1%, to $158.9 million for the 2003 First Quarter from $107.3 million for the 2002 First Quarter. The increase in sales was principally attributable to $42.8 million from the IS acquired business. Excluding this acquisition, sales increased $8.8 million, or 8.2%. Sales on contracts awarded in 2002 to upgrade C-130 aircraft for Greece and Malaysia and higher volume for maritime voyage recorders contributed $13.3 million. Sales volume for commercial aviation products declined by $4.5 million due to continued weakness in the commercial aviation markets.

Operating income increased by $2.4 million to $19.9 million for the 2003 First Quarter from $17.5 million for the 2002 First Quarter because of higher sales, which were partially offset by lower operating margin. Operating margin declined 3.8 percentage points to 12.5% for the 2003 First Quarter from 16.3% for the 2002 First Quarter. Volume declines for commercial aviation products that were caused by continued weakness in the commercial aviation market decreased operating margin by 2.7 percentage points. The remaining decrease in operating margin was primarily attributable to the IS acquired business, which has lower margins than the other businesses in the segment and was included in our results for the entire 2003 First Quarter compared to only March during the 2002 First Quarter.

SPECIALIZED PRODUCTS

Sales within our Specialized Products segment increased $140.1 million, or 59.0%, to $377.4 million for the 2003 First Quarter from $237.3 million for the 2002 First Quarter. The increase in sales was principally attributable to $138.6 million from the Detection Systems, Ruggedized Command & Control, Electron Devices, Wolf Coach, IMC, Westwood and Wescam acquired businesses. Excluding these

acquisitions, sales increased $1.5 million, or 0.6%. Increases in sales from security products and naval power equipment contributed $32.2 million in sales. These increases were largely offset by $28.3 million of volume declines for fuzing products, navigation products and acoustic undersea warfare products arising from timing differences between orders and product deliveries, as well as certain contracts approaching their scheduled completion. The remaining decrease is primarily due to lower volumes from microwave components and telemetry and space products due to continued weakness in those commercial markets. Although our EDS Systems sales increased by $25.2 million for the 2003 First Quarter compared to the 2002 First Quarter, we expect our full-year 2003 sales for EDS systems to decline to about $175 million from $339 million for 2002 because the initial installation of EDS systems by the U.S. Transportation Security Administration (TSA) for major U.S. airports was substantially completed in 2002.

Operating income increased by $11.2 million to $27.1 million for the 2003 First Quarter from $15.9 million for the 2002 First Quarter because of higher sales and operating margin. Operating margin increased 0.5 percentage points to 7.2% for the 2003 First Quarter from 6.7% for the 2002 First Quarter. Higher volumes and operating margins from security products increased operating margin by 0.9 percentage points. Acquired businesses increased operating margin by 1.4 percentage points. Operating margin declined by 1.8 percentage points because of sales declines for telemetry and space products, fuzing products and microwave components.

STATEMENT OF OPERATIONS DATA FOR THE YEARS ENDED DECEMBER 31, 2002, 2001 AND 2000

The tables below provide two presentations of L-3's selected statement of operations data for the years ended December 31, 2002, 2001 and 2000. The first table presents sales and operating income data segregated between L-3's U.S. Government contractor businesses and L-3's commercial businesses. See Note 2 to the audited consolidated financial statements. The second table presents the sales and operating income data on a reportable segments basis. See Note 18 to the audited consolidated financial statements.

	YEAR ENDED DECEMBER 31,		
	2002	2001	2000
	(in millions)		
U.S. GOVERNMENT CONTRACTORS AND COMMERCIAL BUSINESSES DATA			
Sales:			
Contracts, primarily U.S. Government	$3,581.1	$1,932.2	$1,584.8
Commercial, primarily products	430.1	415.2	325.3
Consolidated	$4,011.2	$2,347.4	$1,910.1
Operating income:			
Contracts, primarily U.S. Government	$ 443.6	$ 232.6(1)	$ 196.6(1)
Commercial, primarily products	10.4	42.7(1)	26.1(1)
Consolidated	$ 454.0	$ 275.3	$ 222.7
REPORTABLE SEGMENT DATA(2)			
Sales:			
Secure Communications & ISR	$ 997.8	$ 450.5	$ 393.0
Training, Simulation & Support Services	806.3	596.8	283.4
Aviation Products & Aircraft Modernization	733.0	263.3	209.1
Specialized Products	1,474.1	1,036.8	1,024.6
Consolidated	$4,011.2	$2,347.4	$1,910.1
Operating income:			
Secure Communications & ISR	$ 104.1	$ 32.0(1)	$ 54.1(1)
Training, Simulation & Support Services	96.5	65.7(1)	23.5(1)
Aviation Products & Aircraft Modernization	105.1	85.6(1)	66.9(1)
Specialized Products	148.3	92.0(1)	78.2(1)
Consolidated	$ 454.0	$ 275.3	$ 222.7

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(1) Operating income includes goodwill amortization expense for the years ended December 31, 2001 and 2000 as follows:

	2001	2000
Contracts, primarily U.S. Government	$31.3	$25.0
Commercial, primarily products	11.0	10.0
Total	$42.3	$35.0
Secure Communications & ISR	$ 3.8	$ 3.7
Training, Simulation & Support Services	7.1	3.6
Aviation Products & Aircraft Modernization	7.7	6.5
Specialized Products	23.7	21.2
Total	$42.3	$35.0

(2) Sales are after intersegment eliminations. See Note 18 to the consolidated financial statements.

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YEAR ENDED DECEMBER 31, 2002 COMPARED WITH YEAR ENDED DECEMBER 31, 2001

Consolidated sales increased $1,663.8 million to $4,011.2 million for 2002 from $2,347.4 million for 2001. For 2002, sales grew $347.4 million, or 14.8%, excluding the increase in sales from acquired businesses of $1,316.4 million discussed below. Had these acquisitions occurred on January 1, 2001, pro forma sales for 2002 would have been $4,699.1 million, an increase of 13.5% over pro forma sales of $4,139.6 million for 2001 (See Note 3 to the consolidated financial statements).

Sales from "Contracts, primarily U.S. Government" increased $1,648.9 million to $3,581.1 million for 2002 from $1,932.2 million for 2001. The Analytics, BT Fuze, ComCept, EER, Electron Devices, IS, KDI, Ruggedized Command & Control, Ship Analytics, Spar, SY, Telos, TMA, Wescam and Westwood acquired businesses contributed $1,222.5 million of the increase in sales. Excluding these acquisitions, sales grew $426.4 million, or 22.1%, in 2002. Volume increased $320.9 million for explosive detection systems, $156.8 million for secure communication systems, $20.6 million for training services and devices, $20.1 million for navigation and guidance products and $8.1 million for military displays products. These sales increases were partially offset by declines of $17.3 million on naval power equipment and $14.5 million on static transfer switches used for commercial applications. Sales of ballistic missile targets and services declined $53.0 million. The remaining decline in sales of $15.3 million was primarily related to acoustic undersea warfare products because of lower volume on spares.

Sales from "Commercial, primarily products" increased $14.9 million to $430.1 million for 2002 from $415.2 million for 2001. The Detection Systems, IMC and Wolf Coach acquired businesses contributed $93.9 million of the increase in sales. Excluding these acquisitions, sales declined $79.0 million or 19.0%. This decrease in sales was due to volume declines of $49.2 million on commercial aviation products, $31.7 million on microwave components and $11.8 million on PrimeWave communication products. These declines were partially offset by increases of $5.5 million for maritime voyage recorders and $8.2 million primarily for technical and product support services for commercial customers.

"Commercial, primarily products" sales declined to 10.7% of total sales for 2002 from 17.7% for 2001. The decline was primarily attributable to the acquisitions we completed during 2002, including the IS acquisition, and to a lesser extent, the decline in our commercial sales. This decline was attributable to the continued weakness in the commercial aviation and communications markets. Our 2002 acquisitions were comprised substantially of DoD contractors. Even if a rebound occurs in the commercial aviation and communications markets, which we are not anticipating for 2003, we expect our commercial sales as a percentage of total sales to remain at the current level. Furthermore, even considering our stated interest in expanding L-3's business in avionics for both military and commercial applications through select niche acquisitions, we do not expect to make any substantial acquisitions of commercial businesses.

Consolidated costs and expenses increased $1,485.1 million to $3,557.2 million for 2002 from $2,072.1 million for 2001, primarily as a result of the increase in sales. In accordance with SFAS No. 142, on

January 1, 2002 we stopped amortizing our goodwill to expenses. Goodwill amortization expense was $42.3 million for 2001. SFAS No. 142 also requires that we evaluate the fair value of our goodwill annually to determine if it has been impaired. We evaluated the carrying value of our goodwill as of January 1, 2002 in accordance with the transition provisions of SFAS No. 142 and wrote-off $30.8 million of goodwill related to certain of our space and broadband commercial communications businesses, which has been reported as a $24.4 million loss after income taxes for the cumulative effect of a change in accounting principle, as discussed below. If we experience any impairments to the carrying value of our goodwill after January 1, 2002, we will have to report them as a loss from operations. During 2002, we did not have any other goodwill impairments.

Costs and expenses for "Contracts, primarily U.S. Government" increased $1,437.9 million to $3,137.5 million for 2002 from $1,699.6 million for 2001. Approximately 75% of the increase is attributable to our acquired businesses. The remaining increase is primarily attributed to internal growth for explosive detection systems and secure communication systems. Goodwill amortization expense was $31.3 million for 2001. Costs and expenses for sales on our direct and indirect contracts with the U.S. Government include selling, general and administrative (SG&A) costs, including independent research and development and bid and proposal costs, because SG&A costs are allowable indirect contract costs that we allocate to our U.S. Government contracts in accordance with U.S. Government regulations. Accordingly, we do not report SG&A costs on U.S. Government contracts as period expenses. SG&A costs allocated to our U.S. Government contracts were $431.5 million for 2002 and $304.3 million for 2001 (see Note 4 to our consolidated financial statements).

Costs and expenses for "Commercial, primarily products" increased $47.2 million to $419.7 million for 2002 from $372.5 million for 2001. The increase is primarily due to increased sales as a result of the Detection Systems acquired business, which was partially offset by lower expenses for microwave components products due to lower sales volume. Goodwill amortization expense was $11.0 million for 2001. SG&A expenses, including research and development (R&D) expenses, increased $29.2 million to $148.9 million for 2002 from $119.7 million for 2001, primarily because of SG&A expenses incurred by our acquired businesses.

Consolidated operating income increased by $178.7 million to $454.0 million for 2002 from $275.3 million for 2001. The increase was due to higher sales for all of our segments. The impact of not amortizing goodwill increased consolidated operating income by $42.3 million. Consolidated operating income as a percentage of sales (operating margin) declined by 0.4 percentage points to 11.3% for 2002 from 11.7% for 2001. The impact of not amortizing goodwill increased consolidated operating margin by 1.1 percentage points. Operating margins compared to operating margins for 2001, excluding goodwill amortization expense, declined for our Training, Simulation & Support Services, Aviation Products & Aircraft Modernization and Specialized Products segments, and increased for our Secure Communications & ISR segment. The changes in the operating margins for our segments are discussed below.

Operating income for "Contracts, primarily U.S Government" increased $211.0 million to $443.6 million for 2002 from $232.6 million for 2001. Operating margin increased 0.4 percentage points to 12.4% for 2002, from 12.0% for 2001. The impact of not amortizing goodwill increased operating margin by 0.9 percentage points. Operating income for 2002 includes a loss of $3.0 million for the settlement in June 2002 of certain litigations that we assumed in connection with a business we acquired in 1999, which reduced operating margin for 2002 by 0.1 percentage points. The remaining decline in operating margin was due to the absence in 2002 of a favorable performance adjustment recorded in 2001 on the AVCATT contract. Operating income included approximately $20 million of losses in both 2002 and 2001 related to our naval power equipment business that were caused by production problems which reduced sales volume and related costs to fix manufacturing and quality control problems. We expect to reduce the losses in our naval power equipment business to about $5 million for 2003 because of higher sales related to increasing production levels.

Operating income for "Commercial, primarily products" declined $32.3 million to $10.4 million for 2002 from $42.7 million for 2001. Operating margin declined 7.9 percentage points to 2.4% for 2002 from 10.3% for 2001. The decline was principally attributable to lower gross margin contributions from commercial aviation products, microwave components, and space and broadband communication

products because of volume declines, as well as continued marketing, selling and development expenses for the PrimeWave business. The impact of not amortizing goodwill partially offset these decreases in operating margin by 2.6 percentage points. We expect to reduce our losses from the PrimeWave Communications business by approximately $20 million in 2003 because of higher expected sales volume and lower R&D and SG&A expenses for the business.

Interest expense increased $36.1 million to $122.5 million for 2002 from $86.4 million for 2001. The increase is attributable to higher outstanding debt for 2002 primarily related to the financing of the IS acquisition, which was partially offset by lower interest rates on our debt. Our interest rate swap agreements which converted the fixed interest rates on $580.0 million of our senior subordinated notes to variable interest rates reduced our interest expense for 2002 by $9.6 million because of declining interest rates that the interest rate swaps enabled us to enjoy. In June 2002, we also redeemed our $225.0 million 10 3/8% senior subordinated notes and replaced them with senior subordinated notes that have a 7 5/8% fixed interest rate which reduced our interest expense by $3.1 million. See "Liquidity and Capital Resources -- Financing Activities" below.

Interest and other income increased $3.2 million to $4.9 million for 2002 from $1.7 million for 2001, principally due to interest income earned on our cash and cash equivalents. Additionally, 2001 included a net gain of $0.6 million comprising a gain on the sale of a 30% interest in the ACSS business, largely offset by the write-down of the carrying value of an investment in the common stock of a telecommunications company, because the decline in value for that common stock was determined to be other than temporary.

The 2002 loss on retirement of debt was $16.2 million before income taxes (or $0.11 per diluted share after taxes) and arose from the retirement of our $225.0 million of 10 3/8% senior subordinated notes in June 2002.

The income tax provision for 2002 is based on an effective income tax rate of 35.5%, compared with an effective income tax rate of 38.0% for the year ended December 31, 2001. The decrease in the effective income tax rate is primarily attributable to the adoption of SFAS No. 142. Amortization expense for goodwill that is not deductible for income tax purposes caused an increase in our effective income tax rate prior to the adoption of SFAS No. 142.

Basic earnings per share of L-3 Holdings (EPS) before cumulative effect of a change in accounting principle increased $0.79 to $2.33 for 2002 from $1.54 for 2001. Diluted EPS before cumulative effect of a change in accounting principle increased $0.71 to $2.18 for 2002 from $1.47 for 2001. The impact of not amortizing goodwill in 2002 increased basic EPS before cumulative effect of a change in accounting principle by $0.45 and diluted EPS before cumulative effect of a change in accounting principle by $0.40. Excluding the increase in earnings attributable to not amortizing goodwill, basic EPS before cumulative effect of a change in accounting principle grew 17.1% and diluted EPS before cumulative effect of a change in accounting principle grew 16.6%. Basic EPS was $2.05 and diluted EPS was $1.93 after a loss of $24.4 million ($0.28 per basic share and $0.25 per diluted share) for the cumulative effect of a change in accounting principle for a goodwill impairment, recorded effective as of January 1, 2002 in connection with the adoption of SFAS No. 142.

Diluted weighted-average common shares outstanding increased 14.1% to 97.4 million for 2002 from 85.4 million for 2001. The increase principally reflects the additional shares outstanding from the sale of 9.2 million shares by L-3 Holdings of its common stock effective May 2, 2001, and the sale by L-3 Holdings of 14.0 million shares of its common stock effective June 28, 2002.

The diluted EPS computation for 2002 did not include the dilutive effect of the 7.8 million shares of L-3 Holdings common stock that are issuable upon conversion of the CODES (See Notes 8 and 12 to the consolidated financial statements) because the conditions for their conversion were not satisfied. However, if the CODES had been convertible, reported diluted EPS would have decreased by approximately $0.03 for 2002.

SECURE COMMUNICATIONS & ISR

Sales for the Secure Communications & ISR segment increased $547.3 million to $997.8 million for 2002 from $450.5 million for 2001. The IS-Tactical Reconnaissance Systems including airborne surveillance & control (TRS) and ComCept acquired businesses contributed $403.1 million of sales. Excluding these acquisitions, sales grew $144.2 million or 32.0%. Volumes on secure communication systems, including Secure Terminal Equipment (STE), secure data links and military communications products increased $156.8 million because of greater demand for secure communications from the DoD and U.S. Government intelligence agencies. These increases were partially offset by a decrease in sales of $12.6 million primarily due to lower volumes of PrimeWave communication products. We expect that the demand for our secure communications systems and ISR products will remain strong for 2003, enabling the segment to generate sales growth in 2003, excluding acquisitions in excess of 10%.

Operating income increased by $72.1 million to $104.1 million for 2002 from $32.0 million for 2001 because of higher sales and operating margin. Operating margin improved by 3.3 percentage points to 10.4% for 2002 compared to 7.1% for 2001. The impact of not amortizing goodwill increased operating margin by 0.4 percentage points. Increased volume and cost improvements on secure communication systems increased margins by 1.7 percentage points. Higher losses for the PrimeWave business in 2002 due to lower sales, higher marketing, selling and development expenses and a provision to increase the allowance for doubtful accounts by $3.0 million lowered operating margin by 0.9 percentage points. The remaining change in operating margins was principally attributable to margins from the IS-TRS acquired business, which was higher than the segment operating margin for 2001.

TRAINING, SIMULATION & SUPPORT SERVICES

Sales for the Training, Simulation & Support Services segment increased $209.5 million to $806.3 million for 2002 from $596.8 million for 2001. The Analytics, EER, Ship Analytics, SY Technologies, Telos and TMA acquired businesses contributed $210.9 million of the increase in sales. Excluding these acquisitions, sales declined $1.4 million or 0.2%. Sales for ballistic missile targets and services at our Coleman Research business declined $53.0 million primarily because of a contract completed in 2002 and the delay in the award of its follow-on contract, which is related to the U.S. Missile Defense Agency's decision to consolidate the target requirements for all of its major missile defense programs into a single contract for fiscal year 2003. The decline in ballistic missile targets and services was largely offset by volume increases for training services from new contracts with the DoD, contracts competitively awarded during 2001 and software and systems engineering services. We expect that the sales growth, excluding acquisitions, for our training, simulation and support services will be between 6% and 7% in 2003, which is consistent with the overall increase in the DoD budget. We also expect our sales of ballistic missile targets and services to increase in 2003.

Operating income increased by $30.8 million to $96.5 million for 2002 from $65.7 million for 2001 because of higher sales and operating margin. Operating margin increased by 1.0 percentage points to 12.0% for 2002 compared to 11.0% for 2001 principally because of the impact of not amortizing goodwill.

AVIATION PRODUCTS & AIRCRAFT MODERNIZATION

Sales for the Aviation Products & Aircraft Modernization segment increased $469.7 million to $733.0 million for 2002 from $263.3 million for 2001. The IS-Aircraft Modification and Maintenance (AMM) and Spar acquired businesses contributed $502.0 million to sales. Excluding acquisitions, sales declined $32.3 million, or 12.3%, because of lower volumes for commercial aviation recorders and TCAS products that were partially offset by sales increases for military displays products and commercial maritime voyage recorders. The decline in commercial aviation products sales was caused by a decline in orders and customer-directed deferrals of deliveries stemming from the continued downturn in the commercial aircraft industry that began in 2001 and which remained weak during 2002. Although we expect the commercial aviation markets to remain weak during 2003, we do not expect our sales of commercial products to decline significantly in 2003 because of the introduction of our new T(2)CAS product, which we plan to begin shipping in the second half of 2003, and higher volume for our maritime voyage recorders and transponders. We expect sales from our aircraft modification services, which are primarily performed for the DoD, to increase slightly during 2003.

Operating income increased by $19.5 million to $105.1 million for 2002 from $85.6 million for 2001, because of higher sales from acquired businesses. Operating margin declined by 18.2 percentage points to 14.3% for 2002 from 32.5% for 2001. The impact of not amortizing goodwill increased operating margin by 1.1 percentage points. Lower volumes on TCAS and aviation recorders, increased development expenses for a terrain awareness warning system and a commercial displays product-line reduced operating margin by 5.5 percentage points. The remaining decrease in operating margin of 13.8 percentage points was principally attributable to margins from the IS-AMM and Spar acquired businesses, which averaged 12.0% and were lower than the segment operating margin for 2001. Margins for our aircraft modification businesses are lower than the margins for our commercial aviation products businesses, and the aircraft modification businesses generated 70.5% of the segment's sales for 2002 compared with only 5.7% for 2001, which reduced the overall margin for the entire segment as we expected.

SPECIALIZED PRODUCTS

Sales for the Specialized Products segment increased $437.3 million to $1,474.1 million for 2002 from $1,036.8 million for 2001. The BT Fuze, Detection Systems, Electron Devices, IMC, KDI, Ruggedized Command & Control, Wescam, Westwood and Wolf Coach acquired businesses contributed $200.4 million of sales. Excluding these acquisitions, sales increased $236.9 million or 22.8%. Sales of explosive detection systems used in airport security principally relating to a contract from the Transportation Security Administration contributed $320.9 million of the increase in sales. Navigation and guidance products sales also increased by $20.1 million. These increases to sales were partially offset by volume declines of $17.3 million on naval power equipment arising from lower shipments caused by production capacity diverted to fixing quality control problems, $16.8 million on training devices because certain contracts were completed in 2002, $15.9 million for acoustic undersea warfare products primarily arising from lower spares volume, and $14.5 million for commercial static transfer switches because of the deterioration of the internet service provider market. The remaining decline of $39.6 million was principally on microwave components and telemetry and space products arising from continued softness and declining demand in the space, broadband and wireless commercial communications markets. We expect that our sales for EDS systems in 2003 will decline to about $175 million primarily because the initial installation of EDS systems by TSA for major U.S. airports was completed in 2002. Excluding the decline in EDS systems in 2003, we expect the sales growth, excluding acquisitions, for our Specialized Products to be between 7% and 8%. The majority of the growth is expected for naval power equipment for which shipments should increase after fixing the production problems experienced during 2001 and 2002 and for navigation products and training devices because of continued strong demand and recent orders.

Operating income increased by $56.3 million to $148.3 million for 2002 from $92.0 million for 2001 because of higher sales and operating margin. Operating margin improved by 1.2 percentage points to 10.1% for 2002 compared to 8.9% for 2001. The impact of not amortizing goodwill increased operating margin by 1.6 percentage points. Higher volumes for explosive detection systems caused an increase in operating margin of 2.6 percentage points. These increases were partially offset by declines in operating margin that was primarily related to lower volumes on naval power equipment, microwave components and training devices, and the absence in 2002 of a favorable performance adjustment recorded in 2001 on the AVCATT contract discussed below.

YEAR ENDED DECEMBER 31, 2001 COMPARED WITH YEAR ENDED DECEMBER 31, 2000

Consolidated sales increased $437.3 million to $2,347.4 million for 2001 compared with 2000. Sales from "Contracts, primarily U.S. Government" increased $347.4 million to $1,932.2 million for 2001 from $1,584.8 million for 2000. The MPRI, Coleman, KDI and EER acquisitions contributed $335.6 million of the sales increase in 2001. The remaining sales increase in 2001 was primarily attributable to volume increases of (1) $66.0 million on secure telephone equipment and secure data links, (2) $21.2 million on training devices and services, (3) $16.2 million on acoustic undersea warfare products and (4) $4.4 million on airport security systems. These sales increases were partially offset by declines of $56.7 million on naval power equipment due to lower shipments caused by production quality control problems and customer-directed reductions in delivery requirements, and volume declines of $39.3 million primarily on telemetry

and space products related to the continued decline in the telemetry, space and broadband markets. Sales from "Commercial, primarily products" increased $89.9 million to $415.2 million in 2001 from $325.3 million in 2000. The increase in 2001 was primarily attributable to volume increases of (1) $53.1 million on aviation products, (2) $20.8 million in microwave components and (3) $13.5 million from fixed wireless access products. The remaining change in sales was due to an increase in network support services, which was partially offset by declines primarily on telemetry and space products related to the continued decline in the commercial telemetry, space and broadband communications markets.

The total increase in costs and expenses of $384.7 million to $2,072.1 million for 2001 from $1,687.4 million for 2000 is consistent with the increases in sales. For 2001, costs and expenses were $1,699.6 million for "Contracts, primarily U.S. Government" and $372.5 million for "Commercial, primarily products".

Operating income increased because of higher sales by $52.6 million to $275.3 million for 2001 compared with 2000. Operating income as a percentage of sales ("operating margin") remained unchanged at 11.7%. Operating margins improved at our Training, Simulation & Support Services segment, our Aviation Products & Aircraft Modernization segment and our Specialized Products segment. These margin improvements were offset by a margin decline at our Secure Communications & ISR segment. The change in operating margin for each of our segments is discussed below.

Interest expense decreased $6.6 million to $86.4 million for 2001 because of lower interest rates, changes in the components and levels of our debt, and savings of $4.1 million from the interest rate swap agreements we entered into in July 2001 and November 2001. The interest rate swap agreements exchange the fixed interest rate of 8% on our $200.0 million Senior Subordinated Notes due 2008 and the fixed interest rate of 8 1/2% on our $180.0 million Senior Subordinated Notes due 2008 to variable interest rates determined using the six month LIBOR rate. See "-- Liquidity and Capital Resources".

Interest and other income decreased $2.6 million to $1.8 million. Interest and other income for 2001 includes a net pre-tax gain of $0.6 million ($0.01 per diluted share), consisting of an after-tax gain of $4.3 million from the sale of a 30% interest in ACSS to Thales Avionics and an after-tax charge of $3.9 million to write-down the carrying amount of an investment in common stock of a telecommunications company because the decline of its value was determined to be other than temporary. Also included in interest and other income for 2001 is a pre-tax charge of $0.5 million to account for the increase, in accordance with SFAS No. 133, Accounting for Derivative Instruments and Hedging Activities, in the fair value assigned to the embedded derivatives in L-3 Holdings' $420.0 million 4% Senior Subordinated Convertible Contingent Debt Securities due 2011 ("CODES"), that it sold in the fourth quarter of 2001 (See "-- Liquidity and Capital Resources"), and a pre-tax loss of $0.8 million from an equity method investment. Interest and other income for 2000 includes a net pre-tax gain of $2.5 million ($0.02 per diluted share), consisting of an after-tax gain of $9.2 million from the sale of our interests in certain businesses and an after-tax charge of $7.6 million on the write-down in the carrying amount of an investment in a telecommunications venture that is no longer a going concern, the carrying amount of an investment in a telecommunications equipment provider that was determined to be permanently impaired and a related intangible asset.

The income tax provision for 2001 is based on an effective income tax rate of 38.0% which declined slightly from the effective tax rate of 38.3% for 2000.

Basic earnings per share of L-3 Holdings (EPS) grew 24.2% to $1.54 for 2001 and diluted EPS grew 24.6% to $1.47 for 2001. Diluted weighted-average common shares outstanding increased 22.2% for 2001, primarily because of the sale by L-3 Holdings of its common stock in May 2001, and the dilutive effect of L-3 Holdings' Convertible Notes that it sold in the fourth quarter of 2000. See "-- Liquidity and Capital Resources".

SECURE COMMUNICATIONS & ISR

Sales within our Secure Communications & ISR segment increased $57.5 million, or 14.6%, to $450.5 million for 2001 compared with 2000. The increase in sales was attributed to increased sales of $46.4 million from secure telephone equipment due to an increase in demand for secure communications, and $13.6 million from PrimeWave fixed wireless access products related to a contract for a customer in Argentina. The remaining net decrease in sales was principally attributable to a decline in communication subsystems for the International Space Station, which was partially offset by higher volume for secure data links.

Operating income decreased by $22.1 million to $32.0 million for 2001 from $54.1 million for 2000 because of lower operating margins that were partially offset by higher operating income from higher sales. Operating margin declined 6.7 percentage points from 13.8% in 2000 to 7.1% in 2001. Negative contract margins and increased SG&A and development expenditures and bad debt provisions associated with our PrimeWave business reduced operating margin by 3.7 percentage points. Volume declines and cost overruns related to design and manufacturing problems on certain signal collection and processing equipment reduced operating margin by 1.7 percentage points. The remaining decline in operating margin was principally attributable to lower volumes on certain military communication systems programs caused by contract deliveries that were completed or approaching completion in 2001. The declines were partially offset by higher operating margins on secure telephone equipment attributable to increased volumes and cost improvements.

TRAINING, SIMULATION & SUPPORT SERVICES

Sales within our Training, Simulation & Support Services segment increased $313.4 million, or 110.6%, to $596.8 million for 2001 compared with 2000. The Coleman, MPRI, and EER acquisitions contributed $277.0 million of the increase in sales. The remaining increase in sales was attributable to various training, simulation and communications software support services.

Operating income increased by $42.2 million to $65.7 million for 2001 because of higher sales and operating margins. Operating margin increased 2.7 percentage points from 8.3% in 2000 to 11.0% for 2001. Volume increases and cost improvements from the Link Training Services business increased operating margin by 1.6 percentage points. The remaining increase was principally attributable to higher margins from acquired businesses.

AVIATION PRODUCTS & AIRCRAFT MODERNIZATION

Sales within our Aviation Products & Aircraft Modernization segment increased $54.2 million, or 25.9%, to $263.3 million for 2001 compared with 2000. Volume increased $44.9 million on TCAS products and was attributable to increased customer demand and the timing of the TCAS acquisition completed in April 2000. Volume also increased by $8.2 million for aviation recorders because of commercial customer retrofit deliveries. The remaining increase was primarily attributable to the Spar Aerospace business acquired in November 2001 offset by volume declines of $8.7 million for displays sold to military customers related to the timing of contractual shipments.

Operating income increased by $18.7 million to $85.6 million for 2001 from $66.9 million for 2000 primarily because of higher sales. Operating margin increased 0.5 percentage points from 32.0% for 2000 to 32.5% for 2001. Operating margin increased by 5.2 percentage points because of higher volume of TCAS products with higher gross margin contributions. Lower margins on display products related to volume declines reduced operating margin by 3.3 percentage points. Lower margins from the Spar Aerospace acquired business, which we expected, caused the remaining change in the operating margin.

SPECIALIZED PRODUCTS

Sales within our Specialized Products segment increased $12.2 million, or 1.2%, to $1,036.8 million for 2001 compared with 2000. The increase in sales was principally attributable to the KDI acquired business and increases in volume for microwave components and acoustic undersea warfare products, partially offset by decreases in sales of telemetry and space products and naval power equipment.

Operating income increased by $13.8 million for 2001 to $92.0 million because of higher operating margin. Operating margin increased 1.3 percentage points to 8.9% for 2001 from 7.6% for 2000. Reductions in contract costs related to favorable performance on the AVCATT contract, arising from engineering design changes, material sourcing changes and unit price reductions on several parts in the contract bill of materials that occurred during 2001 increased operating margin by 1.3 percentage points. Cost improvements from increased volume and product sales mix on microwave components resulted in an increase of 1.0 percentage points. Higher margins from fuzing products resulted in an increase of 0.7 percentage points. The remaining increase in operating margin was primarily attributable to overhead

cost reductions and other cost improvements for training devices, volume increases for explosives detection systems and reduced losses on voice and data communication products. These improvements in operating margin were partially offset by continued unfavorable performance on certain contracts and lower production levels for naval power equipment which caused a decrease of 3.2 percentage points in operating margin.

PENSION PLANS

We maintain defined benefit pension plans covering employees at certain of our businesses. At December 31, 2002, our balance sheet included an aggregate $205.1 million liability for pension benefits, an increase of $142.8 million from $62.3 million at December 31, 2001. The increase was primarily caused by the $77.1 million of pension liabilities that we assumed as part of the IS acquisition and the increase in the minimum liability of $75.4 million. Our total estimated projected benefit obligation, including projected future salary increases for covered employees was $713.9 million at the end of 2002, and exceeded the fair value of our pension plan assets of $431.8 million by $282.1 million. The difference between this amount and the pension liability recorded on our balance sheet of $205.1 million is attributable to the deferred recognition of actuarial gains and losses and accumulated differences between the assumed and actual rates of return on plan assets which increased by $115.2 million to $184.9 million from $69.7 million. During 2002, our pension plan assets experienced a loss of $27.8 million, primarily due to the declines in equity capital markets while the expected rate of return on plan assets which was included in the determination of pension cost was $40.7 million, a difference of $68.5 million. In addition, $50.0 million of the increase in our benefit obligation resulted from changes in the actuarial assumptions and differences between actuarial assumptions and actual results. In accordance with SFAS No. 87, Employer's Accounting for Pensions, unrecognized losses that our pension plans experienced in 2002 were not included in pension expense for 2002. Instead, they will be amortized to pension expense in future years over the estimated average remaining service periods of the covered employees (See Notes 3 and 16 to our consolidated financial statements.)

Our pension expense for 2002 was $41.9 million. We expect pension expense for 2003 to increase by a non-cash amount of between $20.0 million and $25.0 million over our 2002 pension expense, primarily because of the amortization of unrecognized losses through December 31, 2002, and the reductions that we made in 2002 to our discount rate from 7.25% to 6.75% and rate of return on plan assets from 9.5% to 9.0%. We made pension plan contributions for the full year 2002 of $47.4 million, which exceeded our original planned contributions for 2002 by more than $30 million. We expect to make pension plan contributions of between $40 million and $50 million in 2003. A substantial portion of our pension plan contributions for L-3's businesses that are U.S. Government contractors are recoverable as allowable indirect contract costs at amounts generally equal to the annual pension contributions. Our actual pension expense for 2003 will be based upon a number of other factors, including the effect of any additional acquisitions for which we assume liabilities for pension benefits, actual pension plan contributions and changes (if any) to our pension assumptions for 2003, including the discount rate, asset return rate and salary increases.

Our shareholders' equity at December 31, 2002, reflects a non-cash charge of $45.6 million (net of tax) to record the increase for the year ended December 31, 2002 in the minimum pension liability in accordance with SFAS No. 87. This non-cash charge had no effect on our compliance with the financial covenants of our debt agreements and did not impact our results of operations for 2002.

LIQUIDITY AND CAPITAL RESOURCES

BALANCE SHEET

Contracts in process increased $22.9 million from December 31, 2002 to March 31, 2003. The increase included $16.7 million related to acquired businesses and $6.2 million principally from:

- increases of $19.2 million in inventoried contract costs, primarily for security products and acoustic undersea warfare products, partially offset by declines for secure communications products;

- increases of $7.0 million in inventories at lower of cost or market due to increases for aviation products and security products partially offset by declines of PrimeWave inventory;

- decreases of $11.4 million in billed receivables due to higher collections from aircraft modifications, ISR systems and secure communications products partially offset by higher sales from secure data links; and

- decreases of $8.6 million in unbilled contract receivables, net of unliquidated progress payments, due to higher billings for ISR systems and security products partially offset by increases for secure data links and aircraft modifications.

Billed receivables were $568.7 million at March 31, 2003, basically unchanged from $568.4 million at December 31, 2002. Billed receivables for our U.S. Government contractor businesses decreased by $20.7 million from $450.9 million at December 31, 2002 to $430.2 million at March 31, 2003, because receivables were collected sooner than expected. Billed receivables for our commercial businesses increased by $21.0 million from $117.5 million at December 31, 2002 to $138.5 million at March 31, 2003, including receivables from acquired businesses of $11.7 million.

L-3's days sales outstanding (DSO) declined to 65.5 at March 31, 2003 from 68.9 at December 31, 2002, primarily because of the timing of certain receivable collections, which occurred sooner than we expected. We calculate our DSO by dividing (a) our aggregate billed receivables and net unbilled contract receivables at the end of the period, by (b) our sales for the last twelve-month period adjusted on a pro forma basis to include sales from acquired businesses for the entire twelve-month period, divided by 365. Excluding the IS acquisition, L-3's DSO would have been 77.5 at March 31, 2003 compared with 79.2 at December 31, 2002.

Included in contracts in process at March 31, 2003, are net billed receivables of $12.6 million and net inventories of $16.3 million related to our PrimeWave business. At December 31, 2002, we had $11.4 million of net billed receivables and $18.2 million of net inventories related to our PrimeWave business.

The increase in property, plant and equipment (PP&E) during the 2003 First Quarter was principally related to the acquisition of Avionics Systems. The percentage of depreciation expense to average gross PP&E declined slightly to 2.9% for the 2003 First Quarter from 3.0% for the 2002 First Quarter. The decline was attributable to (1) the impact from the Avionics Systems acquisition, for which the balance sheet reflects all of the PP&E of the acquired business, but the statement of operations only includes depreciation expense from the date of acquisition rather than for the entire period, and (2) fully depreciated PP&E used in certain of our operations despite having net carrying amounts of zero (after accumulated depreciation) and which are not removed from the balance sheet until they are retired or otherwise disposed of.

Goodwill increased $165.8 million to $2,960.3 million at March 31, 2003 from $2,794.5 million at December 31, 2002. The increase was principally due to the Avionics Systems acquisition as well as net purchase price increases based on the closing date balance sheets for acquisitions completed prior to January 1, 2003.

The increase in accrued employment costs was primarily due to the timing of payments as well as the Avionics Systems acquisition completed in March of 2003. The increase in accrued interest and pension and postretirement liabilities was primarily due to the timing of payments. The decrease in accounts payable was due to the timing of payments primarily attributable to the TSA contract and was partially offset by our acquisition of Avionics Systems.

Customer advances declined by $17.5 million because liquidations exceeded collections, primarily related to shipments and performance on contracts with foreign customers for aircraft modifications and acoustic undersea warfare products. The timing of collections and liquidation of customer advances are proscribed by contract terms, and generally do not coincide because collections mostly occur upon the award of a contract and during the earlier periods of performance, and conversely, liquidations mostly occur during later periods of performance as products are delivered and other work items are completed. Additionally, customer advances do not affect or determine the recognition of revenue because customer advances are a contract financing method.

STATEMENT OF CASH FLOWS

THREE MONTHS ENDED MARCH 31, 2003 COMPARED WITH THREE MONTHS ENDED MARCH 31, 2002

Cash decreased to $34.4 million at March 31, 2003 from $134.9 million at December 31, 2002. The table below provides a summary of our cash flows for the periods indicated.

	THREE MONTHS ENDED MARCH 31,	
	2003	2002
	(in millions)	
Net cash from operating activities	$ 106.1	$ 41.4
Net cash used in investing activities	(213.4)	(1,212.2)
Net cash from financing activities	6.8	855.8
Net decrease in cash	$(100.5)	$ (315.0)

OPERATING ACTIVITIES

We generated $106.1 million of cash from operating activities during the 2003 First Quarter, an increase of $64.7 million from the $41.4 million generated during the 2002 First Quarter. Net income adjusted for non-cash expenses and deferred income taxes increased $33.7 million to $100.0 million for the 2003 First Quarter from $66.3 million for the 2002 First Quarter. Deferred income taxes increased primarily because of larger estimated tax deductions arising from our recent acquisitions. Other non-cash expenses consist primarily of contributions of common stock to savings plans and depreciation and amortization. During the 2003 First Quarter, the change in operating assets and liabilities provided cash of $6.1 million, compared with a use of cash of $24.9 million for the 2002 First Quarter, primarily because of changes in contracts in process, and in particular, the collection of certain receivables sooner than we expected. The decrease in accounts payable reflects payments to vendors primarily for security products. Liquidations exceeded collections of customers advances (discussed above). The timing of payments to employees for salaries and wages, as well as the timing of interest payments was a source of cash. The source of cash from the change in pension and postretirement benefits was due to pension and postretirement expenses for the 2003 First Quarter exceeding related cash contributions.

We expect to generate net cash from operating activities of approximately $385 million for the full year 2003, including approximately $185 million for the first half of 2003. We expect that our cash interest payments for the second quarter of 2003 will exceed those for the 2003 First Quarter by approximately $29 million. Our cash interest payments, which are based on the fixed rate coupons and the interest payment dates of our debt, were approximately $17 million for the 2003 First Quarter and are expected to be approximately $46 million for the second quarter of 2003, approximately $20 million for the third quarter of 2003, and approximately $37 million for the fourth quarter of 2003 after giving effect to the offering by L-3 Communications of $400 million of 6 1/8% Senior Subordinated Notes and the redemption of the 8 1/2% Senior Subordinated Notes (see Financing Activities below).

INVESTING ACTIVITIES

During the 2003 First Quarter, we invested $197.4 million to acquire Avionics Systems and to pay for acquisition costs and purchase price adjustments based on the closing date balance sheets for certain acquisitions completed prior to January 1, 2003. During the 2002 First Quarter, we invested $1,201.5 million to acquire businesses, primarily for our acquisition of IS.

We make capital expenditures for the improvement of manufacturing facilities and equipment. We expect to use approximately $90 million of cash for capital expenditures, and to receive net cash proceeds of approximately $5 million from the dispositions of property, plant and equipment for the full year 2003.

FINANCING ACTIVITIES

In May 2003, L-3 Communications sold $400.0 million of 6 1/8% Senior Subordinated Notes due July 15, 2013 (May 2003 Notes) with interest payable semi-annually on July 15 and January 15 of each year, commencing July 15, 2003. The net proceeds from this offering amounted to $391.0 million.

The net proceeds from this offering will be used to: (1) redeem the 8 1/2% Senior Subordinated Notes due 2008 and (2) increase cash and cash equivalents.

On May 21, 2003, we initiated a full redemption of all the outstanding $180.0 million aggregate principal amount of 8 1/2% Senior Subordinated Notes due 2008. All such notes will be redeemed on June 20, 2003 at a redemption price of 104.250% of the principal amount, plus accrued and unpaid interest to June 20, 2003.

At March 31, 2003, available borrowings under our senior credit facilities were $676.4 million, after reductions for outstanding letters of credit of $73.6 million. There were no outstanding borrowings under our senior credit facilities at March 31, 2003.

In January of 2003, we entered into interest rate swap agreements on $200.0 million of our 7 5/8% Senior Subordinated Notes due 2012. These swap agreements exchanged the fixed interest rate for a variable interest rate on $200.0 million of the $750.0 million principal amount outstanding. In March of 2003, we terminated these interest rate swap agreements and received cash proceeds of $6.4 million. Prior to the termination of the swap agreements, we recorded a reduction to interest expense for the 2003 First Quarter of $1.2 million. This reduction represented interest savings for the period prior to the termination of these swap agreements earned from the lower average variable interest rates of 4.0% that we paid under the swap agreements compared to the 7 5/8% fixed interest rate on the notes subject to the swaps. The remaining $5.2 million of the proceeds represented the future value of the swap agreements at the termination date that was recorded as a deferred gain. The deferred gain will be amortized as a reduction of interest expense over the remaining term of the 7 5/8% Senior Subordinated Notes due 2012 at an amount of $0.1 million per quarter, or $0.6 million annually.

In March of 2003, we entered into interest rate swap agreements on $200.0 million of our 7 5/8% Senior Subordinated Notes due 2012. These swap agreements exchanged the fixed interest rate for a variable interest rate on $200.0 million of the $750.0 million principal amount outstanding. Under the terms of these swap agreements, we will pay or receive the difference between the fixed interest rate of 7 5/8% on the senior subordinated notes and a variable interest rate determined two business days prior to the end of the interest period. The variable interest rate is equal to (1) the six month LIBOR rate, plus (2) an average of 327.75 basis points. The difference to be paid or received on these swap agreements as interest rates change is recorded as an adjustment to interest expense. These swap agreements are accounted for as fair value hedges.

The senior credit facilities, senior subordinated notes, Convertible Notes and CODES agreements contain financial covenants and other restrictive covenants which remain in effect so long as we owe any amount or any commitment to lend exists thereunder. We are in compliance with those covenants in all material respects. The borrowings under the senior credit facilities are guaranteed by L-3 Holdings and by substantially all of the material domestic subsidiaries of L-3 Communications on a senior basis. The payments of principal and premium, if any, and interest on the senior subordinated notes are unconditionally guaranteed, on an unsecured senior subordinated basis, jointly and severally, by all of L-3 Communications' restricted subsidiaries other than its foreign subsidiaries. The guarantees of the senior subordinated notes are junior to the guarantees of the senior credit facilities and rank pari passu with each other and the guarantees of the Convertible Notes and the CODES. The Convertible Notes and CODES are unconditionally guaranteed, on an unsecured senior subordinated basis, jointly and severally, by L-3 Communications and substantially all of its direct and indirect material domestic subsidiaries. These guarantees rank junior to the guarantees of the senior credit facilities and rank pari passu with each other and the guarantees of the senior subordinated notes. The senior credit facilities also limit the payment of dividends by L-3 Communications to L-3 Holdings except for payment of franchise taxes, fees to maintain L-3 Holdings' legal existence, income taxes not to exceed certain amounts, interest accrued on the Convertible Notes and CODES or to provide for operating costs of up to $1.0 million annually. Under the covenant, L-3 Communications may also pay permitted dividends to L-3 Holdings from its excess cash, as defined, up to a cumulative amount of $5.0 million, provided that the debt ratio is no greater than 3.5 to 1 as of the most recent fiscal quarter. As a result, at March 31, 2003, $5.0 million of L-3 Communications' net assets were available for payment of dividends to L-3 Holdings. See "Description of Other Indebtedness" for a description of our debt and related financial covenants.

Based upon our current level of operations, we believe that our cash from operating activities, together with available borrowings under the senior credit facilities, will be adequate to meet our anticipated requirements for working capital, capital expenditures, commitments, research and development expenditures, contingent purchase prices, program and other discretionary investments, and interest payments for the foreseeable future. There can be no assurance, however, that our business will continue to generate cash flow at current levels, or that currently anticipated improvements will be achieved. If we are unable to generate sufficient cash flow from operations to service our debt, we may be required to sell assets, reduce capital expenditures, refinance all or a portion of our existing debt or obtain additional financing. Our ability to make scheduled principal payments or to pay interest on or to refinance our indebtedness depends on our future performance and financial results, which, to a certain extent, are subject to general conditions in or affecting the defense industry and to general economic, political, financial, competitive, legislative and regulatory factors beyond our control. There can be no assurance that sufficient funds will be available to enable us to service our indebtedness, or make necessary capital expenditures or to make discretionary investments.

YEAR ENDED DECEMBER 31, 2002 COMPARED WITH YEARS ENDED DECEMBER 31, 2001 AND 2000

Our cash position at December 31, 2002 was $134.9 million, $361.0 million at December 31, 2001 and $32.7 million at December 31, 2000. The table below provides a summary of our cash flows for the periods indicated.

	YEARS ENDED DECEMBER 31,		
	2002	2001	2000
	(IN MILLIONS)		
Net cash from operating activities	$ 318.5	$ 173.0	$ 113.8
Net cash used in investing activities	(1,810.5)	(424.9)	(608.2)
Net cash from financing activities	1,265.9	580.3	484.3
Net increase (decrease) in cash	$ (226.1)	$ 328.4	$(10.1)

OPERATING ACTIVITIES

We generated $318.5 million of cash from our operating activities during 2002, an increase of $145.5 million from the $173.0 million generated during 2001. Earnings adjusted for non-cash expenses for 2002 and deferred income taxes increased $132.4 million to $415.9 million in 2002 from $283.5 million in 2001. Deferred income taxes for 2002 compared with 2001 increased primarily because of larger estimated tax deductions arising from our recently completed acquisitions, including our acquisition of IS. Other non-cash items consist primarily of contributions of common stock to savings plans. During 2002, our working capital and operating assets and liabilities increased $97.4 million, compared with an increase of $110.5 million in 2001. Our cash flows from operating activities during 2002 reflect increases in billed and unbilled receivables, other current assets and other assets. The use of cash related to customer advances was due to liquidations on certain foreign contracts. The use of cash for other current liabilities was to fund contracts in a loss position for which estimated costs exceed the estimated billings, and was partially offset by an increase in accrued warranty costs primarily for explosive detection systems delivered in 2002. The timing of payments to employees for salaries and wages, as well as the timing of interest payments, was a source of cash. The source of cash in other liabilities was primarily due to deferred gains on the termination of our swap agreements, discussed below. Pension plan contributions in 2002 amounted to $47.4 million.

During 2001, we generated $173.0 million of cash from our operating activities, an increase of $59.2 million from the $113.8 million generated during 2000. Earnings adjusted for non-cash items and deferred income taxes increased $83.2 million to $283.5 million in 2001 from $200.3 million in 2000. During 2001, our working capital and operating assets and liabilities increased $110.5 million compared with an increase of $86.5 million in 2000.

In 2001, we used cash for increases in inventories, receivables and negative operating margins related to our PrimeWave business and naval power equipment products, as well as for incurred contract costs in

excess of billings for the continued effort on the AVCATT contract. These uses of cash were partially offset by a settlement of certain items related to a services agreement and lower income tax payments.

Our cash from operating activities includes interest payments on debt of $109.3 million for 2002, $81.6 million for 2001, and $81.4 million for 2000. Our interest expense also includes amortization of deferred debt issue costs which is a non-cash expense.

Our cash from operating activities includes income tax payments, net of refunds of $2.1 million for 2002, $4.9 million for 2001, and $10.1 million for 2000. Our income tax payments were substantially less than our provisions for income taxes reported on our statements of operations primarily because income tax benefits arising from our acquisitions, as well as reductions to current income taxes payable for compensation expense tax deductions arising from the exercise of employee stock options which are credited directly to shareholders' equity and excluded from income (see Note 13 to our consolidated financial statements). Specifically, the difference of $109.5 million between our income tax payments during 2002 and our provision for income taxes for the year ended December 31, 2002 is comprised of deferred income tax provisions of $79.1 million, $13.3 million of employee stock options compensation expense tax deductions and an increase of $17.1 million to our accrued income taxes, net of certain reclassifications of deferred income tax assets and liabilities.

L-3 receives substantial income tax deductions from its acquisitions of businesses that are structured as asset purchases for income tax purposes. The effect of these income tax deductions is that our cash payments for income taxes are less than our provision for income taxes reported on the statement of operations. The difference is presented as deferred income tax provisions on our statement of cash flows. The deferred income tax provisions primarily result from deducting goodwill amortization from the "asset" acquisitions on L-3's income tax returns over 15 years, in accordance with tax rules and regulations, while no amortization is recorded for financial reporting purposes, in accordance with SFAS No. 142. One of the impacts of SFAS No. 142 was an increase to these income tax benefits because prior to adopting the provisions of SFAS No. 142, goodwill was also amortized for financial reporting purposes, although over longer periods of generally 40 years. We expect that the acquisitions L-3 has completed through December 31, 2002, excluding any additional acquisitions, will continue to generate deferred tax benefits, from 2003 to 2016, with amounts for 2003 to 2005 approximating L-3's deferred tax benefits for 2002. While these income tax deductions are reported as increases or decreases to deferred income tax liabilities and assets, they are not differences that are scheduled to reverse in future periods through normal operations. Rather, they will only reverse if L-3 sells its acquired businesses. Presently, L-3 has no plans to make any material dispositions of its acquired businesses.

INVESTING ACTIVITIES

During 2002, we invested $1,742.1 million to acquire businesses, including IS, Detection Systems, Telos, ComCept, TMA, Electron Devices, Ruggedized Command & Control, Wolf Coach, IMC, Westwood, Wescam and Ship Analytics, and $43.6 million for the remaining outstanding common stock of Spar which was not tendered to L-3 at December 31, 2001. The cash invested in acquisitions for 2002 also includes acquisition costs and payments for contingent purchase price and closing date net assets or net working capital purchase price adjustments for certain acquisitions completed prior to 2002. During 2001, we invested $446.9 million to acquire businesses. During 2000, we invested $599.6 million to acquire businesses.

The IS acquisition was financed using approximately $229.0 million of cash on hand, borrowings under our senior credit facilities of $420.0 million and a $500.0 million senior subordinated bridge loan. We used a portion of the proceeds from the sale in June 2002 of $750.0 million of senior subordinated notes and 14.0 million shares of common stock to repay borrowings under the senior credit facilities and the senior subordinated bridge loan as discussed below in Financing Activities. All of the other acquisitions were financed using cash on hand.

On May 31, 2001, we sold a 30% interest in ACSS to Thales Avionics for $75.2 million in cash. In 2000, we sold our interests in two businesses for net cash proceeds of $19.6 million. The cash proceeds from these transactions are included in other investing activities.

We make capital expenditures for the improvement of manufacturing facilities and equipment. We expect that our capital expenditures for the year ending December 31, 2003 will be approximately $90 million.

FINANCING ACTIVITIES

DEBT

At December 31, 2002, the senior credit facilities were comprised of a $500.0 million five-year revolving credit facility maturing on May 15, 2006 and a $250.0 million 364-day revolving facility maturing on February 25, 2003 under which at the maturity date we may, (1) at our request and subject to approval of the lenders, extend the maturity date, in whole or in part, for an additional 364-day period or (2) at our election, convert the outstanding principal amount thereunder into a term loan which would be repayable in a single payment two years from the conversion date. On February 25, 2003, the Company's lenders approved an extension of the maturity date of the 364-day revolving facility to February 24, 2004.

At December 31, 2002, available borrowings under our senior credit facilities were $661.4 million, after reductions for outstanding letters of credit of $88.6 million. There were no outstanding borrowings under our senior credit facilities at December 31, 2002.

In June 2002, L-3 Communications sold $750.0 million of 7 5/8% Senior Subordinated Notes due June 15, 2012 (the "June 2002 Notes") with interest payable semi-annually on June 15 and December 15 of each year commencing December 15, 2002. The net proceeds from that offering amounted to $731.8 million after underwriting discounts and commissions and other offering expenses.

The net proceeds from the June 2002 Notes and the simultaneous sale of 14.0 million shares by L-3 Holdings of common stock, discussed below under "--Equity," were used to (1) repay $500.0 million borrowed on March 8, 2002, under our senior subordinated bridge loan facility, (2) repay the indebtedness outstanding under our senior credit facilities, (3) repurchase and redeem the 10 3/8% Senior Subordinated Notes due 2007 (discussed in the following paragraph) and (4) increase cash and cash equivalents.

On June 6, 2002, we commenced a tender offer to purchase any and all of our $225.0 million aggregate principal amount of 10 3/8% Senior Subordinated Notes due 2007. The tender offer expired on July 3, 2002. On June 25, 2002 we sent a notice of redemption for all of our 10 3/8% Senior Subordinated Notes due 2007 that remained outstanding after the expiration of the tender offer. Upon sending the notice, the remaining notes became due and payable at the redemption price as of July 25, 2002. During 2002, we recorded a loss on retirement of debt of $16.2 million, comprised of premiums, fees and other transaction costs of $12.5 million and $3.7 million to write-off the remaining balance of unamortized debt issue costs relating to these notes.

In the fourth quarter of 2001, L-3 Holdings sold $420.0 million of 4% Senior Subordinated Convertible Contingent Debt Securities due 2011 (CODES). The net proceeds from this offering amounted to approximately $407.5 million after underwriting discounts and commissions and other offering expenses. Interest is payable semi-annually on March 15 and September 15 of each year commencing March 15, 2002. The CODES are convertible into L-3 Holdings' common stock at a conversion price of $53.81 per share (7,804,878 shares) under any of the following circumstances: (1) during any Conversion Period (defined below) if the closing sales price of the common stock of L-3 Holdings is more than 120% of the conversion price ($64.58) for at least 20 trading days in the 30 consecutive trading-day period ending on the first day of the respective Conversion Period, (2) during the five business day period following any 10 consecutive trading-day period in which the average of the trading prices for the CODES was less than 105% of the conversion value, (3) if the credit ratings assigned to the CODES by either Moody's or Standard & Poor's are below certain specified ratings, (4) if they have been called for redemption by us, or (5) upon the occurrence of certain specified corporate transactions. A Conversion Period is the period from and including the thirtieth trading day in a fiscal quarter to, but not including, the thirtieth trading day of the immediately following fiscal quarter. There are four Conversion Periods in each fiscal year. Additionally, holders of the CODES have a right to receive contingent interest payments, not to exceed a per annum rate of 0.5% of the outstanding principal amount of the CODES, which will be paid on the CODES during any six-month period following a six-month

period in which the average trading price of the CODES is above 120% of the principal amount of the CODES. The contingent interest payment provision was triggered for the period beginning September 15, 2002 to March 14, 2003 and resulted in additional interest for that period of $0.8 million. The contingent interest payment provision as well as the ability of the holders of the CODES to exercise the conversion features as a result of changes in the credit ratings assigned to the CODES have been accounted for as embedded derivatives.

In the fourth quarter of 2000, L-3 Holdings sold $300.0 million of 5 1/4% Convertible Senior Subordinated Notes due 2009 (the "Convertible Notes"). The net proceeds from this offering amounted to $290.5 million after underwriting discounts and commissions and other offering expenses, and were used to repay revolver borrowings outstanding under our senior credit facilities. The Convertible Notes may be converted at any time into L-3 Holdings common stock at a conversion price of $40.75 per share (7,361,964 shares).

In June and August of 2002, we terminated the interest rate swap agreements we entered into in 2001 on $380.0 million of our Senior Subordinated Notes due 2008 and received cash proceeds of $9.3 million. In connection with the termination, we recorded a reduction in interest expense for 2002 of $4.6 million, which represented the interest savings for the period prior to the termination of the swap agreements earned from the differences between the average variable interest rates of 4.6% that we paid under the swap agreements which were lower than the average fixed interest rate of 8.2% on the notes subject to the swaps. The remaining $4.7 million represented the future value of the swap agreements at the termination date and was recorded as a deferred gain in accordance with SFAS No. 133 and will be amortized as a reduction of interest expense over the remaining terms of the $380.0 million of Senior Subordinated Notes due 2008 at an amount equal to $0.2 million per quarter, or $0.8 million annually. We recorded an additional reduction of interest expense for 2002 of $2.5 million relating to interest savings for interest periods which ended prior to the period during which we terminated of the interest rate swap agreements. In June 2002, we entered into interest rate swap agreements on $200.0 million of our 7 5/8% Senior Subordinated Notes due 2012. These swap agreements exchanged the fixed interest rate for a variable interest rate on $200.0 million of the $750.0 million principal amount outstanding. On September 30, 2002, we terminated these interest rate swap agreements and received cash proceeds of $13.9 million in October 2002. In connection with the termination, we recorded a reduction of interest expense for 2002 of $1.8 million, which represented interest savings based on the variable interest rate of 4.1% that L-3 paid in accordance with the terms of the swap for the period prior to the termination of these swap agreements. The remaining $12.1 million represented the future value of the swap agreements at the termination date and was recorded as a deferred gain and will be amortized as a reduction of interest expense over the remaining term of the 7 5/8% Senior Subordinated Notes due 2012 at an amount of $0.3 million per quarter, or $1.3 million annually. All of the cash proceeds received from the swap agreements are included in cash from operating activities on L-3's statement of cash flows. L-3's earnings plan for 2002 included anticipated interest expense savings from the swap agreements because we expected the variable rates payable on the swaps would be lower than the fixed interest rates on our senior subordinated notes. L-3 may enter into new interest rate swap agreements in the future if we believe that financial market conditions are favorable.

CONTRACTUAL OBLIGATIONS AND CONTINGENT COMMITMENTS

The tables below present our contractual obligations and contingent commitments at December 31, 2002.

CONTRACTUAL OBLIGATIONS:	TOTAL	YEARS ENDING DECEMBER 31, 2003	2004	2005	2006 AND THEREAFTER
		(in millions)			
Principal amount of L-3 Communications Corporation's long-term debt	$1,130.0	$ --	$ --	$ --	$1,130.0
Principal amount of L-3 Holdings' long-term debt	720.0	--	--	--	720.0
Non-cancelable operating leases	565.1	71.3	64.6	80.7	348.5
Acquisition earnouts	7.3	7.3	--	--	--
Capital leases	2.2	0.7	0.8	0.5	0.2
Total	$2,424.6	$79.3	$65.4	$81.2	$2,198.7

CONTINGENT COMMITMENTS:	TOTAL	YEARS ENDING DECEMBER 31, 2003	2004	2005	2006 AND THEREAFTER
		(in millions)			
Outstanding letters of credit under our senior credit facilities	$ 88.6	$ 77.7	$ 5.4	$ 5.5	$ --
Other outstanding letters of credit	71.1	65.7	0.7	0.2	4.5
Acquisition earnouts (1)	35.1	1.5	21.9	5.9	5.8
Guarantees of affiliate debt	1.0	1.0	--	--	--
Capital contributions for limited partnership investments	5.0	5.0	--	--	--
Total	$200.8	$150.9	$28.0	$11.6	$10.3

(1) Represents contingent purchase price payments or "earnouts" for certain of our acquisitions that are contingent upon the post-acquisition financial performance of those acquired businesses. Any amount that we pay for the earnouts will be reported as cash paid for acquisition of business within investing activities on the statement of cash flows and will be recorded as an increase to goodwill for the acquisition.

EQUITY. On June 28, 2002, L-3 Holdings sold 14.0 million shares of its common stock in a public offering for $56.60 per share. Upon closing, we received net proceeds of $766.8 million after deducting underwriting discounts and commissions and other offering expenses. As mentioned above, the net proceeds from this sale and the simultaneous sale of the June 2002 Notes were used to (1) repay $500.0 million borrowed on March 8, 2002, under our senior subordinated bridge loan facility, (2) repay the indebtedness outstanding under our senior credit facilities, (3) repurchase and redeem the 10 3/8% Senior Subordinated Notes due 2007 discussed above and (4) increase cash and cash equivalents.

On April 23, 2002, L-3 Holdings announced that its Board of Directors had authorized a two-for-one stock split on all of its shares of common stock. The stock split entitled all shareholders of record at the close of business on May 6, 2002 to receive one additional share of L-3 Holdings' common stock for every share held on that date. The additional shares were distributed to shareholders in the form of a stock dividend on May 20, 2002. Upon completion of the stock spilt, L-3 Holdings had approximately 80 million shares of common stock outstanding.

On May 2, 2001, L-3 Holdings sold 9.2 million shares of its common stock in a public offering for $40.00 per share. In addition, as part of the transaction, other selling stockholders, including affiliates of Lehman Brothers Inc., sold 4.7 million secondary shares. Upon closing, we received net proceeds of $353.6 million, which we used to repay borrowings outstanding under our senior credit facilities, pay for the KDI and EER acquisitions and increase cash and cash equivalents.

EARNINGS BEFORE INTEREST, TAXES, DEPRECIATION AND AMORTIZATION (EBITDA)

We define EBITDA as operating income plus depreciation expense and amortization expense. We believe that the most directly comparable GAAP financial measure to EBITDA is net cash from operating activities. Net cash from operating activities was $318.5 million for 2002, $173.0 million for 2001 and $113.8 million for 2000. Our EBITDA was $529.9 million for 2002, $326.3 million for 2001 and $297.0 million for 2000. Net cash from operating activities was $106.1 million for the 2003 First Quarter compared with $41.4 million for the 2002 First Quarter. Our EBITDA was $131.6 million for the 2003 First Quarter compared with $86.5 million for the 2002 First Quarter. The table below presents a reconciliation of net cash from operating activities to EBITDA.

	THREE MONTHS ENDED MARCH 31,		YEAR ENDED DECEMBER 31,		
	2003	2002	2002	2001	2000
			(in millions)		
Net cash from operating activities	$106.1	$ 41.4	$ 318.5	$173.0	$113.8
Less: Adjustments to reconcile net income to net cash from operating activities	(56.4)	(36.5)	(140.4)	(57.5)	(31.1)
Add: Cumulative effect of a change in accounting principle, net of income taxes	--	24.4	24.4	--	--
Income before cumulative effect of a change in accounting principle	49.7	29.3	202.5	115.5	82.7
Less: Interest and other income	(1.4)	(1.0)	(5.0)	(1.8)	(4.4)
Add: Loss on retirement of debt	--	--	16.2	--	--
Provision for income taxes	28.0	16.0	111.6	70.8	51.4
Interest expense	32.2	26.1	122.5	86.4	93.0
Minority interest	0.3	0.9	6.2	4.4	--
Depreciation and amortization	22.8	15.2	75.9	87.0	74.3
EBITDA	$131.6	$ 86.5	$ 529.9	$362.3	$297.0

Other than our amount of debt and interest expense, EBITDA is the major component in the calculation of the debt ratio and interest coverage ratio which are part of the financial covenants for our debt. The debt ratio is defined as the ratio of consolidated total debt to consolidated EBITDA. The interest coverage ratio is equal to the ratio of consolidated EBITDA to consolidated cash interest expense. The higher our EBITDA is on a relative basis to our outstanding debt, the lower our debt ratio will be. A lower debt ratio indicates a higher borrowing capacity. Similarly, an increase in our EBITDA on a relative basis to consolidated cash interest expense results in a higher interest coverage ratio, which indicates a greater capacity to service debt.

EBITDA is presented as additional information because we believe it to be a useful indicator of an entity's debt capacity and its ability to service its debt. EBITDA is not a substitute for operating income, net income or net cash from operating activities as determined in accordance with generally accepted accounting principles in the United States of America. EBITDA is not a complete net cash flow measure because EBITDA is a financial measure that does not include reductions for cash payments for an entity's obligation to service its debt, fund its working capital and capital expenditures and pay its income taxes. Rather, EBITDA is one potential indicator of an entity's ability to fund these cash requirements. EBITDA as we define it may differ from similarly named measures used by other entities and, consequently could be misleading unless all entities calculate and define EBITDA in the same manner. EBITDA is also not a complete measure of an entity's profitability because it does not include costs and expenses for depreciation and amortization, interest and income taxes.

DERIVATIVE FINANCIAL INSTRUMENTS

Included in our derivative financial instruments are foreign currency forward contracts and the embedded derivatives related to the issuance of our CODES. All of our derivative financial instruments that are sensitive to market risk are entered into for purposes other than trading.

EMBEDDED DERIVATIVES. The contingent interest payment and contingent conversion features of the CODES are embedded derivatives which we bifurcated from the CODES and separately recorded on our balance sheet. On the date of issuance of the CODES, we ascribed $2.5 million of the net proceeds from the CODES to those embedded derivatives which represented their aggregate fair value, and recorded it as a liability in accordance with SFAS No. 133. The subsequent increases (decreases) to the fair values of the embedded derivatives are recorded as losses (gains) in the statement of operations. Their fair values at March 31, 2003 were $1.6 million which represents a liability.

INTEREST RATE RISK. Our financial instruments that are sensitive to changes in interest rates include borrowings under the senior credit facilities and interest rate swap agreements, all of which are denominated in U.S. dollars. The interest rates on the senior subordinated notes, Convertible Notes and CODES are fixed-rate and are not affected by changes in interest rates.

In March of 2003, we entered into new interest rate swap agreements on $200.0 million of our senior subordinated notes to convert their fixed interest rates to variable rates and to take advantage of the current low interest rate environment. These new swap agreements discussed above are described in "Management's Discussion and Analysis of Results of Operations and Financial Condition -- Statement of Cash Flows -- Financing Activities," of this prospectus. For every basis point (0.01%) that the six-month LIBOR interest rate is greater than 4.35%, we will incur an additional $20,000 of interest expense above the fixed interest rate on $200.0 million of senior subordinated notes calculated on a per annum basis until maturity. Conversely, for every basis point that the six month LIBOR interest rate is less than 4.35%, we will recognize $20,000 of interest income on $200.0 million of senior subordinated notes calculated on a per annum basis until maturity. The six month LIBOR rate at March 31, 2003 was 1.25%.

We attempt to manage exposure to counterparty credit risk by entering into interest rate agreements only with major financial institutions that are expected to perform fully under the terms of such agreements. Cash payments between us and the counterparties are made on the interest payment dates of the senior subordinated notes for the interest rate swap agreements. Such payments are recorded as adjustments to interest expense. Additional data on our debt obligations and our applicable borrowing spreads included in the interest rates we pay on borrowings under the senior credit facilities are provided in Notes 8 and 9 to our consolidated financial statements.

The table below presents significant contract terms and fair values at March 31, 2003 for our interest rate swap agreements.

	INTEREST RATE SWAP AGREEMENTS (in millions)
Notional amount	$ 200.0
Interest rate	7 5/8%
Reference rate	6 month LIBOR
Designated maturity	Semi-Annual
Expiration date	June 15, 2012
Fair value	$ (4.1)

FOREIGN CURRENCY EXCHANGE RISK. We conduct some of our operations outside the U.S. in functional currencies other than the U.S. dollar. Additionally, some of our U.S. operations have contracts with foreign customers denominated in foreign currencies. To mitigate the risk associated with certain of these contracts denominated in foreign currency we have entered into foreign currency forward contracts. At March 31, 2003, the notional value of foreign currency forward contracts was $37.2 million and the fair value of these contracts was $0.6 million, which represents a liability. We account for these contracts as cash flow hedges.

EQUITY PRICE RISK. Our equity investments in common stocks and limited partnerships are subject to equity price risk. The fair values of our investments are based on quoted market prices, as available, and on historical cost for investments in cases in which it is not practicable to estimate fair value. Both the carrying values and estimated fair values of such instruments amounted to $24.4 million at March 31, 2003.

BACKLOG AND ORDERS

We define funded backlog as the value of funded orders which have not yet been recognized as sales. We define funded orders as the value of contract awards received from the U.S. Government, for which the U.S. Government has appropriated funds, plus the value of contract awards and orders received from customers other than the U.S. Government. Our funded backlog as of December 31, 2002 was $3,228.6 million and as of December 31, 2001 was $1,719.3 million. We expect to record as sales approximately 73.0% of our December 31, 2002 funded backlog during 2003. However, there can be no assurance that our funded backlog will become sales in any particular period, if at all. Funded orders received were $4,383.1 million for 2002, $2,456.1 million for 2001 and $2,013.7 million for 2000.

Our funded backlog does not include the full value of our contract awards including those pertaining to multi-year, cost-plus reimbursable contracts, which are generally funded on an annual basis. Funded backlog also excludes the sales value of unexercised contract options that may be exercised by customers under existing contracts and the sales value of purchase orders that we may receive under indefinite quantity contracts or basic ordering agreements.

RESEARCH AND DEVELOPMENT

Company-sponsored research and development costs, including bid and proposal costs were $159.9 million for 2002, $107.5 million for 2001 and $101.9 million for 2000. Customer-funded research and development costs were $480.9 million for 2002, $319.4 million for 2001 and $299.3 million for 2000.

CONTINGENCIES

We are engaged in providing products and services under contracts with the U.S. Government and to a lesser degree, under foreign government contracts, some of which are funded by the U.S. Government. All such contracts are subject to extensive legal and regulatory requirements, and, periodically, agencies of the U.S. Government investigate whether such contracts were and are being conducted in accordance with these requirements. Under government procurement regulations, an indictment by a federal grand jury could result in the suspension for a period of time from eligibility for awards of new government contracts. A conviction could result in debarment from contracting with the federal government for a specified term. Additionally, in the event that U.S. Government expenditures for products and services of the type we manufacture and provide are reduced, and not offset by greater commercial sales or other new programs or products, or acquisitions, there may be a reduction in the volume of contracts or subcontracts awarded to us.

We continually assess our obligations with respect to applicable environmental protection laws. While it is difficult to determine the timing and ultimate cost to be incurred in order to comply with these laws, based upon available internal and external assessments, with respect to those environmental loss contingencies of which we are aware, we believe that even without considering potential insurance recoveries, if any, there are no environmental loss contingencies that, individually or in the aggregate, would be material to our consolidated financial position, results of operations or cash flows. Also, we have been periodically subject to litigation, claims or assessments and various contingent liabilities incidental to our business. We accrue for these contingencies when it is probable that a liability has been incurred and the amount of the loss can be reasonably estimated.

With respect to those investigative actions, items of litigation, claims or assessments of which we are aware, we are of the opinion that the probability is remote that, after taking into account certain provisions that have been made with respect to these matters, the ultimate resolution of any such investigative actions, items of litigation, claims or assessments will have a material adverse effect on our consolidated financial position, results of operations or cash flows.

On August 6, 2002, Aviation Communications & Surveillance Systems, LLC (ACSS) was sued by Honeywell International Inc. and Honeywell Intellectual Properties, Inc. (collectively, "Honeywell") for alleged infringement of patents that relate to terrain awareness avionics. The lawsuit was filed in the United States District Court for the District of Delaware. In December of 2002, Honeywell withdrew without prejudice the lawsuit against ACSS and agreed to proceed with non-binding arbitration. If the

matter is not resolved through arbitration, Honeywell may reinstitute the litigation after August 14, 2003. The Company had previously investigated the Honeywell patents and believes that ACSS has valid defenses against Honeywell's patent infringement suit. In addition, ACSS has been indemnified to a certain extent by Thales Avionics, which provided ACSS with the alleged infringing technology. Thales Avionics owns 30% of ACSS. In the opinion of management, the ultimate disposition of Honeywell's pending claim will not result in a material liability to the Company.

On November 18, 2002, the Company initiated a proceeding against OSI Systems, Inc. (OSI) in the United States District Court sitting in the Southern District of New York (the "New York action") seeking, among other things, a declaratory judgment that the Company had fulfilled all of its obligations under a letter of intent with OSI (the "OSI Letter of Intent"). Under the OSI Letter of Intent, the Company was to negotiate definitive agreements with OSI for the sale of certain businesses the Company acquired from PerkinElmer, Inc. on June 14, 2002. On December 23, 2002, OSI responded by filing suit against the Company in the United States District Court sitting in the Central District of California (the "California action") alleging, among other things, that the Company breached its obligations under the OSI Letter of Intent and seeking damages in excess of $100 million not including punitive damages. On February 7, 2003, OSI filed an answer and counterclaims in the New York action that asserted substantially the same claims OSI had raised in the California action. The California action was dismissed by the California District Court in favor of the New York action. Under the OSI Letter of Intent, the Company proposed selling to OSI the conventional detection business and the ARGUS business that the Company recently acquired from PerkinElmer, Inc. Negotiations with OSI lasted for almost one year and ultimately broke down over issues regarding, among other things, intellectual property, product-line definitions, allocation of employees and due diligence. The Company believes that the claims asserted by OSI in its suit are without merit and intends to defend against the OSI claims vigorously.

The Company is periodically subject to litigation, claims or assessments and various contingent liabilities incidental to its business. With respect to those investigative actions, items of litigation, claims or assessments of which they are aware, management of the Company is of the opinion that the probability is remote that, after taking into account certain provisions that have been made with respect to these matters, the ultimate resolution of any such investigative actions, items of litigation, claims or assessments will have a material adverse effect on the consolidated financial position, results of operations or cash flows of the Company.

RECENTLY ISSUED ACCOUNTING STANDARDS

In May of 2002, the FASB issued SFAS No. 145, Rescission of SFAS Nos. 4, 44 and 64, Amendment of SFAS No. 13, and Technical Corrections as of April 2002. SFAS No. 145, rescinds SFAS No. 4, Reporting Gains and Losses from Extinguishment of Debt, and SFAS No. 64, Extinguishments of Debt made to Satisfy Sinking-Fund Requirements. Under the provisions of SFAS No. 145, gains and losses from extinguishment of debt can only be classified as extraordinary items if they meet the criteria in APB Opinion No. 30. The provisions of this Statement related to the rescission of SFAS No. 4 shall be applied in fiscal years beginning after May 15, 2002. Earlier application is permitted. This statement also amends SFAS No. 13, Accounting for Leases, to eliminate an inconsistency between the accounting for sale-leaseback transactions and certain lease modifications that have economic effects that are similar and is effective for transactions occurring after May 15, 2002. This Statement also amends other existing authoritative pronouncements to make various technical corrections, clarify meanings, or describe their applicability under changed conditions and are effective for financial statements issued on or after May 15, 2002. In accordance with the provisions of SFAS No. 145, beginning on January 1, 2003, the loss on the retirement of debt of $16.2 million ($9.9 million after-tax or $0.11 per diluted share) that we recorded in June 2002 has been presented as a separate caption within income from continuing operations and the related income tax benefit has been included in the provision for income taxes.

In January of 2003, the FASB issued FASB Interpretation No. 46, Consolidation of Variable Interest Entities (FIN 46). This interpretation provides guidance on the identification of, and financial reporting for, entities over which control is achieved through means other than voting rights. Such entities have been termed by FIN 46 as variable interest entities (VIE). Once effective, FIN 46 will be the guidance that determines (1) whether consolidation is required under the "controlling financial interest" model of ARB

Bulletin No. 51, Consolidated Financial Statements, or (2) whether the variable-interest model under FIN 46 should be used to account for existing and new entities. FIN 46 includes guidance for identifying the enterprise that will consolidate a VIE, which is the enterprise that is exposed to the majority of an entity's risks or receives the majority of the benefits from an entity's activities. FIN 46 also requires that the enterprises that hold a significant variable interest in a VIE make new disclosures in their financial statements. The transitional disclosures of FIN 46, which are effective immediately, require an enterprise to identify the entities in which it holds a variable interest, if the enterprise believes that those entities might be considered VIEs upon the adoption of FIN 46. The implementation and remaining disclosure requirements of FIN 46 are effective immediately for VIEs created after January 31, 2003, and on July 1, 2003 for all VIEs created before January 31, 2003. The Company does not believe that it holds any interests in VIEs, however, the Company is currently evaluating whether it holds a variable interest in entities that might be considered VIEs.

In March of 2003, the Emerging Issues Task Force (EITF) issued EITF No. 00-21, Accounting for Revenue Arrangements with Multiple Deliverables. EITF No. 00-21 addresses how to determine whether a contractual arrangement involving multiple deliverables contains more than one accounting unit and how consideration should be measured and allocated to the separate accounting units. EITF No. 00-21 applies to all deliverables within contractually binding arrangements in all industries, except to the extent that a deliverable in a contractual arrangement is subject to other existing higher-level authoritative literature, and is effective for revenue arrangements entered into in fiscal periods beginning after June 15, 2003. The Company is currently evaluating the effect of EITF No. 00-21 on the Company's revenue recognition accounting policies and on its consolidated results of operations and financial position.

In May of 2003, the FASB issued SFAS No. 150, Accounting for Certain Financial Instruments with Characteristics of both Liabilities and Equity. This Statement applies to certain financial instruments that, under previous guidance, issuers could account for as equity. SFAS No. 150 requires that those instruments be classified as liabilities in statements of financial position. SFAS No. 150 also requires disclosures about alternative ways of settling the instruments and the capital structure of entities, whose shares are all mandatorily redeemable. SFAS No. 150 is effective for these financial instruments entered into or modified after May 31, 2003. For these financial instruments entered into before May 31, 2003 SFAS No. 150 is effective for our interim period beginning July 1, 2003. SFAS No. 150 is not expected to have a material effect on our consolidated results of operations or financial position.

INFLATION

The effect of inflation on our sales and earnings has not been significant. Although a majority of our sales are made under long-term contracts, the selling prices of such contracts, established for deliveries in the future, generally reflect estimated costs to be incurred in these future periods. In addition, some contracts provide for price adjustments through escalation clauses.

OVERVIEW

We are a leading merchant supplier of secure communications and intelligence, surveillance and reconnaissance (ISR) systems, training, simulation and support services, aviation products and aircraft modernization, as well as specialized products. Our businesses employ proprietary technologies and capabilities, and we believe our businesses have leading positions in their respective primary markets. Our customers include the U.S. Department of Defense (DoD) and prime contractors thereof, certain U.S. Government intelligence agencies, major aerospace and defense contractors, foreign governments, commercial customers and certain other U.S. federal, state and local government agencies. For the year ended December 31, 2002, direct and indirect sales to the DoD provided approximately 65.5% of our sales, while sales to commercial customers, foreign governments and U.S. federal, state and local government agencies other than the DoD provided the remaining 34.5% of our sales. For the year ended December 31, 2002, we had sales of $4,011.2 million, of which U.S. customers accounted for approximately 85.7% and foreign customers accounted for approximately 14.3%, and operating income of $454.0 million. We have the following four reportable segments: (1) Secure Communications & ISR; (2) Training, Simulation & Support Services; (3) Aviation Products & Aircraft Modernization; and (4) Specialized Products. Financial information for our reportable segments is included in Management's Discussion and Analysis of Results of Operations and Financial Condition and in Note 18 of our consolidated financial statements and Note 12 of our unaudited consolidated financial statements, each included elsewhere herein.

The discussion below presents summary data on the businesses of each of our four reportable segments. Detailed data on the products and services for each of our reportable segments is presented below on pages 67 to 79.

Secure Communications & ISR

Our businesses in this segment provide products and services for the global ISR market, specializing in signals intelligence and communications intelligence systems. These products and services provide the warfighter in real-time with the unique ability to collect and analyze unknown electronic signals from command centers, communication nodes and air defense systems for real-time situation awareness and response. These businesses also provide secure, high data rate communications systems for military and other U.S. Government and foreign government reconnaissance and surveillance applications. We believe our systems and products are critical elements of virtually all major communication, command and control, intelligence gathering and space systems. Our systems and products are used to connect a variety of airborne, space, ground and sea-based communication systems and are used in the transmission, processing, recording, monitoring and dissemination functions of these communication systems. Our major secure communication programs and systems include:

- secure data links for airborne, satellite, ground and sea-based remote platforms for real-time information collection and dissemination to users;
- highly specialized fleet management and support, including procurement, systems integration, sensor development, modification and maintenance for signals intelligence and ISR special mission aircraft and airborne surveillance systems;
- strategic and tactical signals intelligence systems that detect, collect, identify, analyze and disseminate information;
- secure telephone and network equipment and encryption management; and
- communication systems for surface and undersea vessels and manned space flights.

Training, Simulation & Support Services.

Our businesses in this segment provide a full range of training, simulation and support services, including:

- services designed to meet customer training requirements for aircrews, navigators, mission operators, gunners and maintenance technicians for virtually any platform, including military fixed and rotary wing aircraft, air vehicles and various ground vehicles;
- communication software support, information services and a wide range of engineering development services and integration support;
- high-end engineering and information support services used for command, control, communications and ISR architectures, as well as for air warfare modeling and simulation tools for applications used by the DoD, Department of Homeland Security and U.S. Government intelligence agencies, including missile and space systems, Unmanned Aerial Vehicles (UAVs) and military aircraft;
- developing and managing extensive programs in the United States and internationally that focus on teaching, training and education, logistics, strategic planning, organizational design, democracy transition and leadership development;
- producing crisis management software and providing command and control for homeland security applications; and
- design, prototype development and production of ballistic missile targets for missile defense applications, including present and future threat scenarios.

Aviation Products & Aircraft Modernization.

Our businesses in this segment provide aviation products and aircraft modernization services, including:

- airborne traffic and collision avoidance systems (TCAS) for commercial and military applications;
- commercial, solid-state, crash-protected cockpit voice recorders, flight data recorders and maritime hardened voyage recorders;
- ruggedized custom displays for military and high-end commercial applications;
- turnkey aviation life cycle management services that integrate custom developed and commercial off-the-shelf products for various military and commercial wide-body and rotary wing aircraft, including heavy maintenance and structural modifications and Head-of-State and commercial interior completions; and
- engineering, modification, maintenance, logistics and upgrade services for U.S. Special Operations Command aircraft, vehicles and personnel equipment.

Specialized Products.

Our businesses in this segment supply products, including components, subsystems and systems, to military and commercial customers in several niche markets. These products include:

- ocean products, including acoustic undersea warfare products for mine hunting, dipping and anti-submarine sonars and naval power distribution, conditioning, switching and protection equipment for surface and undersea platforms;
- ruggedization and integration of commercial-off-the-shelf technology for displays, computers and electronic systems for military and commercial applications;
- integrated video security and surveillance systems that provide perimeter security used by the U.S. Immigration and Naturalization Service and U.S. Border Patrol to monitor and protect U.S. borders;

- o security systems for aviation, port and border applications to detect explosives, concealed weapons, contraband and illegal narcotics, to inspect agricultural products and to examine cargo;

- o telemetry, instrumentation, space and navigation products, including tracking and flight termination;

- o premium fuzing products;

- o microwave components used in radar communication satellites, wireless communication equipment, electronic surveillance, communication and electronic warfare applications and countermeasure systems;

- o high performance antennas and ground based radomes;

- o training devices and motion simulators which produce advanced virtual reality simulation and high-fidelity representations of cockpits and mission stations for fixed and rotary wing aircraft and land vehicles; and

- o precision stabilized electro-optic surveillance systems, including high magnification lowlight, daylight and forward looking infrared sensors, laser range finders, illuminators and designators, and digital and wireless communication systems.

DEVELOPING COMMERCIAL AND CIVIL OPPORTUNITIES

Part of our growth strategy is to identify commercial and non-DoD applications from select products and technologies that we currently sell to our defense customers. We have currently identified two vertical markets where we believe there are significant opportunities to grow our sales: transportation and broadband wireless communications products.

Within the transportation market, we are offering (1) an explosive detection system for screening checked baggage at airports, X-ray screening products for cargo, air freight, port and border security applications, display and power propulsion systems for rail transportation and power switches for internet service providers, and (2) maritime voyage recorders and an enhanced aviation collision avoidance product that incorporates ground proximity warning. Within the communications product market, we are offering local fixed wireless access equipment for voice, DSL and internet access, and a broad range of commercial components and digital test equipment for broadband communications providers.

We have developed the majority of our commercial and civil products employing technology used in our defense businesses. Except for our explosive detection systems, sales generated from our developing commercial and civil opportunities have not been material to us.

INDUSTRY OVERVIEW

The U.S. defense industry has undergone significant changes precipitated by ongoing U.S. federal budget pressures and adjustments in political roles and missions to reflect changing strategic and tactical threats. From fiscal year 1986 to fiscal year 1999, the U.S. DoD budget experienced a decline in nominal dollars. This trend was reversed with the fiscal 2000 DoD budget, followed by increases in fiscal 2001, 2002 and 2003 with an anticipated increase in fiscal 2004 to $380.0 billion. In addition, the DoD philosophy has focused on its transformation strategy that balances modernization and recapitalization (or upgrading existing platforms) while enhancing readiness and joint operations. As a result, defense budget program allocations continue to favor advanced information technologies related to command, control and communications (C(3)) and ISR. Furthermore, the DoD's emphasis on system interoperability, force multipliers and providing battlefield commanders with real-time data is increasing the electronic content of nearly all major military procurement and research programs. As a result, it is expected that the DoD's budget for communications and defense electronics will continue to grow.

The U.S. defense industry has also undergone dramatic consolidation resulting in the emergence of five dominant prime system contractors: The Boeing Company, Lockheed Martin Corporation, Northrop Grumman Corporation, Raytheon Company and General Dynamics Corporation. We believe that one outcome of this consolidation is that the DoD must ensure that continued vertical integration does not

further diminish the fragmented, yet critical DoD vendor base. Additionally, we believe it has become uneconomical for the prime contractors to design, develop and manufacture numerous essential products, components and subsystems for their own use. We believe this situation has and will continue to create opportunities for merchant suppliers such as L-3. As the prime contractors continue to evaluate their core competencies and competitive positions, focusing their resources on larger programs and platforms, we expect the prime contractors to continue to exit non-strategic business areas and procure these needed elements on more favorable terms from independent, commercially oriented merchant suppliers. Examples of this trend include recent divestitures of certain non-core defense-related businesses by several of the prime contractors.

The focus on cost reduction by the prime contractors and the DoD is also driving increased use of commercial off-the-shelf products for upgrades of existing systems and in new systems. We believe the prime contractors will continue to be under pressure to reduce their costs and will increasingly seek to focus their resources and capabilities on major platforms and systems, turning to commercially oriented "best of breed" merchant suppliers to produce subsystems, components and products. We believe successful merchant suppliers will continue to use their resources to complement and support, rather than compete with, the prime contractors. We anticipate that the relationships between the major prime contractors and their primary suppliers will continue to evolve in a fashion similar to those employed in the automotive and commercial aircraft industries. We expect that these relationships will be defined by critical partnerships encompassing increasingly greater outsourcing of non-core products and systems by the prime contractors to their key merchant suppliers and increasing supplier participation in the development of future programs. We believe that early involvement in the upgrading of existing systems and the design and engineering of new systems incorporating the prime contractor outsourced products will provide merchant suppliers, including us, with a competitive advantage in securing new business and provide the prime contractors with significant cost reduction opportunities through the coordination of the design, development and manufacturing processes.

BUSINESS STRATEGY

We intend to grow our sales, improve our profitability and build on our position as a leading merchant supplier of systems, products and services to the major contractors in the aerospace and defense industry as well as the U.S. Government. We also intend to continue to leverage our expertise and products into selected new commercial and civil business areas where we can adapt our existing products and technologies. Our strategy to achieve these objectives includes:

EXPAND MERCHANT SUPPLIER RELATIONSHIPS. We have developed strong relationships with the DoD, several other U.S. Government agencies and all of the major U.S. defense prime contractors, enabling us to identify new business opportunities and anticipate customer needs. As an independent merchant supplier, we anticipate that our growth will be driven by expanding our share of existing programs and by participating in new programs. We identify opportunities where we are able to use our strong relationships to increase our business presence and allow customers to reduce their costs. We also expect to benefit from continued outsourcing of subsystems, components and products by prime contractors, which positions us to be a merchant supplier to multiple bidders on prime contract bids.

SUPPORT CUSTOMER REQUIREMENTS. A significant portion of our sales is derived from strategic, long-term programs and from programs for which we have been the incumbent supplier, and in many cases acted as the sole provider over many years. Our customer satisfaction and excellent performance record are evidenced by our receipt of performance-based award fees exceeding 90% of the available award fees on average during the year ended December 31, 2002. We believe that prime contractors will increasingly award long-term, outsourcing contracts to the best-of-breed merchant suppliers they believe to be most capable on the basis of quality, responsiveness, design, engineering and program management support as well as cost. We intend to continue to align our research and development, manufacturing and new business efforts to complement our customers' requirements and provide state-of-the-art products.

IMPROVE OPERATING MARGINS. We have a history of improving the operating performance of the businesses we acquire by reducing their overhead, administrative expenses and facilities costs, increasing sales, improving contract bidding and proposals controls and practices and increasing competitive

contract award win rates. We intend to continue to improve our operating performance by continuing to reduce overhead expenses, consolidating certain of our business and business processes and increasing the productivity of our businesses.

LEVERAGE TECHNICAL AND MARKET LEADERSHIP POSITIONS. We have developed strong, proprietary technical capabilities that have enabled us to capture the number one or number two market position in most of our key business areas, including secure, high data rate communications systems, solid state aviation recorders, security systems, telemetry, instrumentation and space products, advanced antenna products and high performance microwave components. We continue to invest in company-sponsored independent research and development, including bid and proposal costs, in addition to making substantial investments in our technical and manufacturing resources. Further, we have a highly skilled workforce, including approximately 9,200 engineers. We are applying our technical expertise and capabilities to several closely aligned commercial business markets and applications such as transportation and broadband wireless communications and we expect to continue to explore other similar commercial opportunities.

MAINTAIN DIVERSIFIED BUSINESS MIX. We have a diverse and broad business mix with limited reliance on any single program, a favorable balance of cost-reimbursable and fixed-price contracts, a significant follow-on business and an attractive customer profile. Our largest program represented 8.2% of our sales for the year ended December 31, 2002 and is a firm fixed-price contract with the U.S. Transportation Security Administration (TSA) for explosive detection systems (EDS) used at airports. No other program represented more than 3.7% of sales for the year ended December 31, 2002. We expect our total sales for EDS in 2003 to decline to about $175 million, including those for the TSA, primarily because the initial build-out of EDS by TSA for major U.S. airports was completed in 2002. Furthermore, 34.2% of our sales for 2002 were from cost reimbursable contracts, and 65.8% were from fixed-price contracts, providing us with a mix of predictable profitability (cost-reimbursable) and higher margin (fixed-price) business. We also enjoy a favorable mix of defense and non-defense business, with direct and indirect sales to the DoD accounting for 65.5%, and sales to commercial customers, foreign governments and U.S. federal, state and local government agencies other than the DoD accounting for the remaining 34.5% of our sales for the year ended December 31, 2002. We intend to leverage this business profile to expand our merchant supplier business base.

CAPITALIZE ON STRATEGIC ACQUISITION OPPORTUNITIES. Recent U.S. defense industry consolidation has dramatically reduced the number of traditional middle-tier aerospace and defense companies, which are smaller than the five dominant prime system contractors and larger than the many smaller publicly and privately owned companies, as well as the non-core aerospace and defense businesses of the prime contractors. We intend to enhance our existing product base through internal research and development efforts and selective acquisitions that will add new products in areas that complement our present technologies. We intend to continue acquiring select smaller publicly and privately owned companies, as well as non-core aerospace and defense businesses of larger companies, that exhibit the following criteria:

- significant market position(s) in their business area(s);
- product offerings which complement and/or extend our product offerings; and
- positive future sales growth and earnings and cash flow prospects.

SELECTED RECENT ACQUISITIONS

During the year ended December 31, 2002, we acquired businesses for an aggregate purchase price of $1,703.2 million. During the three months ended March 31, 2003, we acquired one business for a purchase price of $188.5 million. The purchase prices represent the contractual consideration for the acquired business excluding adjustments for net cash acquired and acquisition costs. For certain of these acquisitions, the purchase price may be subject to adjustment based on actual closing date net assets or net working capital of the acquired business and/or the post-acquisition financial performance of the acquired business. The table below summarizes the primary acquisitions.

BUSINESS	DATE ACQUIRED	ACQUIRED FROM	PURCHASE PRICE ($ MILLIONS)	BUSINESS DESCRIPTION
Aircraft Integration Systems	March 8, 2002	Raytheon Company	$1,148.7	Provides products and services for the global ISR market, specializing in signals intelligence (SIGINT) and communications intelligence (COMINT) systems, which provide the unique ability to collect, decode and analyze electronic signals from command centers, communications nodes and air defense systems for real-time communication and response to the warfighter. Also provides complete aircraft and mission system engineering integration, test and support capability.
Detection Systems	June 14, 2002	PerkinElmer, Inc.	110.0	Manufactures a range of detection and imaging products used to detect explosives, concealed weapons, contraband and illegal narcotics, to inspect agricultural products and to examine cargo.
Telos Corporation (a California Corporation)	July 19, 2002	Telos Corporation (a Maryland Corporation)	22.3	Provides systems engineering services for the military with primary emphasis on communications, and systems integration for the U. S. Government.
ComCept, Inc.	July 31, 2002	ComCept stockholders	25.5	Provides network-centric warfare (NCW) capabilities, including requirements development, modeling, simulation, communications and systems development and integration for ISR.
Technology, Management and Analysis Corporation	September 23, 2002	Technology, Management and Analysis stockholders	51.4	Provides engineering, logistics and program management services to various government clients. Majority of work is for the Naval Sea Systems Command.

SELECTED RECENT ACQUISITIONS (CONTINUED)

BUSINESS	DATE ACQUIRED	ACQUIRED FROM	PURCHASE PRICE ($ MILLIONS)	BUSINESS DESCRIPTION
Electron Devices and Displays-Navigation Systems-San Diego Businesses	October 25, 2002	Northrop Grumman Corporation	135.0	Electron Devices provides microwave vacuum electron devices and power modules to military and commercial markets. Displays-Navigation Systems-San Diego provides ruggedized displays, computers and electronic systems for both military and commercial applications.
Wolf Coach, Inc.	October 31, 2002	Wolf Coach stockholders	4.2	Vehicle modification and systems integration for mobile communications platforms used for television broadcasters and government/military users.
International Microwave Corporation	November 8, 2002	International Microwave Corporation stockholders	40.7	Provides wireless communication, enhanced remote video surveillance systems, network support systems, information technology and defense communications. IMC provides remote video surveillance systems, the WatchTower, for the U.S. Border Patrol.
Westwood Corporation	November 13, 2002	Westwood stockholders	22.1	Provides electrical generation, distribution and automated control equipment and related products directly to the U.S. government and its prime contractors.
Wescam Inc.	November 21, 2002	Wescam stockholders	124.3	Designs and manufactures wireless visual information systems that capture images from mobile platforms and transmits them in real-time to tactical command centers for interpretation or to production facilities for broadcast.
Ship Analytics Inc.	December 19, 2002	Ship Analytics stockholders	12.5	Producer of crisis management software applications used to support emergency management and homeland security applications.

SELECTED RECENT ACQUISITIONS (CONTINUED)

BUSINESS	DATE ACQUIRED	ACQUIRED FROM	PURCHASE PRICE ($ MILLIONS)	BUSINESS DESCRIPTION
Avionics Systems Business of Goodrich Corporation	March 28, 2003	Goodrich Corp.	188.5	Develops and manufactures innovative avionics solutions for substantially all segments of the aviation market, and sells its products to the military, business jet, general aviation, rotary wing aircraft and transportation markets.

PRODUCTS AND SERVICES

SECURE COMMUNICATIONS & ISR

The systems and products, selected applications and selected platforms or end users of our Secure Communications & ISR segment at December 31, 2002 are summarized in the table below.

SYSTEMS/PRODUCTS	SELECTED APPLICATIONS	SELECTED PLATFORMS/END USERS
Signals Intelligence		
o Prime mission systems integration and sensor development	o Signal processing, airborne radio frequency applications, antenna technology, real-time process control and software development	o USAF Big Safari Fleet, Rivet Joint, Combat Sent, Cobraball and subsystems for U-2 and EP-3
High Data Rate Communications		
o Wideband data links and ground terminals	o High performance, wideband secure communication links for relaying of intelligence and reconnaissance information	o Manned and unmanned aircraft, naval ships, terminals and satellites
Satellite Communication Terminals		
o Ground-based satellite communication terminals and payloads	o Interoperable, transportable ground terminals	o Remote personnel provided with communication links to distant forces
Space Communication and Satellite Control		
o Satellite communication and tracking system	o On-board satellite external communications, video systems, solid state recorders and ground support equipment	o International Space Station, Space Shuttle and various satellites
o Satellite command and control sustainment and support	o Software integration, test and maintenance support satellite control network and engineering support for satellite launch system	o U.S. Air Force Satellite Control Network and rocket launch system
Military Communications		
o Shipboard communications systems	o Internal and external communications (radio room)	o Naval vessels
Information Security Systems		

SYSTEMS/PRODUCTS	SELECTED APPLICATIONS	SELECTED PLATFORMS/END USERS
o STE (Secure Terminal Equipment)	o Secure and non-secure voice, data and video communication for office and battlefield utilizing Integrated Services Digital Network (ISDN) and Automated Teller Machine (ATM) commercial network technologies	o U.S. Armed services, intelligence and security agencies

We believe that we are an established leader in the development, construction and installation of communication systems for high performance intelligence collection, imagery processing and ground, air, sea and satellite communications for the DoD and other U.S. Government agencies. We provide secure, high data rate, real-time communication systems for surveillance, reconnaissance and other intelligence collection systems. We also design, develop, produce and integrate communication systems and support equipment for space, ground and naval applications, as well as provide communication software support services to military and related government intelligence markets. Product lines of the Secure Communications & ISR business include high data rate communications links, satellite communications terminals, naval vessel communication systems, space communications and satellite control systems, signal intelligence information processing systems, information security systems, tactical battlefield sensor systems and commercial communication systems.

Signals Intelligence

We believe that we are a world leader in SIGINT and ISR systems providing unique, highly specialized fleet management and support for special mission aircraft, including prime mission systems integration, sensor development, aircraft modification, maintenance and procurement for a range of customers, primarily under classified contracts. Our primary mission in this area is to support the USAF Big Safari fleet, including the Rivet Joint, Combat Sent and Cobra Ball RC-135 aircraft through long-term sole-source contracts.

High Data Rate Communications

We believe that we are a technology leader in high data rate, covert, jam-resistant microwave communications used in military and other national agency reconnaissance and surveillance applications. Our product line covers a full range of tactical and strategic secure point-to-point and relay data transmission systems, products and support services that conform to military and intelligence specifications. Our systems and products are capable of providing battlefield commanders with real-time, secure surveillance and targeting information and were used extensively by U.S. armed forces in the Persian Gulf War and during operations in Bosnia, Kosovo and Afghanistan.

Our current family of strategic and tactical data links or CDL (Common Data Link) systems are considered DoD standards for data link hardware. Our primary focus is spread spectrum secure communication links technology, which involves transmitting a data signal with a high-rate noise signal making it difficult to detect by others, and then re-capturing the signal and removing the noise. Our data links are capable of providing information at over 300 megabytes per second and use point-to-point and point-to-multipoint architectures.

We provide these secure high bandwidth products to the U.S. Air Force, the U.S. Navy, the U.S. Army and various U.S. Government agencies, many through long-term programs. The scope of these programs include air-to-ground, air-to-air, ground-to-air and satellite communications such as the U-2 Support Program, GUARDRAIL, ASTOR and major UAV (unmanned aerial vehicle) programs, such as Predator, Global Hawk and Fire Scout.

We remain the industry leader in the mobile airborne satellite terminal product market, delivering mobile satellite communication services to many airborne platforms. These services provide real-time connectivity between the battlefield and non-local exploiters of ISR data.

Satellite Communication Terminals

We provide ground-to-satellite, high availability, real-time global communications capability through a family of transportable field terminals used to communicate with commercial, military and international satellites. These terminals provide remote personnel with constant and effective communication capability and provide communication links to distant forces. Our TSS (TriBand SATCOM Subsystem) employs a 6.25 meter dish with a single point feed that provides C, Ku and X band communication to support the U.S. Army. We also offer an 11.3 meter antenna satellite terminal which is transportable on two C-130 aircraft. The SHF (Super High Frequency) PTS (Portable Terminal System) is a lightweight (28 pounds), portable terminal, which communicates through DSCS, NATO or SKYNET satellites and brings connectivity to small military tactical units and mobile command posts.

We provide System Engineering and Software/Life-cycle support to the Air Force Satellite control network as well as the eastern and western test ranges. These contracts were recently won and are scheduled to remain in effect beyond 2010.

Space Communications and Satellite Control

We have produced and are delivering three communication subsystems for the ISS (International Space Station). These systems will control all ISS radio frequency communications and external video activities. We also provide solid-state recorders and memory units for data capture, storage, transfer and retrieval for space applications. Our standard NASA tape recorder has completed over five million hours of service without a mission failure. Our recorders are on National Oceanic & Atmospheric Administration weather satellites, the Earth Observing Satellite, AM spacecraft and Landsat-7 Earth-monitoring spacecraft. We have extended this technology to our Strategic Tactical Airborne Recorder (S/TAR (Trade Mark)) which was selected for the new Shared Reconnaissance Port (SHARP) Program. We also provide space and satellite system simulation, satellite operations and computer system training, depot support, network engineering, resource scheduling, launch system engineering, support, software integration and test through cost-plus contracts with the U.S. Air Force.

Military Communications

We provide integrated, computer controlled switching systems for the interior and exterior voice and data needs of naval vessels. Our products include the MarCom Integrated Voice Communication Systems for Aegis class destroyers and for the LPD amphibious ship class. We produced the MarCom Baseband Switch for Los Angeles class submarines. Our MarCom secure digital switching system provides an integrated approach to the specialized voice and data communications needs of shipboard environments, for internal and external communications, command and control and air traffic control. Along with the Keyswitch Integrated Terminals, MarCom provides automated switching of radio/cryptocircuits, which results in significant time savings. Without MarCom, it would take approximately one hour to switch twelve radio/cryptocircuits using the previously existing switching system. Our Marcom secure digital switching system is able to switch the same number of radio/cryptocircuits in approximately twelve seconds. We also offer on-board, high data rate communications systems, which provide a data link for carrier battle groups, which are interoperable with the U.S. Air Force's Surveillance/reconnaissance terminals. We supply the "communications on the move" capability needed for the digital battlefield by packaging advanced communications into the U.S. Army's Interim Brigade Combat Team Commander's Vehicle.

Information Security Systems

We believe that we are a leader in the development of secure communications equipment for both military and commercial applications. We are producing the next generation digital, ISDN-compatible STE (secure telephone equipment). STE provides clearer voice and approximately thirteen-times faster data/fax transmission capabilities than the previous generation of secure telecommunications equipment. STE also supports secure conference calls and secure video teleconferencing. STE uses a CryptoCard security system which consists of a small, portable, cryptographic module holding the algorithms, keys and

personalized credentials to identify its user for secure communications access. We also provide the workstation component of the U.S. Government's EKMS (Electronic Key Management System), the next generation of information security systems. EKMS is the government's system to replace current "paper" encryption keys that are used to secure government communications with "electronic" encryption keys. The work station component we provide produces and distributes the electronic keys. We also develop specialized strategic and tactical signal intelligence systems to detect, acquire, collect, and process information derived from electronic sources. These systems are used by classified customers for intelligence gathering and require high-speed digital signal processing and high-density custom hardware designs.

TRAINING, SIMULATION & SUPPORT SERVICES

The products and services, selected applications and selected platforms or end users of our Training, Simulation & Support Services segment at December 31, 2002 are summarized in the table below.

SYSTEMS/PRODUCTS	SELECTED APPLICATIONS	SELECTED PLATFORMS/END USERS
Training and Simulation		
o Battlefield and Weapon Simulation	o Missile system modeling and simulation	o U.S. Army Missile Command
	o Design and manufacture custom ballistic missile targets that are ground launched and air launched for threat replication targets	o U.S. Army Missile Command
o Training	o Training for soldiers on complex command and control systems	o DoD
	o Training and logistics services and training device support	o DoD and foreign governments
o Human Patient Simulators	o Medical Training	o Medical schools, nursing schools, and DoD
Engineering Development and Integration Support		
o System Support	o C(3)ISR (Command, Control, Communications, Intelligence, Surveillance and Reconnaissance), modeling and simulation	o U.S. Armed services, intelligence and security agencies, MDA, NASA and other U.S. Government agencies
o Communication software support services	o Value-added, critical software support for C(3)I (Command, Control, Communication and Intelligence) systems and other engineering and technical services	o DoD, FAA and NASA
o Crisis Incident Management System	o Emergency operations support associated with natural disasters, industrial accidents and acts of terrorism	o Federal, state, local government agencies for homeland defense

Training and Simulation

We believe that we are a leading provider of training, simulation and support services to the U.S. and foreign military agencies.

Our products and services are designed to meet customer training requirements for aircrews, navigators, mission operators, gunners and maintenance technicians for virtually any platform, including

military fixed and rotary wing aircraft, air vehicles and various ground vehicles. As one of the leading suppliers of training services, we believe that we are able to leverage our unique full-service capabilities to develop fully-integrated, innovative solutions for training systems, to propose and provide program upgrades and modifications, and to provide hands-on, best-in-class training operations in accordance with customer requirements in a timely manner. In addition, we are developing, demonstrating, evaluating and transitioning training technologies and methods for use by warfighters at the US Air Force's Fighter Training Research Division.

We also design and develop prototypes of ballistic missile targets for present and future threat scenarios. We provide high-fidelity custom targets to the DoD that are complementary to the U.S. Government's growing focus and priority on national missile defense and space programs. We are the only provider of ballistic missile targets that has successfully launched a ballistic missile target from an Air Force Cargo Aircraft.

We also develop and manage extensive programs in the United States and internationally, focusing on training and education, strategic planning, organizational design, democracy transition and leadership development. To provide these services, we utilize a pool of experienced former armed service, law enforcement and other national security professionals. In the United States, our personnel are instructors in the U.S. Army's Force Management School and other schools and courses and are also involved in recruiting for the U.S. Army. In addition, we own a one-third interest in Medical Education Technologies, Inc., which has developed and is producing human patient simulators for sale to medical teaching and training institutions and the DoD.

We also produce incident management software to support Emergency Management and Homeland Security applications for first responders to crisis situations.

Engineering Development and Integration Support

We believe that we are a premier provider of numerous air campaign modeling and simulation tools for applications, such as Thunder, Storm and Brawler, for the U.S. Air Force Studies and Analysis Agency, and of space science research for NASA. We also provide high-end systems support for the HAWK and PATRIOT missile systems, Unmanned Aerial Vehicles (UAVs), the Cooperative Engagement Capacity (CEC) Program, and the F/A-18.

Our products and services specialize in communication systems, training and simulation equipment and a broad range of hardware and software for the U.S. Army, Air Force and Navy, the Federal Aviation Administration and the Missile Defense Agency (MDA). As one of the leading suppliers of high-end engineering and information support, we believe we are able to provide value-added C(3)ISR engineering support, wargames simulation and modeling of battlefield communications.

Our Ilex Systems business provides systems and software engineering products and services for military applications. We specialize in the innovative application of state-of-the-art software technology and software development methodologies to produce comprehensive real-time solutions satisfying our customers' systems and software needs. We specialize in providing engineering services to the U.S. Army military intelligence community, including the Communications-Electronics Command (CECOM) Software Engineering Center. These engineering services include the development and maintenance of Intelligence, Electronic Warfare, Fusion and Sensor systems and software.

AVIATION PRODUCTS & AIRCRAFT MODERNIZATION

The systems and products, selected applications and selected platforms or end users of our Aviation Products & Aircraft Modernization segment at December 31, 2002, are summarized in the table below.

SYSTEMS/PRODUCTS	SELECTED APPLICATIONS	SELECTED PLATFORMS/END USERS
Aviation Products		
o Solid state crash protected cockpit voice and flight data recorders	o Voice recorders continuously record the most recent 30-120 minutes of voice and sounds from cockpit and aircraft intercommunications. Flight data recorders record the last 25 hours of flight parameters	o Business and commercial aircraft and certain military transport aircraft; sold to both aircraft manufacturers and airlines under the Fairchild brand name
o TCAS (Traffic Alert and Collision Avoidance System)	o Reduce the potential for midair aircraft collisions by providing visual and audible warnings and maneuvering instructions to pilots	o Commercial, business, regional and military transport aircraft
Display Products		
o Cockpit and mission displays and controls	o High performance, ruggedized flat panel and cathode ray tube displays and processors	o Military aircraft including surveillance, fighters and bombers, attack helicopters, transport aircraft and land vehicles
Aircraft Modernization		
o High end aviation product modernization services	o Turnkey aviation life cycle management services including installation of special mission equipment, aircraft navigation and avionics products	o Various military and commercial wide body and rotary wing aircraft

Aviation and Maritime Recorders

We manufacture commercial, solid-state, crash-protected recorders, commonly known as black boxes, under the Fairchild brand name for the aviation and maritime industries, and have delivered approximately 57,400 flight recorders to aircraft manufacturers and airlines around the world. We believe we are the leading manufacturer of commercial cockpit voice recorders and flight data recorders. The hardened voyage recorder, launched from our state-of-the-art aviation technology, and expanded to include cutting edge internet communication protocols, has taken an early leadership position within the maritime industry. We offer three types of recorders:

- the cockpit voice recorder, which records the last 30 to 120 minutes of crew conversation and ambient sounds from the cockpit;
- the flight data recorder, which records the last 25 hours of aircraft flight parameters, such as speed, altitude, acceleration and thrust from each engine and direction of the flight in its final moments; and
- the hardened voyage recorder, which stores and protects 12 hours of voice, radar, radio and shipboard performance data on solid state memory.

Recorders are highly ruggedized instruments, designed to absorb the shock equivalent to that of an object traveling at 268 knots stopping in 18 inches, fire resistant to 1,100 degrees centigrade and pressure resistant to 20,000 feet undersea for 30 days. Our recorders are mandated and regulated by various worldwide agencies for use in commercial airlines and many business aviation aircraft. In addition, our aviation recorders are certified and approved for installation at many of the world's leading aircraft

original equipment manufacturers (OEM's), while our maritime recorders are an integral component of a mandated recording system for numerous vessels that travel on international waters. The U.S. military requires the installation of black boxes in military transport aircraft.

We have completed development of a combined voice and data recorder and are developing an enhanced recorder that monitors engine and other aircraft parameters for use in maintenance and safety applications.

Traffic Alert and Collision Avoidance Systems (TCAS)

TCAS is an avionics safety system that was developed to reduce the potential for mid-air collisions. The system is designed to operate independently from the air traffic control (ATC) system to provide a complementary supplement to the existing ATC system. TCAS operates by transmitting interrogations that elicit replies from transponders in nearby aircraft. The system tracks aircraft within certain range and altitude bands to determine whether they have the potential to become a collision threat.

There are two levels of TCAS protection currently in operation: TCAS I and TCAS II. In the United States, passenger aircraft with 10 to 30 seats must be equipped with a TCAS I system. The TCAS II system is required for passenger aircraft with more than 30 seats. These aircraft, as well as aircraft used in all-cargo operations, must also be equipped with either Mode S or Mode C transponders. The transponder provides altitude and airplane identification to TCAS-equipped aircraft as well as to the ATC system.

If the TCAS I system calculates that an aircraft may be a threat, it provides the pilot with a visual and audible traffic advisory. The advisory information provides the intruder aircraft's range and relative altitude/bearing. In addition to traffic advisories, a TCAS II system will provide the pilot a resolution advisory (RA). This resolution advisory recommends a vertical maneuver to provide separation from the intruder aircraft.

TCAS systems have proven to be very effective, with many documented successful RA's. TCAS II has been in worldwide operation in many aircraft types since 1990. Today, over 16,000 airline, corporate and military aircraft are equipped with TCAS II-type systems, logging over 100 million hours of operation. The number of reported near mid-air collisions in the U.S. has decreased significantly since 1989, a period during which both passenger and cargo air traffic has increased substantially.

We introduced our Traffic and Terrain Collision Avoidance System (T(2)CAS(TM)), a safety avionics system that integrates aircraft performance-based Terrain Awareness Warning System (TAWS) capability into our TCAS. Current TCAS II operators can upgrade their existing system to incorporate the T(2)CAS capability. Unlike other products, T(2)CAS is a true terrain avoidance system that bases its operator alerts on an aircraft's actual ability to climb at a given moment, instead of using predetermined computations. T(2)CAS also reduces weight, power consumption, space requirements, and wiring because it's a combined TCAS and TAWS solution. This allows our TCAS customers to simply swap out the TCAS box for the new T(2)CAS box and use existing power and wiring. T(2)CAS was certified by the FAA on February 11, 2003. We expect to begin shipping our T(2)CAS product in the second half of 2003.

All of our TCAS products, including T(2)CAS are sold by Aviation Communications & Surveillance Systems L.L.C. (ACSS). We own 70% of ACSS, and accordingly, it is a consolidated subsidiary.

Display Products

We design, develop and manufacture ruggedized displays for military and high-end commercial applications. Our current product line includes a family of high performance display processing systems, which use either a cathode ray tube or an active matrix liquid crystal display. Our displays are used in numerous airborne, ship-board and ground based platforms and are designed to survive in military and harsh environments.

Aircraft Modernization

We are dedicated to providing solutions that integrate custom developed and commercial off-the-shelf products to satisfy military and commercial aviation requirements. We have a broad range of

capabilities in the design, development, manufacturing, installation and integration of complex special purpose airborne systems, aircraft modifications and related services on numerous types of multi-engine aircraft and various rotary platforms for government and commercial customers. We believe that we are a leader in maritime patrol aircraft (MPA) upgrades and maintenance, for both domestic and international customers.

SPECIALIZED PRODUCTS

The products, selected applications and selected platforms or end users of our Specialized Products segment at December 31, 2002 are summarized in the table below.

PRODUCTS	SELECTED APPLICATIONS	SELECTED PLATFORMS/END USERS
Ocean Products		
o Airborne dipping sonars	o Submarine detection and localization	o Various military helicopters
o Submarine and surface ship towed arrays	o Submarine and surface ship detection and localization	o U.S. Navy and foreign navies
o Naval and commercial power delivery and switching products	o Switching, distribution and protection, as well as frequency and voltage conversion	o All naval combatants: submarines, surface ships and aircraft carriers
o Commercial transfer switches, uninterruptible power supplies and power products	o Production and maintenance of systems and high-speed switches for power interruption prevention	o Federal Aviation Administration, internet service providers, financial institutions and rail transportation
o Shipboard electronic racks, rugged computers, rugged displays and communication terminals	o Ruggedized displays, computers and electronic systems	o Naval Vessels and other DoD applications
Security Systems		
o Explosive detection systems	o Rapid scanning of passenger checked baggage and carry-on luggage, scanning of large cargo containers.	o Airports, embassies, federal/state facilities, customs, border patrol
o Surveillance products	o Remote video surveillance for U.S. border and naval ports	o Border Patrol, Immigration and Naturalization Service and U.S. Customs
Telemetry, Instrumentation and Space Products		
o Aircraft, missile and satellite telemetry and instrumentation systems	o Real-time data acquisition, measurement, processing, simulation, distribution, display and storage for flight testing	o Aircraft, missiles and satellites
o Global satellite communications systems	o Satellite transmission of voice, video and data	o Rural telephony or private networks, direct to home uplinks, satellite news gathering and wideband applications
Navigation Products		
o GPS (Global Positioning Systems) receivers	o Location tracking	o Guided projectiles and precision munitions

PRODUCTS	SELECTED APPLICATIONS	SELECTED PLATFORMS/END USERS
o Navigation systems and subsystems, gyroscopes, reaction wheels, star sensor	o Space navigation	o Hubble Space Telescope, Delta IV launch vehicle and satellites
Premium Fuzing Products		
o Fuzing Products	o Munitions and electronic and electro-mechanical safety and arming devices (ESADs)	o Various DoD and foreign military customers
Microwave Components	o Radio transmission, switching and conditioning, antenna and base station testing and monitoring, broad-band and narrow-band applications (Personal Communications Services (PCS), cellular, Specialized Mobile Radio (SMR) and paging infrastructure)	o DoD, telephony service providers and original equipment manufacturers
o Passive components, switches and wireless assemblies		
o Safety products	o Radio frequency monitoring and measurement for safety	o Monitor cellular base station and industrial radio frequency emissions
o Satellite and wireless components (channel amplifiers, transceivers, converters, filters and multiplexers)	o Satellite transponder control, channel and frequency separation	o Communications satellites and wireless communications equipment
o Amplifiers and amplifier based components (amplifiers, up/down converters and Ka assemblies)	o Automated test equipment military electronic warfare, ground and space communications	o DoD and commercial satellite operators
o Traveling wave tubes, power modules, klystrons and digital broadcast	o Microwave vacuum electron devices and power modules to military and commercial markets	o DoD/Foreign, military-manned/unmanned platforms, various missile programs and commercial broadcast
Antenna Products		
o Ultra-wide frequency and advanced radar antennas and rotary joints	o Surveillance and radar detection	o Military aircraft including surveillance, fighters and bombers, attack helicopters and transport
o Precision antennas serving major military and commercial frequencies, including Ka band	o Antennas for high frequency, millimeter satellite communications	o Various military and commercial customers including scientific astronomers
Training Devices and Motion Simulators		
o Military Aircraft Flight Simulators	o Training for pilots, navigators, flight engineers, gunners and operators	o Military fixed and rotary winged aircraft and ground vehicles

PRODUCTS	SELECTED APPLICATIONS	SELECTED PLATFORMS/END USERS
Electro-Optical Sensors o Targeted stabilized camera systems with integrated sensors and wireless communication systems	o Intelligence, Data Collection, Surveillance and Reconnaissance	o DoD, intelligence and security agencies, law enforcement, manned and unmanned platforms

Ocean Products

We believe that we are one of the world's leading suppliers of acoustic undersea warfare systems. Our experience spans a wide range of platforms, including helicopters, submarines and surface ships. Our products include towed array sonar, hull mounted sonar, airborne dipping sonar and ocean mapping sonar for navies around the world.

We believe that we are also a leading provider of state-of-the-art power electronics systems and electrical power delivery systems and subsystems. We provide communications and control systems for the military and commercial customers. We offer the following:

- o military power propulsion, distribution and conversion equipment and components, each of which focus on motor drives switching, distribution and protection, and also provide engineering design and development, manufacturing and overhaul and repair services; and
- o ship control and interior communications equipment.

We have been able to apply our static transfer switch technology, which we developed for the U.S. military, to commercial applications. Our commercial customers for static transfer switches are primarily financial institutions and internet service providers, including American Express, AOL-Time Warner, AT&T, Charles Schwab and the Federal Aviation Administration. In addition, we provide electrical products for rail transportation and utilities businesses.

Telemetry, Instrumentation and Space Products

We believe that we are a leader in the development and marketing of component products and systems used in telemetry and instrumentation for airborne applications such as satellites, aircraft, UAVs, launch vehicles, guided missiles, projectiles and targets. Telemetry involves the collection of data for various equipment performance parameters and is required when the object under test is moving too quickly or is of too great a distance to use a direct connection to collect such data. Telemetry products measure, process, receive and collect thousands of parameters of a platform's operation, including heat, vibration, stress and operational performance and transmit this data to the ground.

Additionally, our satellite telemetry equipment transmit data necessary for ground processing. These applications demand high reliability of their components because of the high cost of satellite repair and the need for uninterrupted service. Telemetry products also provide the data used to terminate the flight of missiles and rockets under errant conditions and/or at the end of a mission. These telemetry and command/control products are currently used for a variety of missile and satellite programs.

We offer value-added solutions that provide our customers with complex product integration and comprehensive support. Within the satellite ground segment equipment market, we focus on the telephony, video broadcasting and multimedia niches. Our customers include foreign communications companies, domestic and international prime communications infrastructure contractors, telecommunications and satellite service providers, broadcasters and media-related companies. We also provide space products for advanced guidance and control systems, including gyroscopes, controlled momentum devices and star sensors. These products are used on satellites, launch vehicles, the Hubble Telescope, the Space Shuttle and the International Space Station.

Navigation Products

We provide airborne equipment and data link systems that gather critical information and then process, format and transmit the data to the ground from communications satellites, spacecraft, aircraft and missiles. These products are available in both commercial off-the-shelf and custom configurations and include software and software engineering services. Our primary customers include many of the major defense contractors who manufacture aircraft, missiles, warheads, launch vehicles and munitions. Our ground station instrumentation receives, encrypts and/or decrypts the serial stream of combined data in real-time as it is received from the airborne platform. We believe that we are a leader in digital GPS receiver technology for high performance military applications. These GPS receivers are currently in use on aircraft, cruise missiles and precision guided bombs and provide highly accurate positioning and navigational information. Additionally, we provide navigation systems for high performance weapon pointing and positioning systems for programs such as Multiple Launch Rocket System (MLRS) and Mortar Fire Control System (MFCS).

Premium Fuzing Products

We believe that we are a leading provider of premium fuzing products, including proximity fuzes, electronic and electro-mechanical safety and arming devices (ESADs) and self-destruct/sub-munition grenade fuzes. ESADs prevent the inadvertent firing and detonation of guided missiles during handling, flight operations and the initial phases of launch. Our proximity fuzes are used in smart munitions. All of these are considered to be critical safety and arming products. Additionally, during missile flight the ESAD independently analyzes flight conditions and determines safe separation distance after a missile launch.

Microwave Components

We are a premier worldwide supplier of commercial off-the-shelf and custom, high performance radio frequency (RF) microwave components, assemblies and instruments supplying the wireless communications, industrial and military markets. We are also a leading provider of state-of-the-art space-qualified commercial satellite and strategic military RF products and millimeter amplifier based products. We sell many of these components under the well-recognized Narda brand name through a comprehensive catalog of standard, stocked hardware. We also sell our products through a direct sales force and an extensive network of market representatives. Specific catalog offerings include wireless products, electro-mechanical switches, power dividers and hybrids, couplers/detectors, attenuators, terminations and phase shifters, isolators and circulators, adapters, control products, sources, mixers, waveguide components, RF safety products, power meters/monitors and custom passive products. Passive components are generally purchased in both narrow and broadband frequency configurations by wireless equipment manufacturers, wireless service providers and military equipment suppliers. Commercial applications include cellular and PCS base station automated test equipment, and equipment for the paging industry. Military applications include electronic surveillance and countermeasure systems.

Our space-qualified and wireless components separate various signals and direct them to sections of the satellites' payload. Our main satellite products are channel amplifiers and linearizers, payload products, transponders and antennas. Channel amplifiers amplify the weak signals received from earth stations, and then drive the power amplifier tubes that broadcast the signal back to earth. Linearizers, used either in conjunction with a channel amplifier or by themselves, pre-distort a signal to be transmitted back to earth before it enters a traveling wave tube for amplification. This pre-distortion is exactly the opposite of the distortion created at peak power by the traveling wave tube and, consequently, has a cancellation effect that keeps the signal linear over a much larger power band of the tube. The traveling wave tube and area covered by the satellite is significantly increased.

Narda is the world's largest supplier of non-ionizing radiation safety detection equipment. These devices are used to quantify and alarm of exposure to excessive RF radiation. This equipment is used by wireless tower operators and the military to protect personnel, and insure compliance to various published standards. We design and manufacture both broad and narrow band amplifiers and amplifier-based products in the microwave and millimeter wave frequencies. We use these amplifiers in defense and communications applications. These devices can be narrow band for communication needs or broadband for electronic warfare.

We offer standard packaged amplifiers for use in various test equipment and system applications. We design and manufacture millimeter range (at least 20 to 38GHz) amplifier products for use in emerging communication applications such as back haul radios, LMDS (Local Multipoint Distribution Service) and ground terminals for LEO satellites. Narda filters are sold to some of the world's leading service providers and base station OEMs. Robust demand continues for Narda filters due to ongoing system upgrades by service providers for 2.5G and 3.0G applications geared toward providing higher data rate capabilities for the commercial cellular and PCS marketplace.

We also design, manufacture and market solid state, broadband wireless communications infrastructure equipment, subsystems and modules used to provide point-to-multipoint (PMP) and point-to-point (PTP) terrestrial and satellite-based distribution services in frequency bands from 24 to 38 Gigahertz. Our products include solid-state power amplifiers, hub transmitters, active repeaters, cell-to-cell relays, Internet access systems and other millimeter wave-based modules and subsystems. These products are used in various applications, such as broadband communications, local loop services and Ka-band satellite communications.

We also provide microwave vacuum electron devices and power modules for manned and unmanned airborne radars, F-14, F-16, Predator and Global Hawk platforms and for missile applications for the AMRAAM and Patriot. In addition, we provide modules for VHF TV transmitters.

Antenna Products

We produce high performance antennas under the Randtron brand name that are designed for:

- surveillance of high-resolution, ultra-wide frequency bands;
- detection of low radar cross-section targets and low radar cross-section installations;
- severe environmental applications; and
- polarization diversity.

Our primary product is a sophisticated 24-foot diameter antenna used on all E-2C surveillance aircraft. This airborne antenna is a rotating aerodynamic radome containing a UHF surveillance radar antenna, an IFF antenna, and forward and aft auxiliary antennas. We have been funded to begin the development of the next generation for this antenna. We also produce broadband antennas for a variety of tactical aircraft, and rotary joints for the AWAC antenna. We have delivered over 2,000 sets of antennas for aircraft and have a backlog of orders through 2004.

We are a leading supplier of ground based radomes used for air traffic control, weather radar, defense and scientific purposes. These radomes enclose an antenna system as a protective shield against the environment and are intended to enhance the performance of an antenna system.

Training Devices and Motion Simulators

Our training devices and motion simulators business designs, develops and manufacturers advanced virtual reality simulation and high-fidelity representations of cockpits and mission stations for aircraft and land vehicles. We have developed flight simulators for most of the U.S. military aircraft in active operation. We have numerous proprietary technologies and fully-developed systems integration capabilities that provide us with a competitive advantage. Our proprietary software is used for visual display systems, high-fidelity system models, database production, digital radar land mass image simulation and creation of synthetic environments. We are also a leader in developing training systems that allow multiple trainees at multiple sites to engage in networked group, unit and task force training and combat simulations.

Security Systems

We also design, manufacture and install screening systems to screen packages for explosives, firearms and contraband in airports, security check points, cruise lines, and government, commercial and military buildings. In addition, we provide cargo-screening systems for rapid inspection of incoming goods through rapidly deployable mobile systems to high-throughput, high-penetration fixed systems. We also provide remote robust video surveillance systems (Watch Tower) to monitor the U.S./Canada and U.S./Mexico border and Naval ports.

Electro Optical Cameras

We also design and manufacture wireless visual information systems that capture images from mobile platforms and transmit them in real time to tactical command centers for interpretation or to production facilities for broadcast.

DEVELOPING COMMERCIAL AND CIVIL OPPORTUNITIES

Part of our growth strategy is to identify commercial and non-DoD applications from select products and technologies that we currently sell to our defense customers. We have initially identified two vertical markets where we believe there are significant opportunities to expand our products: transportation and broadband wireless communications.

Transportation. Our products are designed to meet strict government quality and reliability standards and are easily adapted to the commercial and civil transportation markets. Our aircraft voice recorders, designed to meet FAA requirements, have been successfully marketed to the cruise ship, marine shipping and railroad industries. Similarly, our state-of-the-art power propulsion products, originally designed for the U.S. Navy, meet the needs of commuter railroads, including Philadelphia's regional rail system and New York City's Metropolitan Transportation Authority. Our explosives detection system, the eXaminer 3DX (Trade Mark) 6000, enables the rapid scanning of passenger checked baggage at airports using state-of-the-art technology. The Transportation Security Administration (TSA) of the U.S. Department of Transportation, created as a result of the Aviation and Transportation Security Act enacted by Congress on January 3, 2002, ordered 425 eXaminer units from us during 2002. TSA accepted 406 of our eXaminer units as of December 31, 2002, and we completed the remaining shipments during the first quarter of 2003. We are also offering X-ray screening products for cargo, air freight, port and border security applications.

Communications. The wireless communications technology we developed for our military customers also meets the needs of the commercial marketplace for technologically advanced communications products. Some of the products we have developed or are developing to exploit this market include wireless access products, transceivers, compression products, remote sensing internet networks, microwave links and products for microwave base stations. Our PrimeWave Communications products are an example of our expanding involvement in the commercial communications industry.

In the broadband wireless commercial communications market, we also have developed a broad assortment of other products including transponders, payloads, uplinks, downlinks, fly-away SATCOM terminals, telemetry tracking and control and test equipment and waveform generators.

These new commercial products are subject to certain risks and may require us to:

- develop and maintain marketing, sales and customer support capabilities;
- spend additional research and development costs to sustain and enhance our existing products and to develop new products;
- secure sales and customer support capabilities;
- obtain customer and/or regulatory certification;
- respond to rapidly changing technologies including those developed by others that may render our products and systems obsolete or non-competitive; and
- obtain customer acceptance of these products and product performance.

Our efforts to expand our presence in commercial and civil markets require significant resources, including additional working capital and capital expenditures, as well as the use of our management's time. Our ability to sell certain commercial products, particularly our broadband wireless communications products, depends to a significant degree on the efforts of independent distributors or communications service providers and on the financial viability of our existing and target customers, including their ability to obtain financing. Certain of our existing and target customers are agencies or affiliates of governments of emerging and under-developed countries or private business enterprises operating in those countries.

In addition, we have made equity investments in entities that plan to commence operations as communications service providers using some of our commercial products. We can give no assurance that these distributors or service providers will be able to market our products or their services successfully or that we will be able to realize a return on our investment in them. We also cannot assure you that we will be successful in addressing these risks or in developing these commercial and civil business opportunities.

BACKLOG AND ORDERS

We define funded backlog as the value of funded orders which have not yet been recognized as sales. We define funded orders as the value of contract awards received from the U.S. Government, for which the U.S. Government has appropriated funds, plus the value of contract awards and orders received from customers other than the U.S. Government. Our funded backlog as of December 31, 2002 was $3,228.6 million and as of December 31, 2001 was $1,719.3 million. We expect to record as sales approximately 73.0% of our funded backlog as of December 31, 2002 during 2003. However, there can be no assurance that our funded backlog will become sales in any particular period, if at all. Funded orders received for the year ended December 31, 2002 were $4,383.1 million, for the year ended December 31, 2001 were $2,456.1 million and for the year ended December 31, 2000 were $2,013.7 million.

Our funded backlog does not include the full value of our contract awards, including those pertaining to multi-year, cost-reimbursable contracts, which are generally funded on an annual basis. Funded backlog also excludes the sales value of unexercised contract options that may be exercised by customers under existing contracts and the sales value of purchase orders that may be issued under indefinite quantity contracts or basic ordering agreements.

MAJOR CUSTOMERS

For the year ended December 31, 2002, sales to the DoD provided approximately 65.5% of our sales. Approximately 61% of our sales to the DoD were directly to the customer, and approximately 39% of our sales to the DoD were indirect through prime contractors and subcontractors. For the year ended December 31, 2002, foreign governments provided 9.8% of our sales, and commercial customers and U.S. federal, state and local government agencies other than the DoD provided the remaining 24.7% of our sales.

Our U.S. Government sales are predominantly derived from contracts with agencies of, and prime contractors to, the U.S. Government. Various U.S. Government agencies and contracting entities exercise independent and individual purchasing decisions, subject to annual appropriations by the U.S. Congress. As of December 31, 2002, we had approximately 800 contracts with a value exceeding $1.0 million. Our largest program represented 8.2% of our sales for the year ended December 31, 2002 and is a firm fixed- price contract with the TSA for explosive detection systems (EDS) used at airports. No other program represented more than 3.7% of sales for the year ended December 31, 2002. For the year ended December 31, 2002, sales from our five largest programs amounted to $815.7 million, or 20.3% of our sales. We expect our total sales for explosive detection systems in 2003 to decline to about $175 million, including those for the TSA, primarily because the initial installation of EDS systems by TSA for major U.S. airports was completed in 2002.

RESEARCH AND DEVELOPMENT

We conduct research and development activities that consist of projects involving basic research, applied research, development, and systems and other concept studies. We employ scientific, engineering and other personnel to improve our existing product-lines and develop new products and technologies. As of December 31, 2002, we employed approximately 9,200 engineers, a substantial portion of whom hold advanced degrees. For the year ended December 31, 2002, we incurred $480.9 million on research and development costs for customer-funded contracts and spent $159.9 million on company-sponsored research and development projects, including bid and proposal costs. For the year ended December 31, 2001, we incurred $319.4 million on research and development costs for customer-funded contracts and spent $107.5 million on company-sponsored research and development projects, including bid and

proposal costs. For the year ended December 31, 2000, we incurred $299.3 million on research and development costs for customer-funded contracts and spent $101.9 million on company-sponsored research and development projects, including bid and proposal costs.

COMPETITION

We encounter intense competition in all of our businesses. We believe that we are a significant supplier for many of the products that we manufacture and services we provide in our DoD, government and commercial businesses.

Defense and Government Business

Our ability to compete for defense contracts depends on a variety of factors, including:

- the effectiveness and innovation of our technologies and research and development programs;
- our ability to offer better program performance than our competitors at a lower cost; and
- the capabilities of our facilities, equipment and personnel to undertake the programs for which we compete.

In some instances, we are the incumbent supplier or have been the sole provider for many years for certain programs. We refer to such contracts as "sole-source" contracts. In such cases, there may be other suppliers who have the capability to compete for the programs involved, but they can only enter or reenter the market if the customer chooses to reopen or recompete the particular program to competition. Sole-source contracts accounted for 58.5% and competitive contracts accounted for 41.5% of our total sales for the year ended December 31, 2002. The majority of our sales are derived from contracts with the U.S. Government and its prime contractors, which are principally awarded on the basis of negotiations or competitive bids.

We believe that the U.S. defense industry structure contains three tiers of defense contractors. The first tier is dominated by five large prime system contractors: The Boeing Company, Lockheed Martin Corporation, Northrop Grumman Corporation, Raytheon Company and General Dynamics Corporation, all of whom compete for major platform programs. The second tier defense contractors generally are smaller products and niche subsystems contractors and is comprised of traditional aerospace and defense companies, as well as the non-core aerospace and defense businesses of certain larger industrial conglomerates. Some of the defense contractors in the second tier also compete for platform programs. We believe the second tier includes L-3, Honeywell International Inc., Rockwell Collins Inc., Harris Corporation, TRW Inc., ITT Industries, Inc., Alliant Techsystems Inc., United Technologies Corporation, Computer Science Corporation, Science Applications International Corporation, Titan Corporation and United Defense Industries Inc. The third tier represents the vendor base and supply chain for niche products and is comprised of numerous smaller publicly and privately owned aerospace and defense contractors.

We believe we are the aerospace and defense "merchant supplier" with the broadest and most diverse product portfolio. We supply our products to all of the five prime system contractors and in several cases directly to the end customers. We primarily compete with third tier contractors and certain of the second tier contractors and, to a lesser extent, with the prime system contractors in certain niche areas. Some of the second tier contractors are larger than we are and have greater resources than we do. We are larger than all of the third tier contractors and believe we have greater resources than all of them. We believe that most of our businesses enjoy the number one or number two competitive position in their respective market niches. We believe that the primary competitive factors for our businesses are technology, research and development capabilities, quality, cost, market position and past performance. In addition, our ability to compete for non "sole source" contracts often requires us to "team" with one or more of the prime system contractors that bid and compete for major platform programs. Furthermore, our ability to "team" with a prime system contractor is often dependent upon the outcome of a competitive process.

We believe that we will continue to be a successful participant in the business areas in which we compete, based upon the quality and cost competitiveness of our products and services.

Commercial Activities

Although our commercial activities continue to comprise a significant portion of our business mix, our commercial sales declined to approximately 10.7% of our total sales for the year ended December 31, 2002 from approximately 17.7% for the year ended December 31, 2001. This decline in commercial sales as a percentage of our total sales was primarily attributable to our 2002 acquisitions, including the IS acquisition, and, to a lesser extent, the decline in our commercial aviation and communications sales during 2002. Our 2002 acquisitions were comprised substantially of DoD contractors. We do not expect our commercial sales as a percentage of sales to appreciably increase on a relative basis in the future. Our ability to compete for commercial business depends on a variety of factors, including:

- Pricing;
- Product features and performance;
- Reliability, scalability and compatibility;
- Customer relationships, service and support; and
- Brand recognition.

In these markets, we compete with various companies, several of which are listed below:

- Agilent Technologies, Inc.;
- Globecomm Systems, Inc.;
- ViaSat, Inc.;
- Honeywell International Inc.;
- Smiths Industries; and
- Airspan Networks, Inc.

We believe that our sales in these business areas will remain relatively constant as a percentage of our total sales.

PATENTS AND LICENSES

We do not believe that our patents, trademarks and licenses are material to our operations. Furthermore, our U.S. Government contracts generally permit us to use patents owned by others. Similar provisions in U.S. Government contracts awarded to other companies make it impossible for us to prevent the use of our patents in most domestic work performed by other companies for the U.S. Government.

RAW MATERIALS

In manufacturing our products, we use our own production capabilities as well as a diverse base of third party suppliers and subcontractors. Although aspects of certain of our businesses require relatively scarce raw materials, we have not experienced difficulty in our ability to procure raw materials, components, sub-assemblies and other supplies required in our manufacturing processes.

CONTRACTS

A significant portion of our sales are derived from strategic, long-term programs and from sole-source contracts. Approximately 58.5% of our sales for the year ended December 31, 2002 were generated from sole-source contracts. Our customer satisfaction and performance record are evidenced by our receipt of performance-based award fees exceeding 90% of the available award fees on average during the year ended December 31, 2002. We believe that our customers will award long-term, sole-source, outsourcing contracts to the most capable merchant supplier in terms of quality, responsiveness, design, engineering and program management support, as well as cost. As a consequence of our strong competitive position, for the year ended December 31, 2002, we won contract awards at a rate in excess of 55% on new competitive contracts that we bid on, and at a rate in excess of 95% on the contracts we rebid for which we were the incumbent supplier.

Generally, contracts are either fixed-price or cost-reimbursable. On a fixed-price contract, we agree to perform the scope of work required by the contract for a predetermined contract price. Although a

fixed-price contract generally permits us to retain profits if the total actual contract costs are less than the estimated contract costs, we bear the risk that increased or unexpected costs may reduce our profit or cause us to sustain losses on the contract. Conversely, on a cost-reimbursable contract we are paid our allowable incurred costs plus a profit which can be fixed or variable depending on the contract's fee arrangement up to predetermined funding levels determined by our customers. Therefore, on a cost-reimbursable contract we do not bear the risks of unexpected cost overruns, provided that we do not incur costs that exceed the predetermined funded amounts. Generally, a fixed-price contract offers higher profit margins than a cost-reimbursable contract, which is commensurate with the greater levels of risk assumed on a fixed-price contract. Our operating profit margins on fixed-price contracts generally range between 10% and 25%, while our profit margins on cost-reimbursable contracts generally range between 7% and 10%.

We have a diverse business mix with limited reliance on any single program, a balance of cost-reimbursable and fixed-price contracts, a significant sole-source follow-on business and an attractive customer profile. For the year ended December 31, 2002, approximately 34.2% of our sales were generated from cost-reimbursable contracts and approximately 65.8% from fixed-price contracts, providing us with a sales mix of predictable profitability (cost-reimbursable) and higher profit margin (fixed-price) business. Substantially all of our cost-reimbursable contracts are with the U.S. Government, including the DoD. Substantially all of our sales to commercial customers are transacted under fixed-price sales arrangements, and are included in our fixed-price contract sales.

Most of our U.S. Government business is subject to unique procurement and administrative rules based on both laws and regulations, including the U.S. Federal Acquisition Regulation (FAR) that provide various profit and cost controls, rules for allocations of costs, both direct and indirect, to contracts and non-reimbursement of unallowable costs such as lobbying expenses, interest expenses and certain costs related to business acquisitions, including for example the incremental depreciation and amortization expenses arising from fair value increases to the historical carrying values of acquired assets. Our contract administration and cost accounting policies and practices are also subject to oversight by government inspectors, technical specialists and auditors.

Companies supplying defense-related equipment to the U.S. Government are subject to certain additional business risks specific to the U.S. defense industry. Among these risks are the ability of the U.S. Government to unilaterally suspend a company from new contracts pending resolution of alleged violations of procurement laws or regulations. In addition, U.S. Government contracts are conditioned upon the continuing availability of Congressional appropriations. Congress usually appropriates funds for a given program on a September 30 fiscal year basis, even though contract performance may take years. Consequently, at the outset of a major program, the contract is usually partially funded, and additional monies are normally committed to the contract by the procuring agency only as appropriations are made by Congress for future fiscal years.

U.S. Government contracts are, by their terms, subject to unilateral termination by the U.S. Government either for its convenience or default by the contractor if the contractor fails to perform the contracts' scope of work. Upon termination other than for a contractor's default, the contractor will normally be entitled to reimbursement for allowable costs and an allowance for profit. Foreign defense contracts generally contain comparable provisions permitting termination at the convenience of the government. To date, none of our significant fixed price contracts have been terminated.

As is common in the U.S. defense industry, we are subject to business risks, including changes in the U.S. Government's procurement policies (such as greater emphasis on competitive procurement), governmental appropriations, national defense policies or regulations, service modernization plans, and availability of funds. A reduction in expenditures by the U.S. Government for products and services of the type we manufacture and provide, lower margins resulting from increasingly competitive procurement policies, a reduction in the volume of contracts or subcontracts awarded to us or the incurrence of substantial contract cost overruns could materially adversely affect our business.

Certain of our sales are under foreign military sales (FMS) agreements directly between the U.S. Government and foreign governments. In such cases, because we serve only as the supplier, we do not

have unilateral control over the terms of the agreements. These contracts are subject to extensive legal and regulatory requirements and, from time to time, agencies of the U.S. Government investigate whether our operations are being conducted in accordance with these laws and regulations. Investigations could result in administrative, civil, or criminal liabilities, including repayments, disallowance of certain costs, or fines and penalties.

Certain of our sales are direct commercial sales to foreign governments. These sales are subject to U.S. Government approval and licensing under the Arms Export Control Act. Legal restrictions on sales of sensitive U.S. technology also limit the extent to which we can sell our products to foreign governments or private parties.

ENVIRONMENTAL MATTERS

Our operations are subject to various environmental laws and regulations relating to the discharge, storage, treatment, handling, disposal and remediation of certain materials, substances and wastes used in our operations. We continually assess our obligations and compliance with respect to these requirements.

In connection with the Aircraft Integration Systems acquisition, we assumed responsibility for implementing certain corrective actions, required under federal law to remediate the Greenville, Texas site location, and to pay a portion of those remediation costs. The hazardous substances requiring remediation have been substantially characterized, and the remediation system has been partially implemented. We have estimated that our share of the remediation cost will not exceed $2.5 million, and will be incurred over a period of 25 years. We have established adequate reserves for these costs.

We have also assessed the risk of environmental contamination for the various manufacturing facilities of our other acquired businesses and, where appropriate, have obtained indemnification, either from the sellers of those acquired businesses or through pollution liability insurance. We believe that our current operations are in substantial compliance with all existing applicable environmental laws and permits. We believe our current expenditures will allow us to continue to be in compliance with applicable environmental laws and regulations. While it is difficult to determine the timing and ultimate cost to be incurred in order to comply with these laws, based upon available internal and external assessments, with respect to those environmental loss contingencies of which we are aware, we believe that even without considering potential insurance recoveries, if any, there are no environmental loss contingencies that, individually or in the aggregate, would be material to our consolidated results of operations, financial position or cash flows.

Despite our current level of compliance, new laws and regulations, stricter enforcement of existing laws and regulations, the discovery of previously unknown contamination or the imposition of new clean-up requirements may require us to incur costs in the future that could have a negative effect on our financial condition, results of operations or cash flows.

PENSION PLANS

In connection with our 1997 acquisition of the ten business units from Lockheed Martin and the formation of L-3, we assumed certain defined benefit pension plan liabilities for present and former employees and retirees of certain businesses which were transferred from Lockheed Martin to us. Prior to this acquisition, Lockheed Martin received a letter from the Pension Benefit Guaranty Corporation (the "PBGC") which requested information regarding the transfer of such pension plans and indicated that the PBGC believed certain of such pension plans were underfunded using the PBGC's actuarial assumptions. The PBGC assumptions result in a larger liability for accrued benefits than the assumptions used for financial reporting under Statement of Financial Accounting Standards No. 87. The PBGC underfunding is related to the Communication Systems -- West and Aviation Recorders pension plans (the "Subject Plans").

With respect to the Subject Plans, Lockheed Martin entered into an agreement (the "Lockheed Martin Commitment") among Lockheed Martin, L-3 Communications and the PBGC dated as of April 30, 1997. The material terms and conditions of the Lockheed Martin Commitment include a

commitment by Lockheed Martin to the PBGC to, under certain circumstances, assume sponsorship of the Subject Plans or provide another form of financial support for the Subject Plans. The Lockheed Martin Commitment will continue with respect to any Subject Plan until such time as such Subject Plan is no longer underfunded on a PBGC basis for two consecutive years or, at any time after May 31, 2002, if we achieve investment grade credit ratings.

Upon the occurrence of certain events, Lockheed Martin, at its option, has the right to decide whether to cause us to transfer sponsorship of any or all of the Subject Plans to Lockheed Martin, even if the PBGC has not sought to terminate the Subject Plans. Such a triggering event occurred in 1998, but reversed itself in 1999, relating to a decrease in the PBGC-mandated discount rate in 1998 that had resulted in an increase in the underlying liability. We notified Lockheed Martin of the 1998 triggering event, and in February 1999, Lockheed Martin informed us that it had no present intention to exercise its right to cause us to transfer sponsorship of the Subject Plans. If Lockheed Martin did assume sponsorship of these plans, it would be primarily liable for the costs associated with funding the Subject Plans or any costs associated with the termination of the Subject Plans, but we would be required to reimburse Lockheed Martin for these costs. To date, there has been no impact on pension expense and funding requirements resulting from this arrangement. In the event Lockheed Martin assumes sponsorship of the Subject Plans we would be required to reimburse Lockheed Martin for all amounts that it contributes to, or costs it incurs with respect to, the Subject Plans. For the year ended December 31, 2002, we contributed $18.8 million to the Subject Plans. For subsequent years, our funding requirements will depend upon prevailing interest rates, return on pension plan assets and underlying actuarial assumptions.

We have performed our obligations under the letter agreement with Lockheed Martin and the Lockheed Martin Commitment and have not received any communications from the PBGC concerning actions which the PBGC contemplates taking in respect of the Subject Plans.

EMPLOYEES

As of December 31, 2002, we employed approximately 27,000 full-time and part-time employees, the majority of whom are located in the United States. Of these employees, approximately 11.8% are covered by 35 separate collective bargaining agreements with various labor unions. We have a continuing need for skilled and professional personnel to meet contract schedules and obtain new and ongoing orders for our products. We believe that relations with our employees are positive.

PROPERTIES

The table below provides information about our significant facilities and properties as of December 31, 2002.

LOCATION	OWNED	LEASED
	(thousands of square feet)	
L-3 Corporate Offices, New York, NY	--	40.8
Washington Operations, Arlington, VA	--	8.3
SECURE COMMUNICATION & ISR:		
Camden, NJ	--	575.0
Greenville, TX	--	3,043.5
Salt Lake City, UT	--	491.6
Avalon, Australia	--	151.0
TRAINING, SIMULATION & SUPPORT SERVICES:		
Colorado Springs, CO	--	82.6
Orlando, FL	--	170.3
Kirkwood, NY	--	428.0
Arlington, TX	21.3	47.5
Alexandria, VA	--	108.8
Arlington, VA	--	113.4
AVIATION PRODUCTS & AIRCRAFT MODERNIZATION:		
Phoenix, AZ	--	90.0
Sarasota, FL	--	143.7
Alpharetta, GA	93.0	--
Rolling Meadows, IL	45.0	6.7
Lexington, KY	--	128.5
Waco, TX	616.1	221.1
Calgary, Canada	65.5	--
Edmonton, Canada	--	371.0
SPECIALIZED PRODUCTS:		
Anaheim, CA	--	474.2
Menlo Park, CA	--	97.5
San Carlos, CA	191.6	--
San Diego, CA	196.0	202.6
Sylmar, CA	--	253.0
Largo, FL	46.4	60.8
Ocala, FL	111.7	--
Teterboro, NJ	--	250.0
Hauppauge, NY	90.0	150.0
Cinncinatti, OH	222.6	--
Tulsa, OK	--	122.7
Lancaster, PA	--	146.0
Philadelphia, PA	--	230.0
Williamsport, PA	208.6	--
Arlington, TX	60.7	135.1
Grand Prairie, TX	--	125.0
Burlington, Canada	--	124.0
Leer, Germany	32.2	33.2

At December 31, 2002, in the aggregate, we owned approximately 2.1 million square feet and leased approximately 11.0 million square feet of manufacturing facilities and properties.

LEGAL PROCEEDINGS

On August 6, 2002, Aviation Communications & Surveillance Systems, LLC (ACSS) was sued by Honeywell International Inc. and Honeywell Intellectual Properties, Inc. (collectively, "Honeywell") for alleged infringement of patents that relate to terrain awareness avionics. The lawsuit was filed in the United States District Court for the District of Delaware. In December of 2002, Honeywell withdrew without prejudice the lawsuit against ACSS and agreed to proceed with non-binding arbitration. If the matter is not resolved through arbitration, Honeywell may reinstitute the litigation after August 14, 2003. The Company had previously investigated the Honeywell patents and believes that ACSS has valid defenses against Honeywell's patent infringement suit. In addition, ACSS has been indemnified to a certain extent by Thales Avionics, which provided ACSS with the alleged infringing technology. Thales Avionics owns 30% of ACSS. In the opinion of management, the ultimate disposition of Honeywell's pending claim will not result in a material liability to the Company.

On November 18, 2002, the Company initiated a proceeding against OSI Systems, Inc. (OSI) in the United States District Court sitting in the Southern District of New York (the "New York action") seeking, among other things, a declaratory judgment that the Company had fulfilled all of its obligations under a letter of intent with OSI (the "OSI Letter of Intent"). Under the OSI Letter of Intent, the Company was to negotiate definitive agreements with OSI for the sale of certain businesses the Company acquired from PerkinElmer, Inc. on June 14, 2002. On December 23, 2002, OSI responded by filing suit against the Company in the United States District Court sitting in the Central District of California (the "California action") alleging, among other things, that the Company breached its obligations under the OSI Letter of Intent and seeking damages in excess of $100 million not including punitive damages. On February 7, 2003, OSI filed an answer and counterclaims in the New York action that asserted substantially the same claims OSI had raised in the California action. The California action was dismissed by the California District Court in favor of the New York action. Under the OSI Letter of Intent, the Company proposed selling to OSI the conventional detection business and the ARGUS business that the Company recently acquired from PerkinElmer, Inc. Negotiations with OSI lasted for almost one year and ultimately broke down over issues regarding, among other things, intellectual property, product-line definitions, allocation of employees and due diligence. The Company believes that the claims asserted by OSI in its suit are without merit and intends to defend against the OSI claims vigorously.

The Company is periodically subject to litigation, claims or assessments and various contingent liabilities incidental to its business. With respect to those investigative actions, items of litigation, claims or assessments of which they are aware, management of the Company is of the opinion that the probability is remote that, after taking into account certain provisions that have been made with respect to these matters, the ultimate resolution of any such investigative actions, items of litigation, claims or assessments will have a material adverse effect on the consolidated financial position, results of operations or cash flows of the Company.

CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS

In connection with our incorporation, L-3 Holdings, Lehman Brothers Capital Partners III, L.P. and certain of its affiliates, Messrs. Lanza and LaPenta and Lockheed Martin Corporation entered into the Stockholders Agreement, which has terminated except for the terms relating to registration rights.

Pursuant to the Stockholders Agreement, at this time Messrs. Lanza and LaPenta and the Lehman Partnership have the right, subject to certain conditions, to require L-3 Holdings to register their shares of its common stock under the Securities Act of 1933. The Lehman Partnership has four demand rights and each of Messrs. Lanza and LaPenta has one demand registration right. Lockheed Martin Corporation sold all of its shares of L-3 Holdings' common stock in 1999. As of May 31, 2003, the Lehman Partnership owned 2.3% of L-3 Holdings' common stock.

In addition, the Stockholders Agreement also provides Messrs. Lanza and LaPenta and the Lehman Partnership with piggyback registration rights. The Stockholders Agreement provides, among other things, that L-3 Holdings will pay expenses incurred in connection with:

- up to three demand registrations requested by the Lehman Partnership and the two demand registrations requested by each of Messrs. Lanza and LaPenta; and
- any registration in which those parties participate through piggyback registration rights granted under the agreement.

DIRECTORS AND EXECUTIVE OFFICERS

The following table provides information concerning the directors and executive officers of L-3 Communications as of May 31, 2003:

NAME	AGE	POSITION
Frank C. Lanza	71	Chairman, Chief Executive Officer and Director
Robert V. LaPenta	57	President, Chief Financial Officer and Director
Michael T. Strianese	47	Senior Vice President, Finance
Christopher C. Cambria	44	Senior Vice President, General Counsel and Secretary
Jimmie V. Adams	66	Vice President -- Washington D.C. Operations
David T. Butler III	46	Vice President -- Planning
Ralph G. D'Ambrosio	35	Vice President -- Controller
Joseph S. Paresi	47	Vice President -- Product Development
Robert W. RisCassi	67	Vice President -- Washington D.C. Operations
Charles J. Schafer	55	Vice President -- Business Operations
Stephen M. Souza	50	Vice President -- Treasurer
Dr. Jill J. Wittels	53	Vice President -- Business Development
Claude R. Canizares	57	Director
Thomas A. Corcoran(1)	58	Director
Robert B. Millard(2)	51	Director
John M. Shalikashvili(1)	66	Director
Arthur L. Simon(1)	70	Director
Alan H. Washkowitz(2)	62	Director

(1) Member of the Audit Committee.
(2) Member of the Compensation Committee.

Frank C. Lanza, Chairman and Chief Executive Officer and Director since April 1997. From April 1996, when Loral Corporation was acquired by Lockheed Martin Corporation, until April 1997, Mr. Lanza was Executive Vice President of Lockheed Martin, a member of Lockheed Martin's Executive Council and Board of Directors and President and Chief Operating Officer of Lockheed Martin's command, control, communications and intelligence ("C3I") and Systems Integration Sector, which comprised many of the businesses Lockheed Martin acquired from Loral. Prior to the April 1996 acquisition of Loral, Mr. Lanza was President and Chief Operating Officer of Loral, a position he held since 1981. He joined Loral in 1972 as President of its largest division, Electronic Systems. His earlier experience was with DalmoVictor and Philco Western Development Laboratory.

Robert V. LaPenta, President and Chief Financial Officer and Director since April 1997. From April 1996, when Loral was acquired by Lockheed Martin, until April 1997, Mr. LaPenta was a Vice President of Lockheed Martin and was Vice President and Chief Financial Officer of Lockheed Martin's C3I and Systems Integration Sector. Prior to the April 1996 acquisition of Loral, he was Loral's Senior Vice President and Controller, a position he held since 1981. He joined Loral in 1972 and was named Vice President and Controller of its largest division in 1974. He became Corporate Controller in 1978 and was named Vice President in 1979. Mr. LaPenta is on the Board of Trustees of Iona College, the Board of Trustees of The American College of Greece and the Board of Directors of Core Software Technologies.

Michael T. Strianese, Senior Vice President--Finance. Mr. Strianese became a Senior Vice President in March 2001. He joined us in April 1997 as Vice President--Finance and Controller and was our Controller until July 2000. From April 1996, when Loral was acquired by Lockheed Martin, until April 1997, Mr. Strianese was Vice President and Controller of Lockheed Martin's C3I and Systems Integration Sector. From 1991 to the April 1996 acquisition of Loral, he was Director of Special Projects at Loral. Mr. Strianese is a Certified Public Accountant.

Christopher C. Cambria, Senior Vice President--Secretary and General Counsel. Mr. Cambria became a Senior Vice President in March 2001. He joined us in June 1997 as Vice President--General Counsel and Secretary. From 1994 until joining us, Mr. Cambria was an associate with Fried, Frank, Harris, Shriver & Jacobson. From 1986 until 1993, he was an associate with Cravath, Swaine & Moore. Mr. Cambria is a director of Core Software Technologies.

Jimmie V. Adams, Vice President--Washington, D.C. Operations. General Jimmie V. Adams (U.S.A.F.-ret.) joined us in May 1997. From April 1996 until April 1997, he was Vice President of Lockheed Martin's Washington Operations for the C3I and Systems Integration Sector. Prior to the April 1996 acquisition of Loral, he had held the same position at Loral since 1993. Before joining Loral in 1993, he was Commander in Chief, Pacific Air Forces, Hickam Air Force Base, Hawaii, capping a 35-year career with the U.S. Air Force. He was also Deputy Chief of Staff for plans and operation for U.S. Air Force headquarters and Vice Commander of Headquarters Tactical Air Command and Vice Commander in Chief of the U.S. Air Forces Atlantic at Langley Air Force Base. He is a command pilot with more than 141 combat missions.

David T. Butler III, Vice President--Planning. Mr. Butler became a Vice President in December 2000. He joined us in 1997 as our corporate Director of Planning and Strategic Development. Prior to joining us, he was the Controller for Lockheed Martin Fairchild Systems from 1996 to 1997. Prior to the acquisition of Loral, Mr. Butler was Controller of Loral Fairchild Systems from 1992 to 1996. From 1981 to 1992, Mr. Butler held a number of financial positions with Loral Electronic Systems.

Ralph G. D'Ambrosio, Vice President and Controller. Mr. D'Ambrosio became Vice President in July 2001 and Controller in August 2000. He joined us in August 1997, and until July 2000 was our Assistant Controller. Prior to joining us, he was a senior manager at Coopers & Lybrand L.L.P., where he held a number of positions since 1989. Mr. D'Ambrosio is a Certified Public Accountant.

Joseph S. Paresi, Vice President--Product Development and President of the Security Systems Division. Mr. Paresi joined us in April 1997. From April 1996 until April 1997, Mr. Paresi was Corporate Director of Technology for Lockheed Martin's C3I and Systems Integration Sector. Prior to the April 1996 acquisition of Loral, Mr. Paresi was Corporate Director of Technology for Loral, a position he held since 1993. From 1978 to 1993, Mr. Paresi was a Systems Engineer, Director of Marketing and Director of International Programs at Loral Electronic Systems. Mr. Paresi is currently a director of AnnisTech, Inc. and Millivision, Inc.

Robert RisCassi, Vice President--Washington, D.C. Operations. General Robert W. RisCassi (U.S. Army-ret.) joined us in April 1997. From April 1996 until April 1997, he was Vice President of Land Systems for Lockheed Martin's C3I and Systems Integration Sector. Prior to the April 1996 acquisition of Loral, he had held the same position for Loral since 1993. He joined Loral in 1993 after retiring as U.S.Army Commander in Chief, United Nations Command/Korea. His 35-year military career included posts as Army Vice Chief of Staff; Director, Joint Staff, Joint Chiefs of Staff; Deputy Chief of Staff for Operations and Plans; and Commander of the Combined Arms Center. General RisCassi is currently a director of Alliant Techsystems Inc.

Charles J. Schafer, Senior Vice President--Business Operations and President of the Products Group. Mr. Schafer became a Senior Vice President inApril 2002. Mr. Schafer was appointed President of the Products Group in September 1999. He joined us in August 1998 as VicePresident--Business Operations. Prior to August 1998, he was President of Lockheed Martin's Tactical Defense Systems Division, a position he also held at Loral since September 1994. Prior to the April 1996 acquisition of Loral, Mr. Schafer held various executive positions with Loral, which he joined in 1984.

Stephen M. Souza, Vice President and Treasurer. Mr. Souza joined us in August 2001. Prior to joining us he was the Treasurer of ASARCO Inc. from 1999 to August 2001 and Assistant Treasurer from 1992 to 1999.

Jill H. Wittels, Vice President--Business Development. Ms. Wittels joined us in March 2001. From July 1998 to February 2001 she was President and General Manager of BAE Systems' Information and Electronic Warfare Systems/Infrared and Imaging Systems division and its predecessor company.

From January 1997 to July 1998, Ms. Wittels was Vice President--Business Development and Operations for IR Focalplane Products at Lockheed Martin. Ms. Wittels is on the Board of Overseers for the Department of Energy's Fermi National Accelerator Lab. Ms. Wittels is also a director of Innovative Micro Technology, Inc. and Millivision, Inc.

Claude R. Canizares, Director since May 2003. Since 1974, Professor Canizares has been a faculty member of the Massachusetts Institute of Technology (MIT). He currently serves as the Associate Provost and Bruno Rossi Professor of Experimental Physics, overseeing the MIT Lincoln Laboratory. In addition, he is a principal investigator and Associate Director of NASA's Chandra X-ray Observatory. Professor Canizares is a member of the National Academy of Sciences, the International Academy of Astronautics and a fellow of the American Physical Society and the American Association for the Advancement of Science. He is also a member of the Board of Trustees of the Associated Universities, Inc., the Board of Physics and Astronomy of the National Research Council and the Air Force Scientific Advisory Board.

Thomas A. Corcoran, Director since July 1997. Member of the audit committee. Since March 2001, Mr. Corcoran has been the President and Chief Executive Officer of Gemini Air Cargo. Mr. Corcoran is also president of Corcoran Enterprises, a private management consulting firm. Mr. Corcoran was the President and Chief Executive Officer of Allegheny Teledyne Incorporated from October 1999 to December 2000. From October 1998 to September 1999, he was President and Chief Operating Officer of the Space & Strategic Missiles Sector of Lockheed Martin Corporation. From March 1995 to September 1998 he was the President and Chief Operating Officer of the Electronic Systems Sector of Lockheed Martin Corporation. From 1993 to 1995, Mr. Corcoran was President of the Electronics Group of Martin Marietta Corporation. Prior to that he worked for General Electric for 26 years and from 1983 to 1993 he held various management positions with GE Aerospace and was a company officer from 1990 to 1993. Mr. Corcoran is a member of the Board of Trustees of Worcester Polytechnic Institute, the Board of Trustees of Stevens Institute of Technology and the Board of Directors of REMEC Corporation.

Robert B. Millard, Director since April 1997. Chairman of the compensation committee. Mr. Millard is a Managing Director of Lehman Brothers Inc., head of Lehman Brothers' Principal Trading & Investments Group and principal of the Merchant Banking Group. Mr. Millard joined Kuhn Loeb & Co. in 1976 and became a Managing Director of Lehman Brothers Inc. in 1983. Mr. Millard is a director of GulfMark International, Kirch Media GmbH and Weatherford International, Inc.

John M. Shalikashvili, Director since August 1998. Chairman of the audit committee. General Shalikashvili (U.S. Army-ret.) is an independent consultant and a Visiting Professor at Stanford University. General Shalikashvili was the senior officer of the United States military and principal military advisor to the President of the United States, the Secretary of Defense and National Security Council by serving as the thirteenth Chairman of the Joint Chiefs of Staff, Department of Defense, for two terms from 1993 to 1997. Prior to his tenure as Chairman of the Joint Chiefs of Staff, he served as the Commander in Chief of all United States forces in Europe and as NATO's tenth Supreme Allied Commander, Europe(SACEUR). He has also served in a variety of command and staff positions in the continental United States, Alaska, Belgium, Germany, Italy, Korea, Turkey and Vietnam. General Shalikashvili is a director of The Boeing Company, United Defense Industries Inc., Frank Russell Trust Company and Plug Power, Inc.

Arthur L. Simon, Director since April 2000. Member of the audit committee. Mr. Simon is an independent consultant. Before his retirement, Mr. Simon was a partner at Coopers & Lybrand, L.L.P., Certified Public Accountants, from 1968 to 1994. He is a director of Loral Space & Communications, Inc.

Alan H. Washkowitz, Director since April 1997. Member of the compensation committee. Mr. Washkowitz is a Managing Director of Lehman Merchant Banking Group, and is responsible for the oversight of Lehman Brothers Inc. Merchant Banking Portfolio Partnership L.P. Mr. Washkowitz joined Lehman Brothers Inc. in 1978 when Kuhn Loeb & Co. was acquired by Lehman Brothers. Mr. Washkowitz is a director of Peabody Energy Corporation and K&F Industries, Inc.

L-3 Holdings' certificate of incorporation provides for a classified board of directors divided into three classes. Class I will expire at the annual meeting of the stockholders to be held in 2005; Class II will expire at the annual meeting of the stockholders to be held in 2004; and Class III will expire at the annual meeting of the stockholders to be held in 2006. At each annual meeting, L-3 Holdings' stockholders will elect the successors to directors whose terms will then expire to serve from the time of election and qualification until the third annual meeting following election and until their successors have been elected and qualified, or until their resignation or removal, if any. Increases or decreases in the number of directorships will be distributed among the three classes so that, as nearly as possible, each class will consist of an equal number of directors.

Our executive officers and key employees serve at the discretion of our board of directors.

THE BOARD OF DIRECTORS AND CERTAIN COMMITTEES OF THE BOARD OF DIRECTORS

Our board of directors directs the management of our business and affairs, as provided by Delaware law, and conducts its business through meetings of the board of directors and two standing committees: the audit and compensation committees. In addition, from time to time, special committees may be established under the direction of the board of directors when necessary to address specific issues. We have no nominating committee; however, the audit committee has agreed to perform the functions of the nominating committee. Each executive officer serves at the discretion of the board of directors. During the fiscal year ended December 31, 2002, the board of directors held four regularly scheduled meetings and one special meeting. All of our directors attended at least 75% of the combined number of board of directors meetings and committee meetings during the past fiscal year.

The audit committee currently consists of Messrs. Corcoran, Shalikashvili (Chairman) and Simon. This committee, which met nine times during 2002, is responsible generally for (1) recommending to the board of directors the independent accountants to be nominated to audit our financial statements; (2) approving the compensation of the independent accountants; (3) meeting with our independent accountants to review the proposed scope of the annual audit of our financial statements; (4) reviewing the findings of the independent accountants with respect to the annual audit; and (5) reviewing with management and the independent accountants our periodic financial reports prior to our filing them with the SEC and reporting annually to the board of directors with respect thereto. In addition, the audit committee, acting as the nominating committee, nominated the Class III members for reelection to the board of directors.

During the 2002 fiscal year, Messrs. Robert Millard, John Montague and Alan Washkowitz served as members of the compensation committee of the board of directors. In May 2003, Mr. Montague resigned as a director and member of the compensation committee. The compensation committee currently consists of Messrs. Millard (Chairman) and Washkowitz. This committee, which acted by written consent four times during 2002, is responsible for administering our 1997 Stock Option Plan for Key Employees (the "1997 Plan") and our 1999 Long Term Performances Plan (the "1999 Plan") and has limited authority to adopt amendments to those plans. This committee is also responsible for recommending to the board of directors the salaries to be paid to our Chief Executive Officer and the President, and reviewing and approving the Chief Executive Officer's and the President's other annual cash compensation and long-term incentives and the total compensation to be paid to certain of our other executive officers.

COMPENSATION OF DIRECTORS

The directors who are also our employees or employees of our subsidiaries or affiliates do not receive compensation for their services as directors. The non-affiliated directors receive annual compensation of $30,000 for service on the board of directors, of which $25,000 is paid in cash, and $5,000 is paid in shares of L-3 Holdings' common stock. The chairman of both the audit committee and the compensation committee each receives additional cash annual compensation of $3,500. In addition, non-affiliated directors receive an annual stock option grant of 3,000 shares of L-3 Holdings' common stock, which will vest in three equal annual installments. The non-affiliated directors are

entitled to reimbursement for their reasonable out-of-pocket expenses in connection with their travel to and attendance at meetings of the board of directors or committees thereof. In addition, the non-affiliated directors will be compensated $1,250 per meeting attended, including committee meetings, up to a maximum of $2,500 per day.

Non-affiliated directors may defer up to 100 percent of the cash portion of their annual cash compensation (including meeting fees) otherwise payable to the director. Subject to certain limitations, a participating director's deferred compensation will be distributed in a lump sum on, or distribution in annual installments commencing on, the 30th day following the date he or she ceases to be a director. Deferral elections are irrevocable during any calendar year and must be made before the beginning the calendar year in which his/her compensation is earned. Interest is accrued on deferred amounts. Depending on a director's investment election, deferred amounts earn interest at a rate based on the 90-day U.S. Government Treasury Bill or the performance of L-3 Holdings' common stock.

EXECUTIVE COMPENSATION

SUMMARY COMPENSATION TABLE

The following table provides summary information concerning compensation paid or accrued by us to or on behalf of our Chief Executive Officer and each of our four other most highly compensated executive officers who served in such capacities as of December 31, 2002, collectively referred to herein as the named executive officers, for services rendered to us during each of the last three years.

NAME AND PRINCIPAL POSITION	YEAR	ANNUAL COMPENSATION		LONG TERM COMPENSATION AWARD	ALL OTHER COMPENSATION ($)(1)
		SALARY ($)	BONUS ($)	SECURITIES UNDERLYING STOCK OPTIONS (#)	
Frank C. Lanza	2002	$825,000	$850,000	400,000	$ 11,125
(Chairman and Chief	2001	750,000	750,000	--	11,125
Executive Officer)	2000	750,000	500,000	--	6,858
Robert V. LaPenta	2002	625,000	750,000	400,000	39,287
(President and Chief	2001	545,577	650,000	--	34,306
Financial Officer)	2000	500,000	400,000	--	32,907
Michael T. Strianese	2002	331,250	375,000	--	19,690
(Senior Vice President,	2001	255,000	300,000	54,000	13,790
Finance)	2000	209,673	225,000	--	73,515
Christopher C. Cambria	2002	235,000	375,000	--	12,038
(Senior Vice President,	2001	235,000	300,000	54,000	10,838
Secretary and General Counsel)	2000	228,025	225,000	--	10,827
Charles J. Schafer					
(Senior Vice President, Business	2002	268,750	350,000	--	24,449
Operations and President of	2001	248,230	250,000	36,000	118,438
the Products Group)	2000	230,000	175,000	--	118,368

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(1) Amounts for the year ended December 31, 2002 include: (a) our matching contributions of $8,800 under our savings plan for Messrs. LaPenta and Schafer and $8,000 for Messrs. Strianese and Cambria; and (b) the value of supplemental life insurance programs in the amounts of $11,125 for Mr. Lanza, $30,487 for Mr. LaPenta, $11,690 for Mr. Strianese, $4,038 for Mr. Cambria and $15,649 for Mr. Schafer.

OPTION GRANTS IN FISCAL YEAR 2002

The following table shows the options to purchase L-3 Holdings' common stock granted in fiscal year 2002 to the named executive officers.

NAME	OPTIONS GRANTED (#)	% TOTAL OPTIONS GRANTED	PER SHARE EXERCISE PRICE ($)	EXPIRATION DATE	GRANT DATE VALUE ($)
Frank C. Lanza	400,000	18.44%	$ 53.75	3/25/12	$ 7,922,667
Robert V. LaPenta	400,000	18.44%	53.75	3/25/12	7,922,667
Michael T. Strianese	--	0.00%	--	--	--
Christopher C. Cambria	--	0.00%	--	--	--
Charles J. Schafer	--	0.00%	--	--	--
	800,000				$15,845,334

OPTION EXERCISES AND FISCAL YEAR-END VALUES

The following table provides information on options to purchase L-3 Holdings' common stock that were exercised during fiscal year 2002 by our named executive officers; the total numbers of exercisable and non-exercisable options to purchase L-3 Holdings' common stock owned by our named executive officers at December 31, 2002, and the aggregate dollar value of such options that were in-the-money at December 31, 2002.

NAME AND PRINCIPAL POSITION	SHARES ACQUIRED ON EXERCISE(#)	VALUE REALIZED ($)	NUMBER OF SECURITIES UNDERLYING UNEXERCISED OPTIONS AT FISCAL YEAR-END (#)		VALUE OF UNEXERCISED IN-THE-MONEY OPTIONS AT FISCAL YEAR-END ($) (1)	
			EXERCISABLE	UNEXERCISABLE (2)	EXERCISABLE	UNEXERCISABLE (2)
Frank C. Lanza (Chairman and Chief Executive Officer)	--	$ --	1,828,572	400,000	$76,205,738	$ --
Robert V. LaPenta (President and Chief Financial Officer)	100,000	5,029,000	1,528,572	400,000	63,703,238	--
Michael T. Strianese (Senior Vice President, Finance)	50,000	1,790,950	75,000	36,000	1,547,490	187,740
Christopher C. Cambria (Senior Vice President, Secretary and General Counsel)	--	--	89,800	36,000	1,934,658	187,740
Charles J. Schafer (Senior Vice President, Business Operations and President of the Products Group)	27,000	994,680	27,000	24,000	454,980	125,160

(1) In accordance with SEC rules, the values of the in-the-money options were calculated by subtracting the exercise prices of the options from the December 31, 2002 closing stock price of L-3 Holdings' common stock of $44.91.

(2) These options are unexercisable because they have not yet vested under their terms.

PENSION PLAN

The following table shows the estimated annual pension benefits payable under the L-3 Communications Corporation Pension Plan and Supplemental Executive Retirement Plan to a covered participant upon retirement at normal retirement age (65), based on the career average compensation (salary and bonus) and years of credited service with us.

AVERAGE COMPENSATION AT RETIREMENT	YEAR OF CREDITED SERVICE						
	5	10	15	20	25	30	35
$ 300,000	$18,952	$ 34,171	$ 46,357	$ 60,278	$ 71,497	$ 80,603	$ 87,955
400,000	25,605	46,159	62,629	81,361	96,446	108,652	118,496
500,000	32,258	58,152	78,905	102,452	121,399	136,704	149,032
600,000	38,909	70,140	95,176	123,536	146,344	164,749	179,563
700,000	45,562	82,131	111,451	144,624	171,295	192,799	210,100
800,000	52,213	94,119	127,722	165,708	196,243	220,847	240,638
900,000	58,865	106,111	143,997	186,798	221,194	248,898	271,175
1,000,000	65,517	118,100	160,270	207,883	246,141	276,946	301,711
1,100,000	72,169	130,089	176,543	228,970	271,092	304,993	332,245
1,200,000	78,820	142,078	192,814	250,054	296,040	333,039	362,779
1,300,000	85,473	154,069	209,089	271,142	320,988	361,088	393,315
1,400,000	92,124	166,058	225,360	292,228	345,938	389,138	423,851
1,500,000	98,776	178,047	241,633	313,314	370,886	417,186	454,385

As of December 31, 2002, the current annual compensation and current years of credited service (including for Messrs. LaPenta and Strianese, years of credited service as an employee of Loral and Lockheed Martin) for each of the following persons were: Mr. Lanza, $1,575,000 and six years; Mr. LaPenta, $1,275,000 and 31 years; Mr. Strianese, $631,250 and 13 years; Mr. Cambria, $535,000 and six years; and Mr. Schafer, $518,750 and four years.

COMPENSATION COMMITTEE INTERLOCKS AND INSIDER PARTICIPATION

During the 2002 fiscal year, Messrs. Robert Millard, John Montague, and Alan Washkowitz served as members of the compensation committee of the board of directors. In May 2003, Mr. Montague resigned as a director and member of the compensation committee. None of these individuals has served us or any of our subsidiaries as an officer or employee.

None of our executive officers serves as a member of the board of directors or compensation committee of any entity which has one or more executive officers serving as a member of our board of directors or compensation committee.

EMPLOYMENT AGREEMENTS

We entered into an employment agreement (the "Employment Agreements") effective on April 30, 1997 with each of Mr. Lanza, our Chairman and Chief Executive Officer, and Mr. LaPenta, our President and Chief Financial Officer. The Employment Agreements provided for an initial term of five years, which would automatically renew for one-year periods thereafter, unless a party thereto gave notice of its intent to terminate at least 90 days prior to the expiration of the term. Mr. Lanza's employment agreement was renewed in April 2002. Mr. LaPenta's employment agreement expired in April 2002.

Upon a termination without cause or resignation for good reason, we will be obligated, through the end of the term, to (i) continue to pay the base salary and (ii) continue to provide life insurance and medical and hospitalization benefits comparable to those provided to other senior executives; provided, however, that any such coverage shall terminate to the extent that Mr. Lanza is offered or obtains comparable benefits coverage from any other employer. The Employment Agreements provided for confidentiality during employment and at all times thereafter. There was also a

noncompetition and non-solicitation covenant which was effective during the employment term and for one year thereafter; provided, however, that if the employment terminated following the expiration of the initial term, the noncompetition covenant would only be effective during the period, if any, that we paid the severance described above.

SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS

All outstanding capital stock of L-3 Communications is owned by L-3 Holdings. As of May 31, 2003, there were 95,645,332 shares of L-3 Holdings' common stock outstanding. We know of no person who, as of May 31, 2003, beneficially owned more than five percent of the common stock, except as set forth below.

NAME OF BENEFICIAL OWNER	AMOUNT AND NATURE OF BENEFICIAL OWNERSHIP	PERCENT OF CLASS (1)
Citigroup Inc.(2) 153 East 53rd Street New York, New York 10043.	10,675,192	11.2%
Frank C. Lanza(3) c/o L-3 Communications Holdings, Inc. 600 Third Avenue, 34th Floor New York, New York 10016.	4,913,248	5.0%
Robert V. LaPenta(4) c/o L-3 Communications Holdings, Inc. 600 Third Avenue, 34th Floor New York, New York 10016.	5,268,807	5.4%

(1) Under Rule 13d-3, certain shares may be deemed to be beneficially owned by more than one person (if, for example, persons share the power to vote or the power to dispose of the shares). In addition, shares are deemed to be beneficially owned by a person if the person has the right to acquire the shares (for example, upon exercise of an option) within 60 days of the date as of which the information is provided. In computing the percentage ownership of any person, the amount of shares outstanding is deemed to include the amount of shares beneficially owned by such person (and only such person) by reason of these acquisition rights. As a result, the percentage of outstanding shares of any person as shown in this table does not necessarily reflect the person's actual ownership or voting power with respect to the number of shares of common stock actually outstanding at May 31, 2003.

(2) Based on a Schedule 13G/A filed with the S.E.C., dated February 4, 2003, in which Citigroup Inc. reported that it had shared voting and dispositive power over 10,675,192 shares of common stock.

(3) The shares of common stock beneficially owned includes 1,661,906 shares issuable under employee stock options and exercisable within 60 days of May 31, 2003.

(4) The shares of common stock beneficially owned includes 1,661,906 shares issuable under employee stock options and exercisable within 60 days of May 31, 2003 and 959 shares allocated to the account of Mr. LaPenta under our savings plans.

SECURITY OWNERSHIP OF MANAGEMENT

The following table shows the amount of L-3 Holdings' common stock beneficially owned (unless otherwise indicated) by L-3 Holdings' executive officers, L-3 Holdings' directors, and by all of L-3 Holdings' current executive officers and directors as a group. Except as otherwise indicated, all information listed below is as of May 31, 2003.

NAME OF BENEFICIAL OWNER	SHARES OF COMMON STOCK BENEFICIALLY OWNED (1)(2)	PERCENTAGE OF SHARES OF COMMON STOCK OUTSTANDING (3)
Directors and Executive Officers		
Frank C. Lanza	4,913,248	5.0%
Robert V. LaPenta	5,268,807	5.4%
Michael T. Strianese	75,910	--
Christopher C. Cambria	90,681	--
Charles J. Schafer	27,862	--
Thomas A. Corcoran(4)	11,000	--
Robert B. Millard(4)(5)(6)	143,178	--
John M. Shalikashvili(4)	11,684	--
Arthur L. Simon(4)	14,260	--
Alan H. Washkowitz(4)(5)(7)	274,722	--
Directors and Executive Officers as a Group (18 persons)(8)	11,047,808	11.1%

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(1) The shares of L-3 Holdings common stock beneficially owned include the number of shares (i) issuable under employee stock options and exercisable within 60 days of May 31, 2003 and (ii) allocated to the accounts of executive officers under our savings plans. Of the number of shares shown above, (i) the following represent shares that may be acquired upon exercise of employee stock options for the accounts of: Mr. Lanza, 1,661,906 shares; Mr. LaPenta, 1,661,906 shares; Mr. Strianese, 75,000 shares, Mr. Cambria, 89,800 shares and Mr. Schafer, 27,000 shares; and (ii) the following represent shares allocated under our saving plans to the accounts of: Mr. LaPenta, 959 shares; Mr. Strianese, 910 shares; Mr. Cambria, 881 shares; and Mr. Schafer, 862 shares.

(2) The number of shares shown includes shares that are individually or jointly owned, as well as shares over which the individual has either sole or shared investment or voting authority.

(3) Share ownership does not exceed one percent of the class unless otherwise indicated. Under Rule 13d-3, certain shares may be deemed to be beneficially owned by more than one person (if, for example, persons share the power to vote or the power to dispose of the shares). In addition, shares are deemed to be beneficially owned by a person if the person has the right to acquire the shares (for example, upon exercise of an option) within 60 days of the date as of which the information is provided. In computing the percentage ownership of any person, the amount of shares outstanding is deemed to include the amount of shares beneficially owned by such person (and only such person) by reason of these acquisition rights. As a result, the percentage of outstanding shares of any person as shown in this table does not necessarily reflect the person's actual ownership or voting power with respect to the number of shares of common stock actually outstanding at May 31, 2003.

(4) Includes 11,000 shares issuable and exercisable under director stock options within 60 days of May 31, 2003 in the case of Messrs. Corcoran and Shalikashvili, 8,000 shares in the case of Mr. Simon and 5,000 shares in the case of Messrs. Millard and Washkowitz.

(5) Robert B. Millard and Alan H. Washkowitz, each of whom is a member of our board of directors, are each a Managing Director of Lehman Brothers Inc. and limited partners of Lehman Brothers Capital Partners III, L.P. As limited partners of Lehman Brothers Capital Partners III, L.P., Messrs. Millard and Washkowitz may be deemed to share beneficial ownership of shares of L-3 Holdings' common stock held by Lehman Brothers Capital Partners III, L.P. Such individuals disclaim any such beneficial ownership and those shares of common stock are not reflected in the numbers shown in this table.

(6) Includes 105,278 shares owned by a charitable foundation of which Mr. Millard and his wife are the sole trustees, and as to which Mr. Millard disclaims beneficial ownership.

(7) Includes 111,330 shares in trust, for the benefit of Mr. Washkowitz's children, for which Mr. Washkowitz and his wife are co-trustees and as to which Mr. Washkowitz disclaims beneficial ownership.

(8) Includes 3,755,280 shares issuable under employee stock options and exercisable under employee stock options within 60 days of May 31, 2003, and 14,514 shares allocated to the accounts of executive officers under our savings plans.

DESCRIPTION OF OTHER INDEBTEDNESS

SENIOR CREDIT FACILITIES OF L-3 COMMUNICATIONS CORPORATION

The senior credit facilities of L-3 Communications Corporation have been provided by a syndicate of banks led by Bank of America, N.A., as administrative agent. The senior credit facilities provide for:

(A) $500 million in revolving credit loans which must be repaid by May 15, 2006 (the "Revolving Credit Facility"); and

(B) $250 million in revolving credit loans which must be repaid by February 24, 2004 (the "Revolving 364 Day Facility" and together with (A) above, the "senior credit facilities").

However, all or a portion of the Revolving 364 Day Facility may be extended annually on the maturity date of the Revolving 364 Day Facility for a period of 364 days with the consent of lenders holding at least 50% of the commitments to make 364-day loans (February 24, 2004, as extended in accordance with the foregoing, the "364 Day Termination Date"). L-3 Communications Corporation may also convert the outstanding principal amount of any or all of the loans outstanding under the Revolving 364 Day Facility to term loans on the 364 Day Termination Date if it meets certain conditions. The senior credit facilities include availability for letters of credit, and the Revolving Credit Facility allows borrowings up to a specified amount on same-day notice (the "Swingline Loans").

All borrowings under the senior credit facilities bear interest, at L-3 Communications Corporation's option, at either:

(A) "base rate" equal to, for any day, the higher of:

- 0.50% per annum above the latest federal funds effective rate; and
- the rate of interest in effect for such day as publicly announced from time to time by Bank of America, N.A. as its "reference rate,"

plus a spread ranging from 2.00% to 0.50% per annum, and adjusted periodically, depending on L-3 Communications Corporation's Debt Ratio (as defined below) at the time of determination or

(B) "LIBOR" equal to, for any interest period (as defined in the senior credit facilities), the London interbank offered rate for such interest period as determined in accordance with the senior credit facilities and as adjusted to reflect any reserve requirements, plus a spread ranging from 3.00% to 1.50% per annum, and adjusted periodically, depending on the Debt Ratio at the time of determination, provided that Swingline Loans can only bear interest at the "base rate" plus the applicable spread.

The Debt Ratio is defined in the senior credit facilities as the ratio of Consolidated Total Debt to Consolidated EBITDA. Consolidated Total Debt is equal to outstanding indebtedness for borrowed money or the deferred purchase price of property, including capitalized lease obligations, plus permitted convertible securities guaranteed by L-3 Communications Corporation or its subsidiaries minus the lesser of actual unrestricted cash or $50 million. Consolidated EBITDA is equal to consolidated net income (excluding extraordinary gains and losses and gains and losses in connection with asset dispositions and discontinued operations) for the most recent four quarters, plus consolidated interest expense (including consolidated interest expense of L-3 Holdings for permitted convertible securities guaranteed by L-3 Communications Corporation or its subsidiaries), income taxes, depreciation and amortization minus depreciation and amortization related to minority interest.

L-3 Communications Corporation will pay commitment fees calculated at a rate ranging from 0.50% to 0.35% per annum for the Revolving Credit Facility and 0.45% to 0.30% per annum for the Revolving 364 Day Facility, depending on the Debt Ratio in effect at the time of determination, on the daily amount of the available unused commitment under the senior credit facilities. These commitment fees are payable quarterly in arrears and upon termination of the senior credit facilities.

L-3 Communications Corporation will pay a letter of credit fee calculated at a rate ranging from (A) 1.50% to 0.75% per annum in the case of performance letters of credit and (B) 3.00% to 1.50%

per annum in the case of all other letters of credit, in each case depending on the Debt Ratio at the time of determination. L-3 Communications Corporation will also pay a fronting fee equal to 0.125% per annum on the aggregate face amount of all outstanding letters of credit. Such fees will be payable quarterly in arrears and upon the termination of the senior credit facilities. In addition, L-3 Communications Corporation will pay customary transaction charges in connection with any letters of credit. The senior credit facilities provide for the issuance of letters of credit in currencies other than United States dollars.

The above interest rates are adjusted for changes in the Debt Ratio and reach their maximum if the Debt Ratio is greater than 4.25 to 1.0 and reach their minimum if that ratio is less than 2.75 to 1.0.

In the event that we convert any or all of the outstanding principal amount under the Revolving 364 Day Facility into term loans (the "Applicable Converted Commitment") on any 364 Termination Date, we would have to repay the principal amount of the resulting term loans by May 16, 2006 or, if earlier, the second anniversary of the effective date of such conversion into term loans.

Borrowings under the senior credit facilities are subject to mandatory prepayment (i) with the net proceeds of any incurrence of indebtedness that is not permitted under the senior credit facilities and (ii) with the proceeds of asset sales, in both cases subject to certain exceptions.

L-3 Communications Corporation's obligations under the senior credit facilities are secured by:

- a pledge by L-3 Communications Holdings of the stock of L-3 Communications Corporation; and
- a pledge by L-3 Communications Corporation and all of its material direct and indirect subsidiaries of all of the stock of their respective material domestic subsidiaries and 65% of the stock of their material first-tier foreign subsidiaries.

In addition, indebtedness under the senior credit facilities is guaranteed by L-3 Communications Holdings and by substantially all of L-3 Communications Corporation's direct and indirect material domestic subsidiaries.

The senior credit facilities contain customary covenants and restrictions on L-3 Communications Corporation's ability to engage in certain activities. In addition, the senior credit facilities provide that L-3 Communications Corporation must meet or exceed an interest coverage ratio and must not exceed the Debt Ratio. The senior credit facilities also include customary events of default.

Under the senior credit facilities, each of the following items constitutes an event of default:

- L-3 Communications Corporation fails to pay principal or amounts drawn under letters of credit when due;
- L-3 Communications Corporation fails to pay interest within five days after that amount becomes due;
- any representation or warranty made is incorrect in any material respect;
- L-3 Communications Corporation does not comply with its financial and other covenants (and, for some of other covenants, the default continues for 30 days);
- L-3 Communications Corporation or any of its subsidiaries defaults under any indebtedness, guarantee obligation or interest rate hedging agreement in the aggregate amount of at least $15.0 million for more than 10 days and that default would enable the holder of the obligation to accelerate the obligation;
- certain events of bankruptcy, insolvency or reorganization occur with respect to L-3 Communications Corporation or any of its subsidiaries;
- certain events occur with respect to any employee benefit plan of L-3 Communications Corporation or its affiliates covered by ERISA that would have a material adverse effect;

- o L-3 Communications Holdings, L-3 Communications Corporation or any of the subsidiaries of L-3 Communications Corporation fails to pay judgments aggregating in excess of $15.0 million, which judgments are not paid, covered by insurance, discharged or stayed for a period of 60 days;

- o any of the pledge agreements ceases to be in full force and effect or L-3 Communications Corporation or any party to any pledge agreement so asserts, or the lien under any of the pledge agreements ceases to be an enforceable first priority lien (subject to a grace period in certain cases);

- o the guarantees of the senior credit facilities are held to be enforceable or invalid or cease to be in full force and effect, or any guarantor denies its obligations under its guarantee; and

- o a change of control.

If an event of default occurs involving certain events of bankruptcy, insolvency or reorganization of L-3 Communications Corporation, the commitments under the senior credit facilities will automatically terminate and the loans, including accrued interest, and all other amounts owed under the agreements will become immediately due and payable. If any other event of default occurs, then lenders holding the majority in aggregate principal amount of the loans under any senior credit facility may declare the commitments under that facility to be terminated and the loans, including accrued interest, and all other amounts owed under that facility to be immediately due and payable. Upon any acceleration, L-3 Communications Corporation must cash collateralize any undrawn letters of credit under the senior credit facilities.

8% SENIOR SUBORDINATED NOTES DUE 2008

L-3 Communications Corporation has outstanding $200.0 million in aggregate principal amount of 8% Senior Subordinated Notes due 2008 (the "December 1998 Notes"). The December 1998 Notes are subject to the terms and conditions of an Indenture dated as of December 11, 1998, among L-3 Communications Corporation, the guarantors named therein and in supplements thereto and The Bank of New York as trustee (the "December 1998 Indenture"). The following summary of the material provisions of the December 1998 Indenture does not purport to be complete, and is subject to and qualified in its entirety by reference to, all of the provisions of the December 1998 Indenture and those terms made a part of the December 1998 Indenture by the Trust Indenture Act of 1939, as amended. All terms defined in the December 1998 Indenture and not otherwise defined herein are used below with the meanings set forth in the December 1998 Indenture.

General

The December 1998 Notes will mature on August 1, 2008 and bear interest at 8% per annum, payable semi-annually on February 1 and August 1 of each year. The December 1998 Notes are general unsecured obligations of L-3 Communications Corporation and are subordinated in right of payment to all existing and future senior debt of L-3 Communications Corporation and rank pari passu with the 2002 Notes and the outstanding notes and the exchange notes. The December 1998 Notes are unconditionally guaranteed, on an unsecured senior subordinated basis, jointly and severally by all of L-3 Communications Corporation's restricted subsidiaries other than its foreign subsidiaries. These guarantees are pari passu with the guarantees of the outstanding notes and the exchange notes, the 2002 Notes, the 2000 Convertible Notes and the CODES.

Optional Redemption

The December 1998 Notes are subject to redemption at any time, at the option of L-3 Communications Corporation, in whole or in part, on or after August 1, 2003 at redemption prices (plus accrued and unpaid interest) starting at 104% of principal (plus accrued and unpaid interest) during the 12-month period beginning August 1, 2003 and declining annually to 100% of principal (plus accrued and unpaid interest) on August 1, 2006 and thereafter.

Change of Control

Upon the occurrence of a change of control, each holder of the December 1998 Notes may require L-3 Communications Corporation to repurchase all or a portion of such holder's December 1998 Notes at a purchase price equal to 101% of the principal amount (plus accrued and unpaid interest and liquidated damages, if any). Generally, a change of control means the occurrence of any of the following:

- the disposition of all or substantially all of L-3 Communications Corporation's assets to any person;
- the adoption of a plan relating to the liquidation or dissolution of L-3 Communications Corporation;
- the consummation of any transaction in which a person other than the principals and their related parties becomes the beneficial owner of more than 50% of the voting stock of L-3 Communications Corporation; or
- the first day on which a majority of the members of the Board of Directors of L-3 Communications Corporation are not continuing directors.

Subordination

The December 1998 Notes are general unsecured obligations of L-3 Communications Corporation and are subordinate to all existing and future senior debt of L-3 Communications Corporation. The December 1998 Notes rank senior in right of payment to all subordinated indebtedness of L-3 Communications Corporation. The guarantees of L-3 Communications Corporation's subsidiaries under the December 1998 Notes are general unsecured obligations of the guarantors and are subordinated to the senior debt and to the guarantees of senior debt of those guarantors. These guarantees under the December 1998 Notes rank senior in right of payment to all subordinated Indebtedness of those guarantors.

Antilayering Provision

The December 1998 Indenture provides that (i) L-3 Communications Corporation will not incur, create, issue, assume, guarantee or otherwise become liable for any indebtedness that is subordinate or junior in right of payment to any senior debt and senior in any respect in right of payment to the December 1998 Notes, and (ii) no guarantor of the December 1998 Notes will incur, create, issue, assume, guarantee or otherwise become liable for any indebtedness that is subordinate or junior in right of payment to any senior debt of a guarantor and senior in any respect in right of payment to any of the subsidiary guarantees of the December 1998 Notes.

Certain Covenants

The December 1998 Indenture contains a number of covenants restricting the operations of L-3 Communications Corporation, limiting the ability of L-3 Communications Corporation to incur additional Indebtedness, pay dividends or make distributions, sell assets, issue subsidiary stock, restrict distributions from subsidiaries, create certain liens, enter into certain consolidations or mergers and enter into certain transactions with affiliates.

Events of Default

Events of Default under the December 1998 Indenture include the following:

- a default for 30 days in the payment when due of interest on, or liquidated damages with respect to the December 1998 Notes;
- default in payment when due of the principal of or premium, if any, on the December 1998 Notes;
- failure by L-3 Communications Corporation to comply with certain provision of the December 1998 Indenture (subject, in some but not all cases, to notice and cure periods);

- default under indebtedness for money borrowed by L-3 Communications Corporation or any of its restricted subsidiaries in excess of $10.0 million, which default results in the acceleration of such indebtedness prior to its express maturity;

- failure by L-3 Communications Corporation or any restricted subsidiary that would be a significant subsidiary to pay final judgments aggregating in excess of $10.0 million, which judgments are not paid, discharged or stayed for a period of 60 days;

- except as permitted by the December 1998 Indenture, any guarantee under the December 1998 Notes shall be held in any judicial proceeding to be unenforceable or invalid or shall cease for any reason to be in full force and effect or any guarantor, or any person acting on behalf of any guarantor under the December 1998 Notes, shall deny or disaffirm its obligations under its guarantee; or

- certain events of bankruptcy or insolvency with respect to L-3 Communications Corporation or any of its restricted subsidiaries.

Upon the occurrence of an Event of Default, with certain exceptions, the Trustee or the holders of at least 25% in principal amount of the then outstanding December 1998 Notes may accelerate the maturity of all the December 1998 Notes as provided in the December 1998 Indenture.

5 1/4% CONVERTIBLE SENIOR SUBORDINATED NOTES DUE 2009

L-3 Communications Holdings has outstanding $300.0 million in aggregate principal amount of 5 1/4% Convertible Senior Subordinated Notes due 2009 (the "2000 Convertible Notes"). The 2000 Convertible Notes are subject to the terms and conditions of an Indenture dated as of November 21, 2000, among L-3 Communications Holdings, L-3 Communications Corporation, as a guarantor, the other guarantors named therein and in supplements thereto and The Bank of New York as trustee (the "2000 Indenture"). The following summary of the material provisions of the 2000 Indenture does not purport to be complete, and is subject to and qualified in its entirety by reference to, all of the provisions of the 2000 Indenture and those terms made a part of the 2000 Indenture by the Trust Indenture Act of 1939, as amended. All terms defined in the 2000 Indenture and not otherwise defined herein are used below with the meanings set forth in the 2000 Indenture.

General

The 2000 Convertible Notes will mature on June 1, 2009 and bear interest at 5 1/4% per annum, subject to certain adjustments, payable semi-annually on June 1 and December 1 of each year. The 2000 Convertible Notes are unsecured senior subordinated obligations of L-3 Communications Holdings and are subordinated in right of payment to all existing and future senior debt of L-3 Communications Holdings. The 2000 Convertible Notes are unconditionally guaranteed, on an unsecured senior subordinated basis, jointly and severally by all of L-3 Communications Holdings' restricted subsidiaries, including L-3 Communications Corporation, other than its foreign subsidiaries. These guarantees are pari passu with the guarantees of the 2002 Notes, the outstanding notes and the exchange notes, the December 1998 Notes and the CODES. Holders of the 2000 Convertible Notes may convert the 2000 Convertible Notes into shares of L-3 Communications Holdings' common stock at a conversion rate of $40.75 per share (equal to a conversion rate of 24.5398 shares per $1,000 principal amount of 2000 Convertible Notes), subject to adjustment under certain circumstances.

Optional Redemption

The 2000 Convertible Notes are subject to redemption at any time, at the option of L-3 Communications Holdings, in whole or in part, on or after December 1, 2003 at redemption prices (plus accrued and unpaid interest) starting at 102.625% of principal (plus accrued and unpaid interest) during the 12-month period beginning December 1, 2003 and declining annually to 100% of principal (plus accrued and unpaid interest) on December 1, 2005 and thereafter. No interest will be paid on the 2000 Convertible Notes that are converted into common stock of L-3 Communications Holdings, except the 2000 Convertible Notes that are called for redemption on a date that is after a record date but prior to the corresponding interest payment date if the 2000 Convertible Notes are converted into common stock after the record date.

Change of Control

Upon the occurrence of a change of control, each holder of the 2000 Convertible Notes may require L-3 Communications Holdings to repurchase all or a portion of such holder's 2000 Convertible Notes at a purchase price equal to 100% of the principal amount (plus accrued and unpaid interest and liquidated damages, if any). Generally, a change of control means the occurrence of any of the following:

- the disposition of all or substantially all of the assets of L-3 Communications Holdings and certain of its subsidiaries to any person;
- the consummation of any transaction in which a person other than the principals and their related parties becomes the beneficial owner of more than 50% of the voting stock of L-3 Communications Holdings;
- the first day on which a majority of the members of the Board of Directors of L-3 Communications Holdings are not continuing directors; or
- the consolidation or merger of L-3 Communications Holdings with or into any other person, the merger of another person into L-3 Communications Holdings or any conveyance, transfer, sale, lease, or other disposition of all or substantially all of the properties and assets of L-3 Communications Holdings to another person, subject to certain exceptions.

Subordination

The 2000 Convertible Notes are unsecured senior subordinated obligations of L-3 Communications Holdings and are subordinate to all existing and future senior debt of L-3 Communications Holdings. The guarantees of L-3 Communications Holdings' subsidiaries under the 2000 Convertible Notes, including the guarantee by L-3 Communications Corporation, are general unsecured obligations of the guarantors and are subordinated to the senior debt and to the guarantees of senior debt of those guarantors. These guarantees under the 2000 Convertible Notes rank pari passu with all senior subordinated indebtedness of those guarantors.

Antilayering Provision

The 2000 Indenture provides that (i) L-3 Communications Holdings will not incur, create, issue, assume, guarantee or otherwise become liable for any indebtedness that is subordinate or junior in right of payment to any senior debt and senior in any respect in right of payment to the 2000 Convertible Notes, and (ii) no guarantor of the 2000 Convertible Notes will incur, create, issue, assume, guarantee or otherwise become liable for any indebtedness that is subordinate or junior in right of payment to any senior debt of a guarantor and senior in any respect in right of payment to any of the subsidiary guarantees of the 2000 Convertible Notes.

Events of Default

Events of Default under the 2000 Indenture include the following:

- a default for 30 days in the payment when due of interest on, or liquidated damages with respect to, the 2000 Convertible Notes;
- default in payment when due of the principal of or premium, if any, on the 2000 Convertible Notes;
- failure by L-3 Communications Holdings for 60 days after notice to comply with certain provisions of the 2000 Convertible Indenture (subject, in some but not all cases, to notice and cure periods);
- default under indebtedness for money borrowed by L-3 Communications Holdings or any of its restricted subsidiaries that would be a significant subsidiary in excess of $10.0 million, which default results in the acceleration of such indebtedness prior to its express maturity;
- failure by L-3 Communications Holdings or any restricted subsidiary that would be a significant subsidiary to pay final judgments aggregating in excess of $10.0 million, which judgments are not paid, discharged or stayed for a period of 60 days;

- except as permitted by the 2000 Indenture, any guarantee under the 2000 Convertible Notes shall be held in any judicial proceeding to be unenforceable or invalid; and

- certain events of bankruptcy, insolvency or reorganization with respect to L-3 Communications Holdings.

Upon the occurrence of an Event of Default, with certain exceptions, the Trustee or the holders of at least 25% in principal amount of the then outstanding 2000 Convertible Notes may accelerate the maturity of all the 2000 Convertible Notes as provided in the 2000 Indenture.

4.00% SENIOR SUBORDINATED CONVERTIBLE CONTINGENT DEBT SECURITIES (CODES) DUE 2011

L-3 Communications Holdings has outstanding $420.0 million in aggregate principal amount of 4.00% Senior Subordinated Convertible Contingent Debt Securities(SM) (CODES(SM)) due 2011 (the "CODES"). The CODES are subject to the terms and conditions of an Indenture dated as of October 24, 2001, among L-3 Communications Holdings, L-3 Communications Corporation, as a guarantor, the other guarantors named therein and in supplements thereto and The Bank of New York as trustee (the "2001 Indenture"). The following summary of the material provisions of the 2001 Indenture does not purport to be complete, and is subject to and qualified in its entirety by reference to, all of the provisions of the 2001 Indenture and those terms made a part of the 2001 Indenture by the Trust Indenture Act of 1939, as amended. All terms defined in the 2001 Indenture and not otherwise defined herein are used below with the meanings set forth in the 2001 Indenture.

General

The CODES will mature on September 15, 2011 and bear interest at 4.00% per annum, subject to certain adjustments, payable semi-annually on March 15 and September 15 of each year. Holders of CODES are entitled to contingent interest not to exceed a per annum rate of 0.50% during any six months period from March 15 to September 14 and from September 15 to March 14 if the average trading price of the CODES for the five trading days ending on the second trading day immediately preceding the relevant six month period equals 120% or more of the principal amount of the CODES. The CODES are unsecured senior subordinated obligations of L-3 Communications Holdings and are subordinated in right of payment to all existing and future senior debt of L-3 Communications Holdings. The CODES are unconditionally guaranteed, on an unsecured senior subordinated basis, jointly and severally by all of L-3 Communications Holdings' restricted subsidiaries, including L-3 Communications Corporation, other than its foreign subsidiaries. These guarantees are pari passu with the guarantees of the 2002 Notes, the outstanding notes and the exchange notes, the December 1998 Notes and the 2000 Convertible Notes. Holders of the CODES may convert the CODES into shares of L-3 Communications Holdings' common stock at a conversion rate of $53.8125 per share (equal to a conversion rate of 18.583 shares per $1,000 principal amount of CODES), subject to adjustment under any of the following circumstances:

- during any quarterly conversion period, if the closing sale price of our common stock for a period of at least 20 trading days in the period of 30 consecutive days ending on the first day of such conversion period is more than 120% of the conversion price on that thirtieth day;

- during the five business day period following any 10 consecutive trading-day period in which the average of the trading prices (as defined) for the CODES was less than 105% of the average sale prices (as defined) of our common stock multiplied by the number of shares into which such CODES are then convertible;

- during any period in which the credit rating assigned to the CODES by either Moody's Investors Service, Inc., or Moody's, or Standard & Poor's Rating Services, or Standard & Poor's, is below B3 and B\-, respectively, or in which the credit rating assigned to the CODES is suspended or withdrawn by either rating agency or in which neither rating agency continues to rate the CODES or provide ratings services or coverage to us;

- if the CODES have been called for redemption; or

- upon the occurrence of specified corporate transactions described.

Optional Redemption

The CODES are subject to redemption at any time, at the option of L-3 Communications Holdings, in whole or in part, on or after October 24, 2004 at redemption prices (plus accrued and unpaid interest, including contingent interest, if any) starting at 102.0% of principal (plus accrued and unpaid interest, including contingent interest, if any) and declining annually to 100% of principal (plus accrued and unpaid interest, including contingent interest, if any) on September 15, 2006 and thereafter. No interest, including contingent interest, will be paid on the CODES that are converted into common stock of L-3 Communications Holdings, except the CODES that are called for redemption on a date that is after a record date but prior to the corresponding interest payment date if the CODES are converted into common stock after the record date, provided, however, the holders of CODES are entitled to interest, including contingent interest, if any, accrued for a period beginning September 15, 2004 through October 23, 2004 if such holders convert subsequent to October 23, 2004.

Change of Control

Upon the occurrence of a change of control, each holder of the CODES may require L-3 Communications Holdings to repurchase all or a portion of such holder's CODES at a purchase price equal to 100% of the principal amount (plus accrued and unpaid interest, including contingent interest, if any and additional amounts, if any). Generally, a change of control means the occurrence of any of the following:

- the disposition of all or substantially all of the assets of L-3 Communications Holdings and certain of its subsidiaries to any person;
- the consummation of any transaction in which a person other than the principals and their related parties becomes the beneficial owner of more than 50% of the voting stock of L-3 Communications Holdings;
- the first day on which a majority of the members of the Board of Directors of L-3 Communications Holdings are not continuing directors; or
- the consolidation or merger of L-3 Communications Holdings with or into any other person, the merger of another person into L-3 Communications Holdings or any conveyance, transfer, sale, lease, or other disposition of all or substantially all of the properties and assets of L-3 Communications Holdings to another person, subject to certain exceptions.

Subordination

The CODES are unsecured senior subordinated obligations of L-3 Communications Holdings and are subordinate to all existing and future senior debt of L-3 Communications Holdings. The guarantees of L-3 Communications Holdings' subsidiaries under the CODES, including the guarantee by L-3 Communications Corporation, are general unsecured obligations of the guarantors and are subordinated to the senior debt and to the guarantees of senior debt of those guarantors. These guarantees under the CODES rank pari passu with all senior subordinated indebtedness of those guarantors.

Antilayering Provision

The 2001 Indenture provides that (i) L-3 Communications Holdings will not incur, create, issue, assume, guarantee or otherwise become liable for any indebtedness that is subordinate or junior in right of payment to any senior debt and senior in any respect in right of payment to the CODES, and (ii) no guarantor of the CODES will incur, create, issue, assume, guarantee or otherwise become liable for any indebtedness that is subordinate or junior in right of payment to any senior debt of a guarantor and senior in any respect in right of payment to any of the subsidiary guarantees of the CODES.

Events of Default

Events of Default under the 2001 Indenture include the following:

- a default for 30 days in the payment when due of interest (including contingent interest, if any) on, or additional amounts with respect to, the CODES;

- default in payment when due of the principal of or premium, if any, on the CODES;

- failure by L-3 Communications Holdings for 60 days after notice to comply with certain provisions of the 2001 Indenture (subject, in some but not all cases, to notice and cure periods);

- default under indebtedness for money borrowed by L-3 Communications Holdings or any of its restricted subsidiaries that would be a significant subsidiary in excess of $10.0 million, which default results in the acceleration of such indebtedness prior to express maturity;

- failure by L-3 Communications Holdings or any restricted subsidiary that would be a significant subsidiary to pay final judgments aggregating in excess of $10.0 million, which judgments are not paid, discharged or stayed for a period of 60 days;

- except as permitted by the 2001 Indenture, any guarantee under the CODES shall be held in any judicial proceeding to be unenforceable or invalid; and

- certain events of bankruptcy, insolvency or reorganization with respect to L-3 Communications Holdings or any of its restricted subsidiaries that would be significant subsidiaries.

Upon the occurrence of an Event of Default, with certain exceptions, the Trustee or the holders of at least 25% in principal amount of the then outstanding CODES may accelerate the maturity of all the CODES as provided in the 2001 Indenture.

7 5/8% SENIOR SUBORDINATED NOTES DUE 2012

L-3 Communications Corporation has outstanding $750.0 million in aggregate principal amount of 7 5/8% Senior Subordinated Notes due 2012 (the "2002 Notes"). The 2002 Notes are subject to the terms and conditions of an Indenture dated as of June 28, 2002, among L-3 Communications Corporation, the guarantors named therein and in supplements thereto and The Bank of New York as trustee (the "2002 Indenture"). The following summary of the material provisions of the 2002 Indenture does not purport to be complete, and is subject to and qualified in its entirety by reference to, all of the provisions of the 2002 Indenture and those terms made a part of the 2002 Indenture by the Trust Indenture Act of 1939, as amended. All terms defined in the 2002 Indenture and not otherwise defined herein are used below with the meanings set forth in the 2002 Indenture.

General

The 2002 Notes will mature on June 15, 2012 and bear interest at 7 5/8% per annum, payable semi-annually on December 15 and June 15 of each year. The 2002 Notes are general unsecured obligations of L-3 Communications Corporation and are subordinated in right of payment to all existing and future senior debt of L-3 Communications Corporation and rank pari passu with the December 1998 Notes and the outstanding notes and the exchange notes. The 2002 Notes are unconditionally guaranteed, on an unsecured senior subordinated basis, jointly and severally by all of L-3 Communications Corporation's restricted subsidiaries other than its foreign subsidiaries. These guarantees are pari passu with the guarantees of the outstanding notes and the exchange notes, the December 1998 Notes, the 2000 Convertible Notes and the CODES.

Optional Redemption

The 2002 Notes are subject to redemption at any time, at the option of L-3 Communications Corporation, in whole or in part, on or after June 15, 2007 at redemption prices (plus accrued and unpaid interest) starting at 103.813% of principal (plus accrued and unpaid interest) during the 12-month period beginning June 15, 2007 and declining annually to 100% of principal (plus accrued and unpaid interest) on June 15, 2010 and thereafter.

Before June 15, 2005, L-3 Communications Corporation may on any one or more occasions redeem up to an aggregate of 35% of the 2002 Notes originally issued at a redemption price of 107.625% of the principal amount thereof, plus accrued and unpaid interest to the redemption date,

with the net cash proceeds of certain equity offerings by L-3 Communications Corporation or the net cash proceeds of certain equity offerings by L-3 Communications Holdings that are contributed to L-3 Communications Corporation as common equity capital; provided that at least 65% of the 2002 Notes originally issued remain outstanding immediately after the occurrence of each such redemption; and provided, further, that any such redemption must occur within 120 days of the date of the closing of such equity offering.

Change of Control

Upon the occurrence of a change of control, each holder of the 2002 Notes may require L-3 Communications Corporation to repurchase all or a portion of such holder's 2002 Notes at a purchase price equal to 101% of the principal amount (plus accrued and unpaid interest and liquidated damages, if any). Generally, a change of control means the occurrence of any of the following:

- the disposition of all or substantially all of L-3 Communications Corporation's assets to any person;
- the adoption of a plan relating to the liquidation or dissolution of L-3 Communications Corporation;
- the consummation of any transaction in which a person other than the principals and their related parties becomes the beneficial owner of more than 50% of the voting stock of L-3 Communications Corporation; or
- the first day on which a majority of the members of the Board of Directors of L-3 Communications Corporation are not continuing directors.

Subordination

The 2002 Notes are general unsecured obligations of L-3 Communications Corporation and are subordinate to all existing and future senior debt of L-3 Communications Corporation. The 2002 Notes rank senior in right of payment to all subordinated indebtedness of L-3 Communications Corporation. The guarantees of L-3 Communications Corporation's subsidiaries under the 2002 Notes are general unsecured obligations of the guarantors and are subordinated to the senior debt and to the guarantees of senior debt of those guarantors. These guarantees under the 2002 Notes rank senior in right of payment to all subordinated Indebtedness of those guarantors.

Antilayering Provision

The 2002 Indenture provides that (i) L-3 Communications Corporation will not incur, create, issue, assume, guarantee or otherwise become liable for any indebtedness that is subordinate or junior in right of payment to any senior debt and senior in any respect in right of payment to the 2002 Notes, and (ii) no guarantor of the 2002 Notes will incur, create, issue, assume, guarantee or otherwise become liable for any indebtedness that is subordinate or junior in right of payment to any senior debt of a guarantor and senior in any respect in right of payment to any of the subsidiary guarantees of the 2002 Notes.

Certain Covenants

The 2002 Indenture contains a number of covenants restricting the operations of L-3 Communications Corporation, limiting the ability of L-3 Communications Corporation to incur additional Indebtedness, pay dividends or make distributions, sell assets, issue subsidiary stock, restrict distributions from subsidiaries, create certain liens, enter into certain consolidations or mergers and enter into certain transactions with affiliates.

In the event that the 2002 Notes are assigned a rating of Baa3 or better by Moody's and BBB- or better by S&P and no event of default has occurred and is continuing, certain covenants in the 2002 Indenture will be suspended. If the ratings should subsequently decline to below Baa3 or BBB-, the suspended covenants will be reinstituted.

Events of Default

Events of Default under the 2002 Indenture include the following:

- a default for 30 days in the payment when due of interest on, or liquidated damages with respect to the 2002 Notes;

- default in payment when due of the principal of or premium, if any, on the 2002 Notes;

- failure by L-3 Communications Corporation to comply with certain provision of the 2002 Indenture (subject, in some but not all cases, to notice and cure periods);

- default under indebtedness for money borrowed by L-3 Communications Corporation or any of its restricted subsidiaries in excess of $25.0 million, which default results in the acceleration of such indebtedness prior to its express maturity;

- failure by L-3 Communications Corporation or any restricted subsidiary that would be a significant subsidiary to pay final judgments aggregating in excess of $25.0 million, which judgments are not paid, discharged or stayed for a period of 60 days;

- except as permitted by the 2002 Indenture, any guarantee under the 2002 Notes shall be held in any judicial proceeding to be unenforceable or invalid or shall cease for any reason to be in full force and effect or any guarantor, or any person acting on behalf of any guarantor under the 2002 Notes, shall deny or disaffirm its obligations under its guarantee; or

- certain events of bankruptcy or insolvency with respect to L-3 Communications Corporation or any of its restricted subsidiaries.

Upon the occurrence of an Event of Default, with certain exceptions, the Trustee or the holders of at least 25% in principal amount of the then outstanding 2002 Notes may accelerate the maturity of all the 2002 Notes as provided in the 2002 Indenture.

THE EXCHANGE OFFER

GENERAL

L-3 hereby offers, upon the terms and subject to the conditions set forth in this prospectus and in the accompanying letter of transmittal (which together constitute the exchange offer), to exchange up to $400.0 million aggregate principal amount of our 6 1/8% Senior Subordinated Notes due 2013, which we refer to in this prospectus as the outstanding notes, for a like aggregate principal amount of our 6 1/8% Series B Senior Subordinated Notes due 2013, which we refer to in this prospectus as the exchange notes, properly tendered on or prior to the expiration date and not withdrawn as permitted pursuant to the procedures described below. The exchange offer is being made with respect to all of the outstanding notes.

As of the date of this prospectus, $400.0 million aggregate principal amount of the outstanding notes is outstanding. This prospectus, together with the letter of transmittal, is first being sent on or about , 2003, to all holders of outstanding notes known to L-3. L-3's obligation to accept outstanding notes for exchange pursuant to the exchange offer is subject to certain conditions set forth under "Certain Conditions to the Exchange Offer" below. L-3 currently expects that each of the conditions will be satisfied and that no waivers will be necessary.

PURPOSE AND EFFECT OF THE EXCHANGE OFFER

We have entered into a registration rights agreement with the initial purchasers of the outstanding notes in which we agreed, under some circumstances, to file a registration statement relating to an offer to exchange the outstanding notes for exchange notes. We also agreed to use all commercially reasonable efforts to cause the exchange offer registration statement to become effective under the Securities Act as promptly as practicable, but in no event later than 180 days after the closing date and to keep the exchange offer open for a period of not less than 20 business days. The exchange notes will have terms substantially identical to the outstanding notes, except that the exchange notes will not contain terms with respect to transfer restrictions, registration rights and additional interest for failure to observe certain obligations in the registration rights agreement. The outstanding notes were issued on May 21, 2003.

Under certain circumstances set forth in the registration rights agreement, we will use all commercially reasonable efforts to cause the SEC to declare effective a shelf registration statement with respect to the resale of the outstanding notes and keep the statement, effective for up to two years after the closing date.

If we fail to comply with certain obligations under the registration rights agreement, we will be required to pay additional interest to holders of the outstanding notes.

Each holder of outstanding notes that wishes to exchange outstanding notes for transferable exchange notes in the exchange offer will be required to make the following representations:

- any exchange notes will be acquired in the ordinary course of its business;
- the holder will have no arrangements or understanding with any person to participate in the distribution of the outstanding notes or the exchange notes within the meaning of the Securities Act;
- the holder is not an "affiliate," as defined in Rule 405 of the Securities Act, of L-3 or if it is an affiliate, that it will comply with applicable registration and prospectus delivery requirements of the Securities Act to the extent applicable;
- if the holder is not a broker-dealer, that it is not engaged in, and does not intend to engage in, the distribution of the exchange notes; and
- if the holder is a broker-dealer, that it will receive exchange notes for its own account in exchange for outstanding notes that were acquired as a result of market-making activities or

other trading activities and that it will be required to acknowledge that it will deliver a prospectus in connection with any resale of the exchange notes. See "Plan of Distribution."

RESALE OF EXCHANGE NOTES

Based on interpretations of the SEC staff set forth in no action letters issued to unrelated third parties, we believe that exchange notes issued under the exchange offer in exchange for outstanding notes may be offered for resale, resold and otherwise transferred by any exchange note holder without compliance with the registration and prospectus delivery provisions of the Securities Act, if:

- the holder is not an "affiliate" of ours within the meaning of Rule 405 under the Securities Act;
- the exchange notes are acquired in the ordinary course of the holder's business; and
- the holder does not intend to participate in the distribution of the exchange notes.

Any holder who tenders in the exchange offer with the intention of participating in any manner in a distribution of the exchange notes:

- cannot rely on the position of the staff of the SEC enunciated in Exxon Capital Holdings Corporation or similar interpretive letters; and
- must comply with the registration and prospectus delivery requirements of the Securities Act in connection with a secondary resale transaction.

This prospectus may be used for an offer to resell, for the resale or for other retransfer of exchange notes only as specifically set forth in this prospectus. With regard to broker-dealers, only broker-dealers that acquired the outstanding notes as a result of market-making activities or other trading activities may participate in the exchange offer. Each broker-dealer that receives exchange notes for its own account in exchange for outstanding notes, where the outstanding notes were acquired by the broker-dealer as a result of market-making activities or other trading activities, must acknowledge that it will deliver a prospectus in connection with any resale of the exchange notes. Please read the section captioned "Plan of Distribution" for more details regarding the transfer of exchange notes.

TERMS OF THE EXCHANGE OFFER

Upon the terms and subject to the conditions set forth in this prospectus and in the accompanying letter of transmittal, we will accept for exchange any outstanding notes properly tendered and not withdrawn prior to the expiration date. We will issue $1,000 principal amount of exchange notes in exchange for each $1,000 principal amount of outstanding notes surrendered under the exchange offer. Outstanding notes may be tendered only in integral multiples of $1,000.

The form and terms of the exchange notes will be substantially identical to the form and terms of the outstanding notes except the exchange notes will be registered under the Securities Act, will not bear legends restricting their transfer and will not provide for any additional amounts upon our failure to fulfill our obligations under the registration rights agreement to file, and cause to be effective, a registration statement. The exchange notes will evidence the same debt as the outstanding notes. The exchange notes will be issued under and entitled to the benefits of the same indenture that authorized the issuance of the outstanding notes.

The exchange offer is not conditioned upon any minimum aggregate principal amount of outstanding notes being tendered for exchange.

As of the date of this prospectus, $400.0 million aggregate principal amount of the outstanding notes are outstanding. This prospectus and a letter of transmittal are being sent to all registered holders of outstanding notes. There will be no fixed record date for determining registered holders of outstanding notes entitled to participate in the exchange offer.

We intend to conduct the exchange offer in accordance with the provisions of the exchange offer and registration rights agreement, the applicable requirements of the Securities Act and the Securities Exchange Act of 1934 and the rules and regulations of the SEC. Outstanding notes that are not tendered for exchange in the exchange offer will remain outstanding and continue to accrue interest and will be entitled to the rights and benefits the holders have under the indenture relating to the outstanding notes, except for any rights under the exchange offer and registration rights agreement that by their terms terminate upon the consummation of the exchange offer.

We will be deemed to have accepted for exchange properly tendered outstanding notes when we have given oral or written notice of the acceptance to the exchange agent. The exchange agent will act as agent for the tendering holders for the purposes of receiving the exchange notes from us and delivering exchange notes to the holders. Under the terms of the exchange offer and registration rights agreement, we reserve the right to amend or terminate the exchange offer, and not to accept for exchange any outstanding notes not previously accepted for exchange, upon the occurrence of any of the conditions specified below under the caption "--Certain Conditions to the Exchange Offer."

Holders who tender outstanding notes in the exchange offer will not be required to pay brokerage commissions or fees or, subject to the instructions in the letter of transmittal, transfer taxes with respect to the exchange of outstanding notes. We will pay all charges and expenses, other than certain applicable taxes described below, in connection with the exchange offer. It is important that you read the section labeled "--Fees and Expenses" below for more details regarding fees and expenses incurred in the exchange offer.

EXPIRATION DATE; EXTENSIONS; AMENDMENTS

The exchange offer will expire at 5:00 p.m., New York City time on , 2003, unless in our sole discretion we extend it.

In order to extend the exchange offer, we will notify the exchange agent orally or in writing of any extension. We will notify the registered holders of outstanding notes of the extension no later than 9:00 a.m., New York City time, on the business day after the previously scheduled expiration date.

We reserve the right, in our sole discretion:

- to delay accepting for exchange any outstanding notes;
- to extend the exchange offer or to terminate the exchange offer and to refuse to accept outstanding notes not previously accepted if any of the conditions set forth below under "--Certain Conditions to the Exchange Offer" have not been satisfied, by giving oral or written notice of the delay, extension or termination to the exchange agent; or
- under the terms of the exchange offer and registration rights agreement, to amend the terms of the exchange offer in any manner.

Any delay in acceptance, extension, termination, or amendment will be followed as promptly as practicable by oral or written notice to the registered holders of outstanding notes. If we amend the exchange offer in a manner that we determine constitutes a material change, we will promptly disclose the amendment in a manner reasonably calculated to inform the holder of outstanding notes of the amendment.

Without limiting the manner in which we may choose to make public announcements of any delay in acceptance, extension, termination or amendment of the exchange offer, we will have no obligation to publish, advertise, or otherwise communicate any public announcement, other than by making a timely release to a financial news service.

CERTAIN CONDITIONS TO THE EXCHANGE OFFER

Despite any other term of the exchange offer, we will not be required to accept for exchange, or exchange any exchange notes for, any outstanding notes, and we may terminate the exchange offer as provided in this prospectus before accepting any outstanding notes for exchange if in our reasonable judgment:

- the exchange notes to be received will not be tradable by the holder. without restriction under the Securities Act, the Securities Exchange Act and without material restrictions under the blue sky or securities laws of substantially all of the states of the United States;

- the exchange offer, or the making of any exchange by a holder of outstanding notes, would violate applicable law or any applicable interpretation of the staff of the SEC: or

- any action or proceeding has been instituted or threatened in any court or by or before any governmental agency with respect to the exchange offer that, in our judgment, would reasonably be expected to impair our ability to proceed with the exchange offer.

In addition, we will not be obligated to accept for exchange the outstanding notes of any holder that has not made to us:

- the representations described under "--Purpose and Effect of the Exchange Offer," "--Procedures for Tendering" and "Plan of Distribution"; and

- such other representations as may be reasonably necessary under applicable SEC rules, regulations or interpretations to make available to it an appropriate form for registration of the exchange notes under the Securities Act.

We expressly reserve the right, at any time or at various times, to extend the period of time during which the exchange offer is open. Consequently, we may delay acceptance of any outstanding notes by giving oral or written notice of the extension to their holders. During any such extensions, all notes previously tendered will remain subject to the exchange offer, and we may accept them for exchange. We will return any outstanding notes that we do not accept for exchange for any reason without expense to their tendering holder as promptly as practicable after the expiration or termination of the exchange offer.

We expressly reserve the right to amend or terminate the exchange offer, and to reject for exchange any outstanding notes not previously accepted for exchange, upon the occurrence of any of the conditions of the exchange offer specified above. We will give oral or written notice of any extension, amendment, nonacceptance, or termination to the holders of the outstanding notes as promptly as practicable.

These conditions are for our sole benefit and we may assert them regardless of the circumstances that may give rise to them or waive them in whole or in part at any or at various times in our sole discretion. If we fail at any time to exercise any of the foregoing rights, this failure will not constitute a waiver of this right. Each right will be deemed an ongoing right that we may assert at any time or at various times.

In addition, we will not accept for exchange any outstanding notes tendered, and will not issue exchange notes in exchange for any outstanding notes, if at the time any stop order will be threatened or in effect with respect to the registration statement of which this prospectus constitutes a part or the qualification of the indenture under the Trust Indenture Act.

PROCEDURES FOR TENDERING

Only a holder of outstanding notes may tender the outstanding notes in the exchange offer. To tender in the exchange offer, a holder must:

- complete, sign and date the accompanying letter of transmittal, or a facsimile of the letter of transmittal; have the signature on the letter of transmittal guaranteed if the letter of transmittal so requires; and mail or deliver the letter of transmittal or facsimile to the exchange agent prior to the expiration date; or

- comply with DTC's Automated Tender Offer Program procedures described below.

In addition, either:

- the exchange agent must receive the outstanding notes along with the accompanying letter of transmittal; or

- the exchange agent must receive, prior to the expiration date, a timely confirmation of book-entry transfer of the outstanding notes into the exchange agent's account at DTC according to the procedures for book-entry transfer described below or a properly transmitted agent's message; or

- the holder must comply with the guaranteed delivery procedures described below.

To be tendered effectively, the exchange agent must receive any physical delivery of a letter of transmittal and other required documents at the address set forth below under "-- Exchange Agent" prior to the expiration date.

The tender by a holder that is not withdrawn prior to the expiration date will constitute an agreement between the holder and us in accordance with the terms and subject to the conditions set forth in this prospectus and in the accompanying letter of transmittal.

The method of delivery of outstanding notes, the letter of transmittal and all other required documents to the exchange agent is at the holder's election and risk. Rather than mail these items, we recommend that holders use an overnight or hand delivery service. In all cases, holders should allow sufficient time to assure delivery to the exchange agent before the expiration date. Holders should not send the letter of transmittal or outstanding notes to us. Holders may request their respective brokers, dealers, commercial banks, trust companies or other nominees to effect the above transactions for them.

Any beneficial owner whose outstanding notes are registered in the name of a broker, dealer, commercial bank, trust company or other nominee and who wishes to tender should contact the registered holder promptly and instruct it to tender on the owners behalf. If the beneficial owner wishes to tender on its own behalf, it must, prior to completing and executing the accompanying letter of transmittal and delivering its outstanding notes either:

- make appropriate arrangements to register ownership of the outstanding notes in such owner's name; or

- obtain a properly completed bond power from the registered holder of outstanding notes.

The transfer of registered ownership may take considerable time and may not be completed prior to the expiration date.

Signatures on a letter of transmittal or a notice of withdrawal described below must be guaranteed by a member firm of a registered national securities exchange or of the National Association of Securities Dealers, Inc., a commercial bank or trust company having an office or correspondent in the United States or another "eligible institution" within the meaning of Rule 17Ad-15 under the Exchange Act, unless the outstanding notes are tendered:

- by a registered holder who has not completed the box entitled "Special Issuance Instructions" or "Special Delivery Instructions" on the accompanying letter of transmittal; or

- for the account of an eligible institution.

If the accompanying letter of transmittal is signed by a person other than the registered holder of any outstanding notes listed on the outstanding notes, the outstanding notes must be endorsed or accompanied by a properly completed bond power. The bond power must be signed by the registered holder as the registered holder's name appears on the outstanding notes and an eligible institution must guarantee the signature on the bond power.

If the accompanying letter of transmittal or any outstanding notes or bond powers are signed by trustees, executors, administrators, guardians, attorneys-in-fact, officers of corporations or others acting in a fiduciary or representative capacity, these persons should so indicate when signing. Unless waived by us, they should also submit evidence satisfactory to us of their authority to deliver the accompanying letter of transmittal.

The exchange agent and DTC have confirmed that any financial institution that is a participant in DTC's system may use DTC's Automated Tender Offer Program to tender. Participants in the

program may. instead of physically completing and signing the accompanying letter of transmittal and delivering it to the exchange agent, transmit their acceptance of the exchange offer electronically. They may do so by causing DTC to transfer the outstanding notes to the exchange agent in accordance with its procedures for transfer. DTC will then send an agent's message to the exchange agent. The term "agent's message" means a message transmitted by DTC, received by the exchange agent and forming part of the book-entry confirmation, to the effect that:

- DTC has received an express acknowledgment from a participant in its Automated Tender Offer Program that is tendering outstanding notes that are the subject of the book-entry confirmation;

- the participant has received and agrees to be bound by the terms of the accompanying letter of transmittal, or, in the case of an agent's message relating to guaranteed delivery, that the participant has received and agrees to be bound by the applicable notice of guaranteed delivery; and

- the agreement may be enforced against that participant.

We will determine in our sole discretion all outstanding questions as to the validity, form, eligibility, including time or receipt, acceptance of tendered outstanding notes and withdrawal of tendered outstanding notes. Our determination will be final and binding. We reserve the absolute right to reject any outstanding notes not properly tendered or any outstanding notes the acceptance of which would, in the opinion of our counsel, be unlawful. We also reserve the right to waive any defects, irregularities or conditions of tender as to particular outstanding notes. Our interpretation of the terms and conditions of the exchange offer, including the instructions in the accompanying letter of transmittal, will be final and binding on all parties. Unless waived, any defects or irregularities in connection with tenders of outstanding notes must be cured within such time as we will determine. Although we intend to notify holders of defects or irregularities with respect to tenders of outstanding notes, neither we, the exchange agent, nor any other person will incur any liability for failure to give the notification. Tenders of outstanding notes will not be deemed made until any defects or irregularities have been cured or waived. Any outstanding notes received by the exchange agent that are not properly tendered and as to which the defects or irregularities have not been cured or waived will be returned to the exchange agent without cost to the tendering holder, unless otherwise provided in the letter of transmittal, as soon as practicable following the expiration date.

In all cases, we will issue exchange notes for outstanding notes that we have accepted for exchange under the exchange offer only after the exchange agent timely receives:

- outstanding notes or a timely book-entry confirmation of the outstanding notes into the exchange agent's account at DTC; and

- a properly completed and duly executed letter of transmittal and all other required documents or a properly transmitted agent's message.

By signing the accompanying letter of transmittal or authorizing the transmission of the agent's message, each tendering holder of outstanding notes will represent or be deemed to have represented to us that, among other things:

- any exchange notes that the holder receives will be acquired in the ordinary course of its business;

- the holder has no arrangement or understanding with any person or entity to participate in the distribution of the exchange notes;

- if the holder is not a broker-dealer, that it is not engaged in and does not intend to engage in the distribution of the exchange notes;

- if the holder is a broker-dealer that will receive exchange notes for its own account in exchange for outstanding notes that were acquired as a result of market-making activities or other trading activities. that it will deliver a prospectus, as required by law, in connection with any resale of any exchange notes. See "Plan of Distribution"; and

- the holder is not an "affiliate," as defined in Rule 405 of the Securities Act, of ours or, if the holder is an affiliate, it will comply with any applicable registration and prospectus delivery requirements of the Securities Act.

BOOK-ENTRY TRANSFER

The exchange agent will make a request to establish an account with respect to the outstanding notes at DTC for purposes of the exchange offer promptly after the date of this prospectus. Any financial institution participating in DTC's system may make book-entry delivery of outstanding notes by causing DTC to transfer the outstanding notes into the exchange agent's account at DTC in accordance with DTC's procedures for transfer. Holders of outstanding notes who are unable to deliver confirmation of the book-entry tender of their outstanding notes into the exchange agent's account at DTC or all other documents required by the letter of transmittal to the exchange agent on or prior to the expiration date must tender their outstanding notes according to the guaranteed delivery procedures described below.

GUARANTEED DELIVERY PROCEDURES

Holders wishing to tender their outstanding notes but whose outstanding notes are not immediately available or who cannot deliver their outstanding notes, the accompanying letter of transmittal or any other available required documents to the exchange agent or comply with the applicable procedures under DTC's Automated Tender Offer Program prior to the expiration date may tender if:

- the tender is made through an eligible institution;
- prior to the expiration date, the exchange agent receives from the eligible institution either a properly completed and duly executed notice of guaranteed delivery, by facsimile transmission, mail or hand delivery, or a properly transmitted agent's message and notice of guaranteed delivery:
  - setting forth the name and address of the holder, the registered number(s) of the outstanding notes and the principal amount of outstanding notes tendered:
  - stating that the tender is being made thereby; and
  - guaranteeing that, within three New York Stock Exchange trading days after the expiration date, the accompanying letter of transmittal, or facsimile thereof, together with the outstanding notes or a book-entry confirmation, and any other documents required by the accompanying letter of transmittal will be deposited by the eligible institution with the exchange agent; and
- the exchange agent receives the properly completed and executed letter of transmittal, or facsimile thereof, as well as all tendered outstanding notes in proper form for transfer or a book-entry confirmation. and all other documents required by the accompanying letter of transmittal, within three New York Stock Exchange trading days after the expiration date.

Upon request to the exchange agent, a notice of guaranteed delivery will be sent to holders who wish to tender their outstanding notes according to the guaranteed delivery procedures set forth above.

WITHDRAWAL OF TENDERS

Except as otherwise provided in this prospectus, holders of outstanding notes may withdraw their tenders at any time prior to the expiration date.

For a withdrawal to be effective:

- the exchange agent must receive a written notice of withdrawal, which notice may be by telegram, telex, facsimile transmission or letter of withdrawal at one of the addresses set forth below under "-- Exchange Agent", or

- holders must comply with the appropriate procedures of DTC's Automated Tender Offer Program system.

Any notice of withdrawal must:

- specify the name of the person who tendered the outstanding notes to be withdrawn;

- identify the outstanding notes to be withdrawn, including the principal amount of the outstanding notes; and

- where certificates for outstanding notes have been transmitted, specify the name in which the outstanding notes were registered, if different from that of the withdrawing holder.

If certificates for outstanding notes have been delivered or otherwise identified to the exchange agent, then, prior to the release of the certificates, the withdrawing holder must also submit:

- the serial numbers of the particular certificates to be withdrawn; and

- a signed notice of withdrawal with signatures guaranteed by an eligible institution unless the holder is an eligible institution.

If outstanding notes have been tendered pursuant to the procedure for book-entry transfer described above, any notice of withdrawal must specify the name and number of the account at DTC to be credited with the withdrawn outstanding notes and otherwise comply with the procedures of that facility. We will determine all questions as to the validity, form and eligibility, including time of receipt, of the notices, and our determination will be final and binding on all parties. We will deem any outstanding notes so withdrawn not to have been validly tendered for exchange for purposes of the exchange offer. Any outstanding notes that have been tendered for exchange but that are not exchanged for any reason will be returned to their holder without cost to the holder, or, in the case of outstanding notes tendered by book-entry transfer into the exchange agent's account at DTC according to the procedures described above, the outstanding notes will be credited to an account maintained with DTC for outstanding notes, as soon as practicable after withdrawal, rejection of tender or termination of the exchange offer. Properly withdrawn, outstanding notes may be retendered by following one of the procedures described under "-- Procedures for Tendering" above at any time on or prior to the expiration date.

EXCHANGE AGENT

The Bank of New York has been appointed as exchange agent for the exchange offer. You should direct questions and requests for assistance, requests for additional copies of this prospectus or for the letter of transmittal and requests for the notice of guaranteed delivery to the exchange agent as follows:

BY MAIL OR OVERNIGHT DELIVERY:	BY FACSIMILE:	BY HAND DELIVERY:
The Bank of New York Reorganization Unit 101 Barclay Street - 7 East New York, NY 10286 Attention: William Buckley	The Bank of New York Reorganization Unit 101 Barclay Street - 7 East New York, NY 10286 Attention: William Buckley (212) 298-1915 CONFIRM RECEIPT OF FACSIMILE BY TELEPHONE (212) 815-5788	The Bank of New York Reorganization Unit 101 Barclay Street Lobby Level - Corp. Trust Window New York 10286 Attention: William Buckley

DELIVERY OF THE LETTER OF TRANSMITTAL TO AN ADDRESS OTHER THAN AS SET FORTH ABOVE OR TRANSMISSION VIA FACSIMILE OTHER THAN AS SET FORTH ABOVE DOES NOT CONSTITUTE A VALID DELIVERY OF THE LETTER OF TRANSMITTAL.

FEES AND EXPENSES

We will bear the expenses of soliciting tenders. The principal solicitation is being made by mail; however, we may make additional solicitations by telephone or in person by our officers and regular employees and those of our affiliates.

We have not retained any dealer-manager in connection with the exchange offer and will not make any payments to broker-dealers or others soliciting acceptance of the exchange offer. We will, however, pay the exchange agent reasonable and customary fees for its services and reimburse it for its related reasonable out-of-pocket expenses.

We will pay the cash expenses to be incurred in connection with the exchange offer. The expenses are estimated in the aggregate to be approximately $300,000. They include:

- SEC registration fees;
- fees and expenses of the exchange agent and trustee;
- accounting and legal fees and printing costs; and
- related fees and expenses.

TRANSFER TAXES

We will pay all transfer taxes, if any, applicable to the exchange of outstanding notes under the exchange offer. The tendering holder, however, will be required to pay any transfer taxes, whether imposed on the registered holder or any other person, if:

- certificates representing outstanding notes for principal amounts not tendered or accepted for exchange are to be delivered to, or are to be issued in the name of, any person other than the registered holder of outstanding notes tendered;
- tendered outstanding notes are registered in the name of any person other than the person signing the letter of transmittal; or
- a transfer tax is imposed for any reason other than the exchange of outstanding notes under the exchange offer.

If satisfactory evidence of payment of the taxes is not submitted with the letter of transmittal, the amount of the transfer taxes will be billed to that tendering holder.

Holders who tender their outstanding notes for exchange will not be required to pay any transfer taxes. However, holders who instruct us to register exchange notes in the name of, or request that outstanding notes not tendered or not accepted in the exchange offer be returned to, a person other than the registered tendering holder will be required to pay any applicable transfer tax.

CONSEQUENCES OF FAILURE TO EXCHANGE

Holders of outstanding notes who do not exchange their outstanding notes for exchange notes under the exchange offer will remain subject to the restrictions on transfer of the outstanding notes:

- as set forth in the legend printed on the notes as a consequence of the issuance of the outstanding notes under the exemption from, or in transactions not subject to, the registration requirements of the Securities Act and applicable state securities laws; and

- otherwise as set forth in the offering memorandum distributed in connection with the private offering of the outstanding notes.

In general, you may not offer or sell the outstanding notes unless they are registered under the Securities Act, or if the offer or sale is exempt from registration under the Securities Act and applicable state securities laws. Except as required by the registration rights agreement, we do not intend to register resales of the outstanding notes under the Securities Act. Based on interpretations of the SEC staff, exchange notes issued under the exchange offer may be offered for resale, resold or otherwise transferred by their holders (other than any holder that is our "affiliate" within the meaning of Rule 405 under the Securities Act) without compliance with the registration and prospectus delivery provisions of the Securities Act, provided that the holders acquired the exchange notes in the ordinary course of the holders' business and the holders have no arrangement or understanding with respect to the distribution of the exchange notes to be acquired in the exchange offer. Any holder who tenders in the exchange offer for the purpose of participating in a distribution of the exchange notes:

- cannot rely on the applicable interpretations of the SEC; and

- must comply with the registration and prospectus delivery requirements of the Securities Act in connection with a secondary resale transaction.

ACCOUNTING TREATMENT

We will record the exchange notes in our accounting records at the same carrying value as the outstanding notes, which is the aggregate principal amount, as reflected in our accounting records on the date of exchange. Accordingly, we will not recognize any gain or loss for accounting purposes in connection with the exchange offer. We will record the expenses of the exchange offer as incurred.

OTHER

Participation in the exchange offer is voluntary, and you should carefully consider whether to accept. You are urged to consult your financial and tax advisors in making your own decision on what action to take.

We may in the future seek to acquire untendered outstanding notes in open market or privately negotiated transactions, through subsequent exchange offers or otherwise. We have no present plans to acquire any outstanding notes that are not tendered in the exchange offer or to file a registration statement to permit resales of any untendered outstanding notes.

DESCRIPTION OF THE NOTES

The outstanding notes were issued and the exchange notes offered hereby will be issued under an indenture (the "Indenture") among the Company, as issuer, the Guarantors and The Bank of New York, as trustee (the "Trustee"). The terms of the Notes include those stated in the Indenture and those made part of the Indenture by reference to the Trust Indenture Act of 1939, as amended (the "Trust Indenture Act"). The Notes are subject to all such terms, and holders of the Notes are referred to the Indenture and the Trust Indenture Act for a statement thereof.

The following summary of the material provisions of the Indenture describes the material terms of the Indenture but does not purport to be complete and is subject to, and qualified in its entirety by reference to, the provisions of the Indenture, including the definitions of certain terms contained therein and those terms made part of the Indenture by reference to the Trust Indenture Act. For definitions of certain capitalized terms used in the following summary, see "-- Certain Definitions."

For purposes of this summary, the term "Company" refers only to L-3 Communications Corporation and not to any of its Subsidiaries.

BRIEF DESCRIPTION OF THE NOTES AND THE SUBSIDIARY GUARANTEES

The Notes:

- are general unsecured obligations of the Company;
- rank pari passu in right of payment with the May 1998 Notes, the December 1998 Notes and the 2002 Notes;
- rank pari passu in right of payment with the obligations of the Company under Holdings' outstanding 2000 Convertible Notes and 2001 CODES;
- are subordinated in right of payment to all current and future Senior Debt; and
- are senior in right of payment to any future Indebtedness of the Company that expressly provides that it is not senior to the Notes.

The Subsidiary Guarantees:

- are general unsecured obligations of the Guarantors;
- rank pari passu in right of payment with the guarantees of the May 1998 Notes, the December 1998 Notes and the 2002 Notes;
- rank pari passu in right of payment with the obligations of the Guarantors under Holdings' outstanding 2000 Convertible Notes and 2001 CODES;
- are subordinated in right of payment to all current and future Senior Debt of the Guarantors; and
- are senior in right of payment to any future Indebtedness of the Guarantors that expressly provides that it is not senior to the Subsidiary Guarantees.

At March 31, 2003, the Company did not have any Senior Debt outstanding (excluding letters of credit). The Indenture permits the incurrence of additional Senior Debt in the future. See "-- Certain Covenants -- Incurrence of Indebtedness and Issuance of Preferred Stock."

THE SUBSIDIARY GUARANTEES

The Indenture provides that the Company's payment obligations under the Notes are jointly and severally guaranteed (the "Subsidiary Guarantees") by all of the Company's present and future Restricted Subsidiaries, other than Foreign Subsidiaries. The obligations of each Guarantor under its Subsidiary Guarantee will be limited as necessary to prevent that Subsidiary Guarantee from constituting a fraudulent conveyance under applicable law. See "Risk Factors -- The guarantees may

be unenforceable due to fraudulent conveyance statutes, and accordingly, you could have no claim against the guarantors." The Subsidiary Guarantee of each Guarantor will be subordinated to the prior payment in full of all Senior Debt of such Guarantor, which would include the guarantees of amounts borrowed under the Senior Credit Facilities.

Upon the release of a Guarantee by a Restricted Subsidiary under all then outstanding Credit Facilities, at any time after the suspension of certain covenants as provided below under the caption "-- Certain Covenants -- Changes in Covenants when Notes Rated Investment Grade," the Subsidiary Guarantee of such Restricted Subsidiary under the Indenture will be released and discharged at such time. In the event that any such Restricted Subsidiary thereafter Guarantees any Indebtedness of the Company under any Credit Facility (or if any released Guarantee under any Credit Facility is reinstated or renewed), or if at any time certain covenants are reinstituted as provided below under the caption "-- Certain Covenants -- Changes in Covenants when Notes Rated Investment Grade," then such Restricted Subsidiary will Guarantee the Notes on the terms and conditions set forth in the Indenture.

As of the date of this prospectus, not all of the Company's subsidiaries are "Restricted Subsidiaries." Aviation Communications & Surveillance Systems, LLC, Honeywell TCAS Inc., L-3 Satellite Networks, LLC, Digital Technics, L.P., ITel Solutions, LLC, L-3 Communications Secure Information Technology, Inc., Logimetrics, Inc., LogiMetrics FSC, Inc. and mmTech, INC. are currently Unrestricted Subsidiaries. In addition, under the circumstances described below under the subheading "-- Certain Covenants -- Restricted Payments", the Company is permitted to designate certain of the Company's subsidiaries as "Unrestricted Subsidiaries." Unrestricted Subsidiaries are not subject to many of the restrictive covenants in the Indenture. Unrestricted Subsidiaries do not guarantee these Notes.

PRINCIPAL, MATURITY AND INTEREST

The exchange notes will be limited in aggregate principal amount to $400.0 million. The Company may issue additional Notes from time to time after the offering of exchange notes. Any offering of additional Notes is subject to the covenant described below under the caption "-- Certain Covenants -- Incurrence of Indebtedness and Issuance of Preferred Stock." The Notes and any additional Notes subsequently issued under the Indenture will be treated as a single class for all purposes under the Indenture, including, without limitation, waivers, amendments, redemptions and offers to purchase.

The Notes will mature on July 15, 2013. Interest on the Notes will accrue at the rate of 6 1/8% per annum and will be payable semi-annually in arrears on July 15 and January 15, commencing on July 15, 2003, to Holders of record on the immediately preceding July 1 and January 1.

Interest on the Notes will accrue from the most recent date to which interest has been paid or, if no interest has been paid, from the date of original issuance. Interest will be computed on the basis of a 360-day year comprised of twelve 30-day months.

METHODS OF RECEIVING PAYMENTS ON THE NOTES

Principal, premium and Additional Amounts, if any, and interest on the Notes will be payable at the office or agency of the Company maintained for such purpose within the City and State of New York or, at the option of the Company, payment of interest and Additional Amounts, if any, may be made by check mailed to the Holders of the Notes at their respective addresses set forth in the register of Holders of Notes; provided that all payments of principal, premium, interest and Additional Amounts with respect to Notes the Holders of which have given wire transfer instructions to the Company will be required to be made by wire transfer of immediately available funds to the accounts specified by the Holders thereof if such Holders shall be registered Holders of at least $250,000 in principal amount of Notes. Until otherwise designated by the Company, the Company's office or agency in New York will be the office of the Trustee maintained for such purpose. The exchange notes will be issued in denominations of $1,000 and integral multiples thereof.

OPTIONAL REDEMPTION

The Notes will not be redeemable at the Company's option prior to July 15, 2008. Thereafter, the Notes will be subject to redemption at any time at the option of the Company, in whole or in part, upon not less than 30 nor more than 60 days' notice, at the redemption prices (expressed as percentages of principal amount) set forth below plus accrued and unpaid interest and Additional Amounts, if any, to the applicable redemption date, if redeemed during the twelve-month period beginning on July 15 of the years indicated below:

YEAR	PERCENTAGE
2008	103.063%
2009	102.042%
2010	101.021%
2011 and thereafter	100.000%

Notwithstanding the foregoing, before July 15, 2006, the Company may on any one or more occasions redeem up to an aggregate of 35% of the Notes originally issued at a redemption price of 106.125% of the principal amount thereof, plus accrued and unpaid interest and Additional Amounts, if any, to the redemption date, with the net cash proceeds of one or more Equity Offerings by the Company or the net cash proceeds of one or more Equity Offerings by Holdings that are contributed to the Company as common equity capital; provided that at least 65% of the Notes originally issued remain outstanding immediately after the occurrence of each such redemption; and provided, further, that any such redemption must occur within 120 days of the date of the closing of such Equity Offering.

SUBORDINATION

The payment of principal of, premium and Additional Amounts, if any, and interest on the Notes will be subordinated in right of payment, as set forth in the Indenture, to the prior payment in full in cash of all Senior Debt, whether outstanding on the Issue Date or thereafter incurred.

Upon any distribution to creditors of the Company:

(1) in a liquidation or dissolution of the Company;

(2) in a bankruptcy, reorganization, insolvency, receivership or similar proceeding relating to the Company or its property;

(3) in an assignment for the benefit of creditors; or

(4) in any marshalling of the Company's assets and liabilities,

the holders of Senior Debt will be entitled to receive payment in full in cash of all Obligations due in respect of such Senior Debt (including interest after the commencement of any such proceeding at the rate specified in the applicable Senior Debt, whether or not an allowable claim in any such proceeding) before the Holders of Notes will be entitled to receive any payment with respect to the Notes, and until all Obligations with respect to Senior Debt are paid in full in cash, any distribution to which the Holders of Notes would be entitled shall be made to the holders of Senior Debt (except, in each case, that Holders of Notes may receive Permitted Junior Securities and payments made from the trust described under "-- Legal Defeasance and Covenant Defeasance").

The Company also may not make any payment upon or in respect of the Notes (except in Permitted Junior Securities or from the trust described under "-- Legal Defeasance and Covenant Defeasance") if:

(1) a default in the payment of the principal of, premium, if any, or interest on Designated Senior Debt occurs and is continuing; or

(2) any other default occurs and is continuing with respect to Designated Senior Debt that permits holders of the Designated Senior Debt as to which such default relates to accelerate its maturity (or that would permit such holders to accelerate with the giving of notice or the passage of time or both) and the Trustee receives a notice of such default (a "Payment Blockage Notice") from the Company or the holders of any Designated Senior Debt.

Payments on the Notes may and shall be resumed:

(1) in the case of a payment default, upon the date on which such default is cured or waived; and

(2) in case of a nonpayment default, the earlier of the date on which such nonpayment default is cured or waived or 179 days after the date on which the applicable Payment Blockage Notice is received, unless the maturity of any Designated Senior Debt has been accelerated.

No new period of payment blockage may be commenced unless and until:

(1) 360 days have elapsed since the effectiveness of the immediately prior Payment Blockage Notice; and

(2) all scheduled payments of principal, premium and Additional Amounts, if any, and interest on the Notes that have come due have been paid in full in cash.

No nonpayment default that existed or was continuing on the date of delivery of any Payment Blockage Notice to the Trustee shall be, or be made, the basis for a subsequent Payment Blockage Notice unless such default shall have been cured or waived for a period of not less than 90 days.

The Indenture further requires that the Company promptly notify holders of Senior Debt if payment of the Notes is accelerated because of an Event of Default.

As a result of the subordination provisions described above, in the event of a liquidation or insolvency, Holders of Notes may recover less ratably than creditors of the Company who are holders of Senior Debt. At March 31, 2003, the Company did not have any Senior Debt outstanding.

MANDATORY REDEMPTION

Except as set forth below under "-- Repurchase at the Option of Holders", the Company is not required to make mandatory redemption or sinking fund payments with respect to the Notes.

REPURCHASE AT THE OPTION OF HOLDERS

CHANGE OF CONTROL

Upon the occurrence of a Change of Control, each Holder of Notes will have the right to require the Company to repurchase all or any part (equal to $1,000 or an integral multiple thereof) of such Holder's Notes pursuant to the offer described below (the "Change of Control Offer") at an offer price in cash equal to 101% of the aggregate principal amount thereof plus accrued and unpaid interest and Additional Amounts, if any, to the date of purchase (the "Change of Control Payment"). Within ten days following any Change of Control, the Company will mail a notice to each Holder describing the transaction or transactions that constitute the Change of Control and offering to repurchase Notes on the date specified in such notice, which date shall be no earlier than 30 days and no later than 60 days from the date such notice is mailed (the "Change of Control Payment Date"), pursuant to the procedures required by the Indenture and described in such notice. The Company will comply with the requirements of Rule 14e-1 under the Exchange Act and any other securities laws and regulations thereunder to the extent such laws and regulations are applicable in connection with the repurchase of the Notes as a result of a Change of Control.

On the Change of Control Payment Date, the Company will, to the extent lawful:

(1) accept for payment all Notes or portions thereof properly tendered pursuant to the Change of Control Offer;

(2) deposit with the Paying Agent an amount equal to the Change of Control Payment in respect of all Notes or portions thereof so tendered; and

(3) deliver or cause to be delivered to the Trustee the Notes so accepted together with an Officers' Certificate stating the aggregate principal amount of Notes or portions thereof being purchased by the Company.

The Paying Agent will promptly mail to each Holder of Notes so tendered the Change of Control Payment for such Notes, and the Trustee will promptly authenticate and mail (or cause to be transferred by book entry) to each Holder a new Note equal in principal amount to any unpurchased portion of the Notes surrendered, if any; provided that each such new Note will be in a principal amount of $1,000 or an integral multiple thereof.

The Indenture provides that, prior to mailing a Change of Control Offer, but in any event within 90 days following a Change of Control, the Company will either repay all outstanding Senior Debt or offer to repay all Senior Debt and terminate all commitments thereunder of each lender who has accepted such offer or obtain the requisite consents, if any, under all agreements governing outstanding Senior Debt to permit the repurchase of Notes required by this covenant. The Company will publicly announce the results of the Change of Control Offer on or as soon as practicable after the Change of Control Payment Date.

The Change of Control provisions described above will be applicable whether or not any other provisions of the Indenture are applicable. Except as described above with respect to a Change of Control, the Indenture does not contain provisions that permit the Holders of the Notes to require that the Company repurchase or redeem the Notes in the event of a takeover, recapitalization or similar transaction.

The Senior Credit Facilities prohibits the Company, in certain circumstances, from purchasing any Notes, and also provides that certain change of control events with respect to the Company constitutes a default thereunder. Any future credit agreements or other agreements relating to Senior Debt to which the Company becomes a party may contain similar restrictions and provisions. In the event a Change of Control occurs at a time when the Company is prohibited from purchasing Notes, the Company could seek the consent of its lenders to the purchase of Notes or could attempt to refinance the borrowings that contain such prohibition. If the Company does not obtain such a consent or repay such borrowings, the Company will remain prohibited from purchasing Notes. In such case, the Company's failure to purchase tendered Notes would constitute an Event of Default under the Indenture and under the documentation governing certain of our other Indebtedness which would, in turn, constitute a default under the Senior Credit Facilities. In such circumstances, the subordination provisions in the Indenture would likely restrict payments to the Holders of Notes. See "Risk Factors -- Our ability to repurchase notes with cash upon a change of control may be limited."

Finally, the Company's ability to pay cash to the holders of Notes upon a purchase may be limited by the Company's then-existing financial resources. There can be no assurance that sufficient funds will be available when necessary to make any required purchases. Even if sufficient funds were otherwise available, the terms of the Senior Credit Facilities will prohibit, subject to certain exceptions, the Company's prepayment of Notes prior to their scheduled maturity. Consequently, if the Company is not able to prepay indebtedness outstanding under the Senior Credit Facilities and any other Senior Debt containing similar restrictions or obtain requisite consents, the Company will be unable to fulfill its repurchase obligations if holders of Notes exercise their purchase rights following a Change of Control, thereby resulting in a default under the Indenture and under the documentation governing certain of our other Indebtedness, which would, in turn, constitute a default under our Senior Credit Facilities. Furthermore, the Change of Control provisions of the Indenture and under the documentation governing certain of our other Indebtedness may in certain circumstances make more difficult or discourage a takeover of the Company.

The Company will not be required to make a Change of Control Offer upon a Change of Control if a third party makes the Change of Control Offer in the manner, at the times and otherwise in

compliance with the requirements set forth in the Indenture applicable to a Change of Control Offer made by the Company and purchases all Notes validly tendered and not withdrawn under such Change of Control Offer.

The definition of Change of Control contains, with respect to the disposition of assets, the phrase "all or substantially all," which varies according to the facts and circumstances of the subject transaction and is subject to judicial interpretation. Accordingly, in certain circumstances there may be a degree of uncertainty in ascertaining whether a particular transaction would involve a disposition of "all or substantially all" of the assets of the Company and its Restricted Subsidiaries, and therefore it may be unclear as to whether a Change of Control has occurred and whether the holders have the right to require the Company to purchase the Notes. In the event that the Company were to determine that a Change of Control did not occur because not "all or substantially all" of the assets of the Company and its Restricted Subsidiaries had been sold and the holders of the Notes disagreed with such determination, the holders and/or the Trustee would need to seek a judicial determination of the issue.

ASSET SALES

The Indenture provides that the Company will not, and will not permit any of its Restricted Subsidiaries to, consummate an Asset Sale unless:

(1) the Company or the Restricted Subsidiary, as the case may be, receives consideration at the time of such Asset Sale at least equal to the fair market value (evidenced by an Officers' Certificate delivered to the Trustee which will include a resolution of the Board of Directors with respect to such fair market value in the event such Asset Sale involves aggregate consideration in excess of $10.0 million) of the assets or Equity Interests issued or sold or otherwise disposed of; and

(2) at least 80% of the consideration therefor received by the Company or such Restricted Subsidiary, as the case may be, consists of cash, Cash Equivalents and/or Marketable Securities;

provided, however, that:

(a) the amount of any Senior Debt of the Company or such Restricted Subsidiary that is assumed by the transferee in any such transaction; and

(b) any consideration received by the Company or such Restricted Subsidiary, as the case may be, that consists of (1) all or substantially all of the assets of one or more Similar Businesses, (2) other long-term assets that are used or useful in one or more Similar Businesses and (3) Permitted Securities shall be deemed to be cash for purposes of this provision.

Within 365 days after the receipt of any Net Proceeds from an Asset Sale, the Company may apply such Net Proceeds, at its option:

(1) to repay Indebtedness under a Credit Facility;

(2) to the acquisition of Permitted Securities;

(3) to the acquisition of all or substantially all of the assets of one or more Similar Businesses;

(4) to the making of a capital expenditure; or

(5) to the acquisition of other long-term assets in a Similar Business.

Pending the final application of any such Net Proceeds, the Company may temporarily reduce Indebtedness under a Credit Facility or otherwise invest such Net Proceeds in any manner that is not prohibited by the Indenture.

Any Net Proceeds from Asset Sales that are not applied or invested as provided in the first sentence of this paragraph will be deemed to constitute "Excess Proceeds." When the aggregate amount of Excess Proceeds exceeds $10.0 million, the Company will be required to make an offer to

all Holders of the Notes (an "Asset Sale Offer") and any other Indebtedness that ranks pari passu with the Notes (including, without limitation, the December 1998 Notes, the May 1998 Notes and the 2002 Notes) that, by its terms, requires the Company to offer to repurchase such Indebtedness with such Excess Proceeds to purchase the maximum principal amount of Notes and pari passu Indebtedness that may be purchased out of such Excess Proceeds at an offer price in cash in an amount equal to 100% of the principal amount thereof plus accrued and unpaid interest thereon, if any, to the date of purchase, in accordance with the procedures set forth in the Indenture. To the extent that the aggregate amount of Notes or pari passu Indebtedness tendered pursuant to an Asset Sale Offer is less than the Excess Proceeds, the Company may use any Excess Proceeds for general corporate purposes. If the aggregate principal amount of Notes or pari passu Indebtedness surrendered by Holders thereof exceeds the amount of Excess Proceeds in an Asset Sale Offer, the Company shall repurchase such Indebtedness on a pro rata basis and the Trustee shall select the Notes to be purchased on a pro rata basis. Upon completion of such offer to purchase, the amount of Excess Proceeds shall be reset at zero.

The Senior Credit Facilities will substantially limit the Company's ability to purchase subordinated Indebtedness, including the Notes. Any future credit agreements relating to Senior Debt may contain similar restrictions. See "Description of Other Indebtedness -- Senior Credit Facilities of L-3 Communications."

SELECTION AND NOTICE

If less than all of the Notes are to be redeemed at any time, selection of Notes for redemption will be made by the Trustee as follows:

(1) in compliance with the requirements of the principal national securities exchange, if any, on which the Notes are listed; or

(2) if the Notes are not so listed, on a pro rata basis, by lot or by such method as the Trustee shall deem fair and appropriate.

No Notes of $1,000 or less shall be redeemed in part. Notices of redemption shall be mailed by first class mail at least 30 but not more than 60 days before the redemption date to each Holder of Notes to be redeemed at its registered address. Notices of redemption may not be conditional.

If any Note is to be redeemed in part only, the notice of redemption that relates to such Note shall state the portion of the principal amount thereof to be redeemed. A new Note in principal amount equal to the unredeemed portion thereof will be issued in the name of the Holder thereof upon cancellation of the original Note. Notes called for redemption become due on the date fixed for redemption. On and after the redemption date, interest ceases to accrue on Notes or portions of them called for redemption.

CERTAIN COVENANTS

CHANGES IN COVENANTS WHEN NOTES RATED INVESTMENT GRADE

If on any date following the date of the Indenture:

(1) the Notes are rated Baa3 or better by Moody's and BBB\- or better by S&P (or, if either such entity ceases to rate the notes for reasons outside of the control of the Company, the equivalent investment grade credit rating from any other "nationally recognized statistical rating organization" within the meaning of Rule 15c3-1(c)(2)(vi)(F) under the Exchange Act selected by Company as a replacement agency); and

(2) no Default or Event of Default shall have occurred and be continuing,

then, beginning on that day and subject to the provisions of the following paragraph, the provisions and covenants specifically listed under the following captions in this prospectus will be suspended:

(a) "-- Repurchase at the Option of Holders-Asset Sales;"

(b) "-- Restricted Payments;"

(c) "-- Incurrence of Indebtedness and Issuance of Preferred Stock;"

(d) "-- Dividend and Other Payment Restrictions Affecting Restricted Subsidiaries;"

(e) "-- Transactions with Affiliates;"

(f) clauses (4)(a) and (b) of the covenant listed under "-- Merger, Consolidation or Sale of Assets;"

(g) "-- Payments for Consent;" and

(h) clauses (3)(a) and (b) of the covenant listed under "-- Future Subsidiary Guarantees."

In addition, following the achievement of such investment grade ratings, (1) the Subsidiary Guarantees of the Company's Restricted Subsidiaries will be released at the time of the release of Guarantees under all outstanding Credit Facilities as described above under the caption "-- The Subsidiary Guarantees" and, (2) as described below under the caption "-- Future Subsidiary Guarantees," no Restricted Subsidiary thereafter acquired or created will be required to execute a Subsidiary Guarantee unless such Subsidiary Guarantees Indebtedness of the Company under a Credit Facility.

Notwithstanding the foregoing, if the rating assigned by any such rating agency should subsequently decline to below Baa3 or BBB-, respectively, the foregoing covenants shall be reinstituted as of and from the date of such rating decline. For purposes of determining whether a Restricted Payment exceeds the allowable amount under the calculation described in paragraphs 3(a) through (d) of "--Restricted Payments" below, the covenant described under the caption "--Restricted Payments" will be interpreted as if it had been in effect since the date of the Indenture. However, no default will be deemed to have occurred as a result of the provisions and covenants listed in 2(a) through (h) above while those provisions and covenants were suspended. There can be no assurance that the Notes will ever achieve an investment grade rating or that any such rating will be maintained.

RESTRICTED PAYMENTS

The Indenture provides that the Company will not, and will not permit any of its Restricted Subsidiaries to, directly or indirectly:

(1) declare or pay any dividend or make any other payment or distribution on account of the Company's or any of its Restricted Subsidiaries' Equity Interests (including, without limitation, any payment in connection with any merger or consolidation involving the Company) or to the direct or indirect holders of the Company's or any of its Restricted Subsidiaries' Equity Interests in their capacity as such (other than (A) dividends or distributions payable in Equity Interests (other than Disqualified Stock) of the Company or (B) dividends or distributions by a Restricted Subsidiary so long as, in the case of any dividend or distribution payable on or in respect of any class or series of securities issued by a Restricted Subsidiary other than a Wholly Owned Restricted Subsidiary, the Company or a Restricted Subsidiary receives at least its pro rata share of such dividend or distribution in accordance with its Equity Interests in such class or series of securities);

(2) purchase, redeem or otherwise acquire or retire for value (including without limitation, in connection with any merger or consolidation involving the Company) any Equity Interests of the Company or any direct or indirect parent of the Company;

(3) make any payment on or with respect to, or purchase, redeem, defease or otherwise acquire or retire for value any Indebtedness that is subordinated to the Notes except a payment of interest or principal at Stated Maturity; or

(4) make any Restricted Investment (all such payments and other actions set forth in clauses (1)through (4) above being collectively referred to as "Restricted Payments"),

unless, at the time of and after giving effect to such Restricted Payment:

(1) no Default or Event of Default shall have occurred and be continuing or would occur as a consequence thereof; and

(2) the Company would, at the time of such Restricted Payment and after giving pro forma effect thereto as if such Restricted Payment had been made at the beginning of the applicable four-quarter period, have been permitted to incur at least $1.00 of additional Indebtedness pursuant to the Fixed Charge Coverage Ratio test set forth in the first paragraph of the covenant described below under the caption "-- Incurrence of Indebtedness and Issuance of Preferred Stock"; and

(3) such Restricted Payment, together with the aggregate amount of all other Restricted Payments made by the Company and its Restricted Subsidiaries since April 30, 1997 (excluding Restricted Payments permitted by clauses (2) through (8) of the next succeeding paragraph or of the kind contemplated by such clauses that were made prior to the date of the Indenture), is less than the sum of:

(a) 50% of the Consolidated Net Income of the Company for the period (taken as one accounting period) from July 1, 1997 to the end of the Company's most recently ended fiscal quarter for which internal financial statements are available at the time of such Restricted Payment (or, if such Consolidated Net Income for such period is a deficit, less 100% of such deficit); plus

(b) 100% of the aggregate net cash proceeds received by the Company since April 30, 1997 as a contribution to its common equity capital or from the issue or sale of Equity Interests of the Company (other than Disqualified Stock) or from the issue or sale of Disqualified Stock or debt securities of the Company that have been converted into such Equity Interests (other than Equity Interests (or Disqualified Stock or convertible debt securities) sold to a Subsidiary of the Company and other than Disqualified Stock or convertible debt securities that have been converted into Disqualified Stock); plus

(c) to the extent that any Restricted Investment that was made after April 30, 1997 is sold for cash or otherwise liquidated or repaid for cash, the amount of cash received in connection therewith (or from the sale of Marketable Securities received in connection therewith); plus

(d) to the extent not already included in such Consolidated Net Income of the Company for such period and without duplication;

(A) 100% of the aggregate amount of cash received as a dividend from an Unrestricted Subsidiary;

(B) 100% of the cash received upon the sale of Marketable Securities received as a dividend from an Unrestricted Subsidiary; and

(C) 100% of the net assets of any Unrestricted Subsidiary on the date that it becomes a Restricted Subsidiary.

As of March 31, 2003, the amount that would have been available to the Company for Restricted Payments pursuant to this paragraph (3) would have been $1,358.0 million.

The foregoing provisions will not prohibit:

(1) the payment of any dividend within 60 days after the date of declaration thereof, if at said date of declaration such payment would have complied with the provisions of the Indenture;

(2) the redemption, repurchase, retirement, defeasance or other acquisition of any subordinated Indebtedness or Equity Interests of the Company in exchange for, or out of the net cash proceeds of the substantially concurrent sale (other than to a Subsidiary of the Company) of, other Equity Interests of the Company (other than any Disqualified Stock); provided that the amount of any such net cash proceeds that are utilized for any such redemption, repurchase, retirement, defeasance or other acquisition shall be excluded from clause (3) (b) of the preceding paragraph;

(3) the defeasance, redemption, repurchase or other acquisition of subordinated Indebtedness (other than intercompany Indebtedness) in exchange for, or with the net cash proceeds from an incurrence of, Permitted Refinancing Indebtedness;

(4) the repurchase, retirement or other acquisition or retirement for value of common Equity Interests of the Company or Holdings held by any future, present or former employee, director or consultant of the Company or any Subsidiary or Holdings issued pursuant to any management equity plan or stock option plan or any other management or employee benefit plan or agreement; provided, however, that the aggregate amount of Restricted Payments made under this clause (4) does not exceed $1.5 million in any calendar year and provided further that cancellation of Indebtedness owing to the Company from members of management of the Company or any of its Restricted Subsidiaries in connection with a repurchase of Equity Interests of the Company will not be deemed to constitute a Restricted Payment for purposes of this covenant or any other provision of the Indenture;

(5) repurchases of Equity Interests deemed to occur upon exercise of stock options upon surrender of Equity Interests to pay the exercise price of such options;

(6) payments to Holdings (A) in amounts equal to the amounts required for Holdings to pay franchise taxes and other fees required to maintain its legal existence and provide for other operating costs of up to $500,000 per fiscal year and (B) in amounts equal to amounts required for Holdings to pay federal, state and local income taxes to the extent such income taxes are actually due and owing; provided that the aggregate amount paid under this clause (B) does not exceed the amount that the Company would be required to pay in respect of the income of the Company and its Subsidiaries if the Company were a stand alone entity that was not owned by Holdings;

(7) dividends paid to Holdings in amounts equal to amounts required for Holdings to pay interest and/or principal on Indebtedness that has been guaranteed by, or is otherwise considered Indebtedness of, the Company; and

(8) other Restricted Payments in an aggregate amount since May 22, 1998 not to exceed $20.0 million.

The Board of Directors of the Company may designate any Restricted Subsidiary to be an Unrestricted Subsidiary if such designation would not cause a Default. For purposes of making such determination, all outstanding Investments by the Company and its Restricted Subsidiaries (except to the extent repaid in cash) in the Subsidiary so designated will be deemed to be Restricted Payments at the time of such designation and will reduce the amount available for Restricted Payments under the first paragraph of this covenant. All such outstanding Investments will be deemed to constitute Investments in an amount equal to the fair market value of such Investments at the time of such designation. Such designation will only be permitted if such Restricted Payment would be permitted at such time and if such Restricted Subsidiary otherwise meets the definition of an Unrestricted Subsidiary.

The amount of all Restricted Payments (other than cash) shall be the fair market value on the date of the Restricted Payment of the asset(s) or securities proposed to be transferred or issued by the Company or such Restricted Subsidiary, as the case may be, pursuant to the Restricted Payment. The fair market value of any non-cash Restricted Payment shall be determined by the Board of Directors whose resolution with respect thereto shall be delivered to the Trustee. Not later than the date of making any Restricted Payment, the Company shall deliver to the Trustee an Officers' Certificate stating that such Restricted Payment is permitted and setting forth the basis upon which the calculations required by the covenant "Restricted Payments" were computed.

INCURRENCE OF INDEBTEDNESS AND ISSUANCE OF PREFERRED STOCK

The Indenture provides that the Company will not, and will not permit any of its Restricted Subsidiaries to, directly or indirectly, create, incur, issue, assume, guarantee or otherwise become directly or indirectly liable, contingently or otherwise, with respect to (collectively, "incur") any

Indebtedness (including Acquired Debt) and that the Company will not issue any Disqualified Stock and will not permit any of its Restricted Subsidiaries to issue any shares of preferred stock; provided, however, that the Company and any Restricted Subsidiary may incur Indebtedness (including Acquired Debt) or issue shares of preferred stock if the Fixed Charge Coverage Ratio for the Company's most recently ended four full fiscal quarters for which internal financial statements are available immediately preceding the date on which such additional Indebtedness is incurred or such preferred stock is issued would have been at least 2.0 to 1.0, determined on a pro forma basis (including a pro forma application of the net proceeds therefrom), as if the additional Indebtedness had been incurred, or the preferred stock had been issued, as the case may be, at the beginning of such four-quarter period.

The foregoing limitation will not apply to the incurrence of any of the following items of Indebtedness (collectively, "Permitted Debt"):

(1) the incurrence by the Company of additional Indebtedness under Credit Facilities (and the guarantee thereof by the Guarantors) in an aggregate principal amount outstanding pursuant to this clause (1) at any one time (with letters of credit being deemed to have a principal amount equal to the maximum potential liability of the Company and its Restricted Subsidiaries thereunder), including all Permitted Refinancing Indebtedness then outstanding incurred to refund, refinance or replace any other Indebtedness incurred pursuant to this clause (1), not to exceed $750.0 million less the aggregate amount of all Net Proceeds of Asset Sales applied to repay any such Indebtedness pursuant to the covenant described above under the caption "-- Asset Sales";

(2) the incurrence by the Company and its Restricted Subsidiaries of the Existing Indebtedness;

(3) the incurrence by the Company and the Guarantors of $400.0 million in aggregate principal amount of each of the outstanding notes and the Exchange Notes and the Subsidiary Guarantees thereof;

(4) the incurrence by the Company or any of its Restricted Subsidiaries of Indebtedness represented by Capital Lease Obligations, mortgage financings or purchase money obligations, in each case incurred for the purpose of financing all or any part of the purchase price or cost of construction or improvement of property, plant or equipment used in the business of the Company or such Restricted Subsidiary, in an aggregate principal amount, including all Permitted Refinancing Indebtedness then outstanding incurred to refund, refinance or replace any other Indebtedness incurred pursuant to this clause (4), not to exceed $100.0 million at any time outstanding;

(5) the incurrence by the Company or any of its Restricted Subsidiaries of Indebtedness in connection with the acquisition of assets or a new Restricted Subsidiary; provided that such Indebtedness was incurred by the prior owner of such assets or such Restricted Subsidiary prior to such acquisition by the Company or one of its Restricted Subsidiaries and was not incurred in connection with, or in contemplation of, such acquisition by the Company or one of its Restricted Subsidiaries; and provided further that the principal amount (or accreted value, as applicable) of such Indebtedness, together with any other outstanding Indebtedness incurred pursuant to this clause (5) does not exceed $50.0 million;

(6) the incurrence by the Company or any of its Restricted Subsidiaries of Permitted Refinancing Indebtedness in exchange for, or the net proceeds of which are used to refund, refinance or replace, Indebtedness that was permitted by the Indenture to be incurred (other than intercompany Indebtedness or Indebtedness incurred pursuant to clause (1) above);

(7) Indebtedness incurred by the Company or any of its Restricted Subsidiaries constituting reimbursement obligations with respect to letters of credit issued in the ordinary course of business in respect of workers' compensation claims or self-insurance, or other Indebtedness with respect to reimbursement type obligations regarding workers' compensation claims; provided, however, that upon the drawing of such letters of credit or the incurrence of such Indebtedness, such obligations are reimbursed within 30 days following such drawing or incurrence;

(8) Indebtedness arising from agreements of the Company or a Restricted Subsidiary providing for indemnification, adjustment of purchase price or similar obligations, in each case, incurred or assumed in connection with the disposition of any business, assets or a Subsidiary, other than guarantees of Indebtedness incurred by any Person acquiring all or any portion of such business, assets or a Subsidiary for the purpose of financing such acquisition; provided, however, that:

(a) such Indebtedness is not reflected on the balance sheet of the Company or any Restricted Subsidiary (contingent obligations referred to in a footnote to financial statements and not otherwise reflected on the balance sheet will not be deemed to be reflected on such balance sheet for purposes of this clause (a)); and

(b) the maximum assumable liability in respect of all such Indebtedness shall at no time exceed the gross proceeds including noncash proceeds (the fair market value of such noncash proceeds being measured at the time received and without giving effect to any subsequent changes in value) actually received by the Company and its Restricted Subsidiaries in connection with such disposition;

(9) the incurrence by the Company or any of its Restricted Subsidiaries of intercompany Indebtedness between or among the Company and any of its Restricted Subsidiaries; provided, however, that:

(a) if the Company is the obligor on such Indebtedness, such Indebtedness is expressly subordinated to the prior payment in full in cash of all Obligations with respect to the Notes; and

(b) (1) any subsequent issuance or transfer of Equity Interests that results in any such Indebtedness being held by a Person other than the Company or one of its Restricted Subsidiaries and (2) any sale or other transfer of any such Indebtedness to a Person that is not either the Company or one of its Restricted Subsidiaries shall be deemed, in each case, to constitute an incurrence of such Indebtedness by the Company or such Restricted Subsidiary, as the case may be;

(10) the incurrence by the Company or any of the Guarantors of Hedging Obligations that are incurred for the purpose of:

(a) fixing, hedging or capping interest rate risk with respect to any floating rate Indebtedness that is permitted by the terms of the Indenture to be outstanding; or

(b) protecting the Company and its Restricted Subsidiaries against changes in currency exchange rates;

(11) the guarantee by the Company or any of the Guarantors of Indebtedness of the Company or a Restricted Subsidiary of the Company that was permitted to be incurred by another provision of this covenant;

(12) the incurrence by the Company's Unrestricted Subsidiaries of Non-Recourse Debt, provided, however, that if any such Indebtedness ceases to be Non-Recourse Debt of an Unrestricted Subsidiary, such event shall be deemed to constitute an incurrence of Indebtedness by a Restricted Subsidiary of the Company that was not permitted by this clause (12), and the issuance of preferred stock by Unrestricted Subsidiaries;

(13) obligations in respect of performance and surety bonds and completion guarantees provided by the Company or any Restricted Subsidiaries in the ordinary course of business; and

(14) the incurrence by the Company or any of its Restricted Subsidiaries of additional Indebtedness in an aggregate principal amount (or accreted value, as applicable) at any time outstanding, including all Permitted Refinancing Indebtedness then outstanding incurred to refund, refinance or replace any other Indebtedness incurred pursuant to this clause (14), not to exceed $100.0 million.

For purposes of determining compliance with this covenant, in the event that an item of Indebtedness meets the criteria of more than one of the categories of Permitted Debt described in

clauses (1) through (14) above or is entitled to be incurred pursuant to the first paragraph of this covenant, the Company shall, in its sole discretion, classify, or later reclassify, such item of Indebtedness in any manner that complies with this covenant. Accrual of interest, the accretion of accreted value and the payment of interest in the form of additional Indebtedness will not be deemed to be an incurrence of Indebtedness for purposes of this covenant.

LIENS

The Indenture provides that the Company will not, and will not permit any of its Restricted Subsidiaries to, directly or indirectly, create, incur, assume or suffer to exist any Lien (other than Permitted Liens) securing Indebtedness on any asset now owned or hereafter acquired, or any income or profits therefrom or assign or convey any right to receive income therefrom, unless all payments due under the Indenture and the Notes are secured on an equal and ratable basis with the Obligations so secured until such time as such Obligations are no longer secured by a Lien.

ANTILAYERING PROVISION

The Indenture provides that (A) the Company will not incur, create, issue, assume, guarantee or otherwise become liable for any Indebtedness that is subordinate or junior in right of payment to any Senior Debt and senior in any respect in right of payment to the Notes, and (B) no Guarantor will incur, create, issue, assume, guarantee or otherwise become liable for any Indebtedness that is subordinate or junior in right of payment to any Senior Debt of a Guarantor and senior in any respect in right of payment to any of the Subsidiary Guarantees.

DIVIDEND AND OTHER PAYMENT RESTRICTIONS AFFECTING RESTRICTED SUBSIDIARIES

The Indenture provides that the Company will not, and will not permit any of its Restricted Subsidiaries to, directly or indirectly, create or otherwise cause or suffer to exist or become effective any encumbrance or restriction on the ability of any Restricted Subsidiary to:

(1) (A) pay dividends or make any other distributions to the Company or any of its Restricted Subsidiaries (1) on its Capital Stock or (2) with respect to any other interest or participation in, or measured by, its profits, or (B) pay any indebtedness owed to the Company or any of its Restricted Subsidiaries;

(2) make loans or advances to the Company or any of its Restricted Subsidiaries; or

(3) transfer any of its properties or assets to the Company or any of its Restricted Subsidiaries.

However, the preceding restrictions will not apply to encumbrances or restrictions existing under or by reason of:

(1) the provisions of security agreements that restrict the transfer of assets that are subject to a Lien created by such security agreements;

(2) the provisions of agreements governing Indebtedness incurred pursuant to clause (5) of the second paragraph of the covenant described above under the caption "-- Incurrence of Indebtedness and Issuance of Preferred Stock";

(3) the Senior Credit Facilities, the Indenture, the Notes, the Exchange Notes, the December 1998 Indenture, the December 1998 Notes, the May 1998 Indenture, the May 1998 Notes, the 2002 Indenture and the 2002 Notes;

(4) applicable law;

(5) any instrument governing Indebtedness or Capital Stock of a Person acquired by the Company or any of its Restricted Subsidiaries as in effect at the time of such acquisition (except to the extent such Indebtedness was incurred in connection with or in contemplation of such acquisition), which encumbrance or restriction is not applicable to any Person, or the properties or assets of any Person, other than the Person, or the property or assets of the Person, so acquired, provided that, in the case of Indebtedness, such Indebtedness was permitted by the terms of the Indenture to be incurred;

(6) by reason of customary non-assignment provisions in leases entered into in the ordinary course of business and consistent with past practices;

(7) purchase money obligations for property acquired in the ordinary course of business that impose restrictions of the nature described in clause (3) of the preceding paragraph;

(8) Permitted Refinancing Indebtedness, provided that the restrictions contained in the agreements governing such Permitted Refinancing Indebtedness are not materially more restrictive, taken as a whole, than those contained in the agreements governing the Indebtedness being refinanced;

(9) contracts for the sale of assets, including, without limitation, customary restrictions with respect to a Subsidiary pursuant to an agreement that has been entered into for the sale or disposition of all or substantially all of the Capital Stock or assets of such Subsidiary;

(10) agreements relating to secured Indebtedness otherwise permitted to be incurred pursuant to the covenants described under "Limitations on Incurrence of Indebtedness and Issuance of Preferred Stock" and "Liens" that limit the right of the debtor to dispose of the assets securing such Indebtedness;

(11) restrictions on cash or other deposits or net worth imposed by customers under contracts entered into in the ordinary course of business; or

(12) customary provisions in joint venture agreements and other similar agreements entered into in the ordinary course of business.

MERGER, CONSOLIDATION OR SALE OF ASSETS

The Indenture provides that the Company may not consolidate or merge with or into (whether or not the Company is the surviving corporation), or sell, assign, transfer, lease, convey or otherwise dispose of all or substantially all of its properties or assets in one or more related transactions, to another Person unless:

(1) the Company is the surviving corporation or the Person formed by or surviving any such consolidation or merger (if other than the Company) or to which such sale, assignment, transfer, lease, conveyance or other disposition shall have been made is a corporation organized or existing under the laws of the United States, any state thereof or the District of Columbia;

(2) the Person formed by or surviving any such consolidation or merger (if other than the Company) or the Person to which such sale, assignment, transfer, lease, conveyance or other disposition shall have been made assumes all the obligations of the Company under the Registration Rights Agreement, the Notes and the Indenture pursuant to a supplemental indenture in a form reasonably satisfactory to the Trustee;

(3) immediately after such transaction no Default or Event of Default exists; and

(4) except in the case of a merger of the Company with or into a Wholly Owned Restricted Subsidiary of the Company, the Company or the Person formed by or surviving any such consolidation or merger (if other than the Company), or to which such sale, assignment, transfer, lease, conveyance or other disposition shall have been made, after giving pro forma effect to such transaction as if such transaction had occurred at the beginning of the most recently ended four full fiscal quarters for which internal financial statements are available immediately preceding such transaction either:

(a) would be permitted to incur at least $1.00 of additional Indebtedness pursuant to the Fixed Charge Coverage Ratio test set forth in the first paragraph of the covenant described above under the caption "-- Incurrence of Indebtedness and Issuance of Preferred Stock"; or

(b) would have a pro forma Fixed Charge Coverage Ratio that is greater than the actual Fixed Charge Coverage Ratio for the same four-quarter period without giving pro forma effect to such transaction.

Notwithstanding the foregoing clause (4):

(1) any Restricted Subsidiary may consolidate with, merge into or transfer all or part of its properties and assets to the Company; and

(2) the Company may merge with an Affiliate that has no significant assets or liabilities and was incorporated solely for the purpose of reincorporating the Company in another State of the United States so long as the amount of Indebtedness of the Company and its Restricted Subsidiaries is not increased thereby.

TRANSACTIONS WITH AFFILIATES

The Indenture provides that the Company will not, and will not permit any of its Restricted Subsidiaries to, make any payment to, or sell, lease, transfer or otherwise dispose of any of its properties or assets to, or purchase any property or assets from, or enter into or make or amend any transaction, contract, agreement, understanding, loan, advance or guarantee with, or for the benefit of, any Affiliate (each of the foregoing, an "Affiliate Transaction"), unless:

(1) such Affiliate Transaction is on terms that are no less favorable to the Company or the relevant Restricted Subsidiary than those that would have been obtained in a comparable transaction by the Company or such Restricted Subsidiary with an unrelated Person; and

(2) the Company delivers to the Trustee:

(a) with respect to any Affiliate Transaction or series of related Affiliate Transactions involving aggregate consideration in excess of $5.0 million, a resolution of the Board of Directors set forth in an Officers' Certificate certifying that such Affiliate Transaction complies with clause (1) above and that such Affiliate Transaction has been approved by a majority of the disinterested members of the Board of Directors; and

(b) with respect to any Affiliate Transaction or series of related Affiliate Transactions involving aggregate consideration in excess of $15.0 million, an opinion as to the fairness to the Holders of such Affiliate Transaction from a financial point of view issued by an accounting, appraisal or investment banking firm of national standing.

The foregoing provisions will not prohibit:

(1) any employment agreement entered into by the Company or any of its Restricted Subsidiaries in the ordinary course of business;

(2) any transaction with a Lehman Investor;

(3) any transaction between or among the Company and/or its Restricted Subsidiaries;

(4) transactions between the Company or any of its Restricted Subsidiaries, on the one hand, and a Permitted Joint Venture, on the other hand, on terms that are not materially less favorable to the Company or the applicable Restricted Subsidiary of the Company than those that could have been obtained from an unaffiliated third party; provided that:

(a) in the case of any such transaction or series of related transactions pursuant to this clause (4) involving aggregate consideration in excess of $5.0 million but less than $25.0 million, such transaction or series of transactions (or the agreement pursuant to which the transactions were executed) was approved by the Company's Chief Executive Officer or Chief Financial Officer; and

(b) in the case of any such transaction or series of related transactions pursuant to this clause (4) involving aggregate consideration equal to or in excess of $25.0 million, such transaction or series of related transactions (or the agreement pursuant to which the transactions were executed) was approved by a majority of the disinterested members of the Board of Directors;

(5) any transaction pursuant to and in accordance with the provisions of the Transaction Documents as the same are in effect on the Issue Date; and

(6) any Restricted Payment that is permitted by the provisions of the Indenture described above under the caption "-- Restricted Payments."

PAYMENTS FOR CONSENT

The Indenture provides that neither the Company nor any of its Subsidiaries will, directly or indirectly, pay or cause to be paid any consideration, whether by way of interest, fee or otherwise, to any Holder of any Notes for or as an inducement to any consent, waiver or amendment of any of the terms or provisions of the Indenture or the Notes unless such consideration is offered to be paid or is paid to all Holders of the Notes that consent, waive or agree to amend in the time frame set forth in the solicitation documents relating to such consent, waiver or agreement.

REPORTS

Notwithstanding that the Company may not be subject to the reporting requirements of Section 13 or 15(d) of the Exchange Act or otherwise report on an annual and quarterly basis on forms provided for such annual and quarterly reporting pursuant to rules and regulations promulgated by the SEC, the Indenture requires the Company to file with the Commission (and provide the Trustee and Holders with copies thereof, without cost to each Holder, within 15 days after it files them with the Commission):

(1) within 90 days after the end of each fiscal year, annual reports on Form 10-K (or any successor or comparable form) containing the information required to be contained therein (or required in such successor or comparable form);

(2) within 45 days after the end of each of the first three fiscal quarters of each fiscal year, reports on Form 10-Q (or any successor or comparable form);

(3) promptly from time to time after the occurrence of an event required to be therein reported, such other reports on Form 8-K (or any successor or comparable form); and

(4) any other information, documents and other reports which the Company would be required to file with the Commission if it were subject to Section 13 or 15(d) of the Exchange Act;

provided, however, the Company shall not be so obligated to file such reports with the Commission if the Commission does not permit such filing, in which event the Company will make available such information to prospective purchasers of Notes, in addition to providing such information to the Trustee and the Holders, in each case within 15 days after the time the Company would be required to file such information with the Commission, if it were subject to Sections 13 or 15(d) of the Exchange Act.

FUTURE SUBSIDIARY GUARANTEES

The Company's payment obligations under the Notes are jointly and severally guaranteed by all of the Company's existing and future Restricted Subsidiaries, other than Foreign Subsidiaries. The Indenture provides that if the Company or any of its Subsidiaries shall acquire or create a Subsidiary (other than a Foreign Subsidiary or an Unrestricted Subsidiary) after the Issue Date, then such Subsidiary shall execute a Subsidiary Guarantee and deliver an opinion of counsel, in accordance with the terms of the Indenture. The Subsidiary Guarantee of each Guarantor ranks pari passu with the guarantees of the 2001 CODES, the 2000 Convertible Notes, the December 1998 Notes, the May 1998 Notes and the 2002 Notes and is subordinated to the prior payment in full of all Senior Debt of such Guarantor, which would include the guarantees of amounts borrowed under the Senior Credit Facilities. The obligations of each Guarantor under its Subsidiary Guarantee are limited so as not to constitute a fraudulent conveyance under applicable law.

The Indenture also provides that, notwithstanding the foregoing, for so long as certain covenants are suspended as provided above under the caption "-- Certain Covenants -- Changes in Covenants when Notes Rated Investment Grade," no newly acquired or created Subsidiary will be required to execute a Subsidiary Guarantee unless such Subsidiary Guarantees Indebtedness of the Company under a Credit Facility. However, any Subsidiary (other than a Foreign Subsidiary or an Unrestricted

Subsidiary) that Guarantees any Indebtedness of the Company under a Credit Facility will become a Subsidiary Guarantor and, if at any time certain covenants are reinstituted as provided above under the caption "-- Certain Covenants -- Changes in Covenants when Notes Rated Investment Grade," any newly acquired or created Subsidiary (other than a Foreign Subsidiary or an Unrestricted Subsidiary) will Guarantee the Notes on the terms and conditions set forth in the Indenture.

The Indenture provides that no Guarantor may consolidate with or merge with or into (whether or not such Guarantor is the surviving Person) another Person (except the Company or another Guarantor) unless:

(1) subject to the provisions of the following paragraph, the Person formed by or surviving any such consolidation or merger (if other than such Guarantor) or to which such sale, assignment, transfer, lease, conveyance or other disposition shall have been made assumes all the obligations of such Guarantor pursuant to a supplemental indenture in form and substance reasonably satisfactory to the Trustee, under the Notes and the Indenture;

(2) immediately after giving effect to such transaction, no Default or Event of Default exists; and

(3) the Company:

(a) would be permitted by virtue of the Company's pro forma Fixed Charge Coverage Ratio, immediately after giving effect to such transaction, to incur at least $1.00 of additional Indebtedness pursuant to the Fixed Charge Coverage Ratio test set forth in the covenant described above under the caption "-- Incurrence of Indebtedness and Issuance of Preferred Stock"; or

(b) would have a pro forma Fixed Charge Coverage Ratio that is greater than the actual Fixed Charge Coverage Ratio for the same four-quarter period without giving pro forma effect to such transaction.

Notwithstanding the foregoing clause (3):

(1) any Guarantor may consolidate with, merge into or transfer all or part of its properties and assets to the Company or to another Guarantor; and

(2) any Guarantor may merge with an Affiliate that has no significant assets or liabilities and was incorporated solely for the purpose of reincorporating such Guarantor in another State of the United States so long as the amount of Indebtedness of the Company and its Restricted Subsidiaries is not increased thereby.

The Indenture provides that in the event of a sale or other disposition of all of the assets of any Guarantor, by way of merger, consolidation or otherwise, or a sale or other disposition of all of the capital stock of any Guarantor, then such Guarantor (in the event of a sale or other disposition, by way of such a merger, consolidation or otherwise, of all of the capital stock of such Guarantor) or the corporation acquiring the property (in the event of a sale or other disposition of all of the assets of such Guarantor) will be released and relieved of any obligations under its Subsidiary Guarantee; provided that the Net Proceeds of such sale or other disposition are applied in accordance with the applicable provisions of the Indenture. See "-- Repurchase at the Option of Holders -- Asset Sales."

EVENTS OF DEFAULT AND REMEDIES

The Indenture provides that each of the following constitutes an Event of Default:

(1) default for 30 days in the payment when due of interest or Additional Amounts, if any, on the Notes (whether or not prohibited by the subordination provisions of the Indenture);

(2) default in payment when due of the principal of or premium, if any, on the Notes (whether or not prohibited by the subordination provisions of the Indenture);

(3) failure by the Company to comply with the provisions described under the captions "-- Repurchase at the Option of Holders -- Change of Control", "-- Repurchase at the Option of Holders -- Asset Sales" or "-- Merger, Consolidation or Sale of Assets";

(4) failure by the Company for 60 days after notice to comply with any of its other agreements in the Indenture or the Notes;

(5) default under any mortgage, indenture or instrument under which there may be issued or by which there may be secured or evidenced any Indebtedness for money borrowed by the Company or any of its Restricted Subsidiaries (or the payment of which is guaranteed by the Company or any of its Restricted Subsidiaries) whether such Indebtedness or guarantee now exists, or is created after the Issue Date, which default results in the acceleration of such Indebtedness prior to its express maturity and, in each case, the principal amount of any such Indebtedness, together with the principal amount of any other such Indebtedness the maturity of which has been so accelerated, aggregates $25.0 million or more;

(6) failure by the Company or any of its Restricted Subsidiaries to pay final judgments aggregating in excess of $25.0 million, which judgments are not paid, discharged or stayed for a period of 60 days;

(7) certain events of bankruptcy or insolvency with respect to the Company or any of its Significant Subsidiaries or any group of Subsidiaries that, taken as a whole, would constitute a Significant Subsidiary; and

(8) except as permitted by the Indenture, any Subsidiary Guarantee shall be held in any judicial proceeding to be unenforceable or invalid.

If any Event of Default occurs and is continuing, the Trustee or the Holders of at least 25% in principal amount of the then outstanding Notes may declare all the Notes to be due and payable immediately; provided, however, that so long as any Designated Senior Debt is outstanding, such declaration shall not become effective until the earlier of:

(1) the day which is five Business Days after receipt by the Representatives of Designated Senior Debt of such notice of acceleration; or

(2) the date of acceleration of any Designated Senior Debt.

Notwithstanding the foregoing, in the case of an Event of Default arising from certain events of bankruptcy or insolvency, with respect to the Company or any Significant Subsidiary or any group of Subsidiaries that, taken as a whole, would constitute a Significant Subsidiary, all outstanding Notes will become due and payable without further action or notice. Holders of the Notes may not enforce the Indenture or the Notes except as provided in the Indenture. Subject to certain limitations, Holders of a majority in principal amount of the then outstanding Notes may direct the Trustee in its exercise of any trust or power. The Trustee may withhold from Holders of the Notes notice of any continuing Default or Event of Default (except a Default or Event of Default relating to the payment of principal or interest) if it determines that withholding notice is in their interest.

In the case of any Event of Default occurring by reason of any willful action (or inaction) taken (or not taken) by or on behalf of the Company with the intention of avoiding payment of the premium that the Company would have had to pay if the Company then had elected to redeem the Notes pursuant to the optional redemption provisions of the Indenture, an equivalent premium shall also become and be immediately due and payable to the extent permitted by law upon the acceleration of the Notes. If an Event of Default occurs prior to July 15, 2008 by reason of any willful action (or inaction) taken (or not taken) by or on behalf of the Company with the intention of avoiding the prohibition on redemption of the Notes prior to July 15, 2008, then the premium specified in the Indenture shall also become immediately due and payable to the extent permitted by law upon the acceleration of the Notes.

The Holders of a majority in aggregate principal amount of the Notes then outstanding by notice to the Trustee may on behalf of the Holders of all of the Notes waive any existing Default or Event of

Default and its consequences under the Indenture except a continuing Default or Event of Default in the payment of interest on, or the principal of, the Notes.

The Company is required to deliver to the Trustee annually a statement regarding compliance with the Indenture, and the Company is required upon becoming aware of any Default or Event of Default, to deliver to the Trustee a statement specifying such Default or Event of Default.

NO PERSONAL LIABILITY OF DIRECTORS, OFFICERS, EMPLOYEES AND STOCKHOLDERS

No director, officer, employee, incorporator or stockholder of the Company or any Subsidiary of the Company, as such, shall have any liability for any obligations of the Company or any Subsidiary of the Company under the Notes, the Subsidiary Guarantees or the Indenture or for any claim based on, in respect of, or by reason of, such obligations or their creation. Each Holder of Notes by accepting a Note waives and releases all such liability. The waiver and release are part of the consideration for issuance of the Notes. Such waiver may not be effective to waive liabilities under the federal securities laws and it is the view of the Commission that such a waiver is against public policy.

LEGAL DEFEASANCE AND COVENANT DEFEASANCE

The Company may, at its option and at any time, elect to have all of its obligations discharged with respect to the outstanding Notes ("Legal Defeasance") except for:

(1) the rights of Holders of outstanding Notes to receive payments in respect of the principal of, premium and Additional Amounts, if any, and interest on such Notes when such payments are due from the trust referred to below;

(2) the Company's obligations with respect to the Notes concerning issuing temporary Notes, registration of Notes, mutilated, destroyed, lost or stolen Notes and the maintenance of an office or agency for payment and money for security payments held in trust;

(3) the rights, powers, trusts, duties and immunities of the Trustee, and the Company's obligations in connection therewith; and

(4) the Legal Defeasance provisions of the Indenture.

In addition, the Company may, at its option and at any time, elect to have the obligations of the Company released with respect to certain covenants that are described in the Indenture ("Covenant Defeasance") and thereafter any omission to comply with such obligations shall not constitute a Default or Event of Default with respect to the Notes. In the event Covenant Defeasance occurs, certain events (not including non-payment, bankruptcy, receivership, rehabilitation and insolvency events) described under "Events of Default" will no longer constitute an Event of Default with respect to the Notes.

In order to exercise either Legal Defeasance or Covenant Defeasance:

(1) the Company must irrevocably deposit with the Trustee, in trust, for the benefit of the Holders of the Notes, cash in U.S. dollars, non-callable Government Securities, or a combination thereof, in such amounts as will be sufficient, in the opinion of a nationally recognized firm of independent public accountants, to pay the principal of, premium and Additional Amounts, if any, and interest on the outstanding Notes on the stated maturity or on the applicable redemption date, as the case may be, and the Company must specify whether the Notes are being defeased to maturity or to a particular redemption date;

(2) in the case of Legal Defeasance, the Company shall have delivered to the Trustee an opinion of counsel in the United States reasonably acceptable to the Trustee confirming that:

(a) the Company has received from, or there has been published by, the Internal Revenue Service a ruling; or

(b) since the Issue Date, there has been a change in the applicable federal income tax law, in either case to the effect that, and based thereon such opinion of counsel shall confirm that, the Holders of the outstanding Notes will not recognize income, gain or loss for federal income tax purposes as a result of such Legal Defeasance and will be subject to federal income tax on the same amounts, in the same manner and at the same times as would have been the case if such Legal Defeasance had not occurred;

(3) in the case of Covenant Defeasance, the Company shall have delivered to the Trustee an opinion of counsel in the United States reasonably acceptable to the Trustee confirming that the Holders of the outstanding Notes will not recognize income, gain or loss for federal income tax purposes as a result of such Covenant Defeasance and will be subject to federal income tax on the same amounts, in the same manner and at the same times as would have been the case if such Covenant Defeasance had not occurred;

(4) no Default or Event of Default shall have occurred and be continuing on the date of such deposit (other than a Default or Event of Default resulting from the borrowing of funds to be applied to such deposit) or insofar as Events of Default from bankruptcy or insolvency events are concerned, at any time in the period ending on the 91st day after the date of deposit;

(5) such Legal Defeasance or Covenant Defeasance will not result in a breach or violation of, or constitute a default under any material agreement or instrument (other than the Indenture) to which the Company or any of its Restricted Subsidiaries is a party or by which the Company or any of its Restricted Subsidiaries is bound;

(6) the Company must have delivered to the Trustee an opinion of counsel to the effect that after the 91st day following the deposit, the trust funds will not be subject to the effect of any applicable bankruptcy, insolvency, reorganization or similar laws affecting creditors' rights generally;

(7) the Company must deliver to the Trustee an Officers' Certificate stating that the deposit was not made by the Company with the intent of preferring the Holders of Notes over the other creditors of the Company with the intent of defeating, hindering, delaying or defrauding creditors of the Company or others; and

(8) the Company must deliver to the Trustee an Officers' Certificate and an opinion of counsel, each stating that all conditions precedent provided for relating to the Legal Defeasance or the Covenant Defeasance have been complied with.

TRANSFER AND EXCHANGE

A Holder may transfer or exchange Notes in accordance with the Indenture. The registrar and the Trustee may require a Holder, among other things, to furnish appropriate endorsements and transfer documents and the Company may require a Holder to pay any taxes and fees required by law or permitted by the Indenture. The Company is not required to transfer or exchange any Note selected for redemption. Also, the Company is not required to transfer or exchange any Note for a period of 15 days before a selection of Notes to be redeemed.

The registered Holder of a Note will be treated as the owner of it for all purposes.

AMENDMENT, SUPPLEMENT AND WAIVER

Except as provided in the next two succeeding paragraphs, the Indenture or the Notes may be amended or supplemented with the consent of the Holders of at least a majority in principal amount of the Notes then outstanding (including, without limitation, consents obtained in connection with a purchase of, or tender offer or exchange offer for, Notes), and any existing default or compliance with any provision of the Indenture or the Notes may be waived with the consent of the Holders of a majority in principal amount of the then outstanding Notes (including consents obtained in connection with a tender offer or exchange offer for Notes).

Without the consent of each Holder affected, an amendment or waiver may not (with respect to any Notes held by a non-consenting Holder):

(1) reduce the principal amount of Notes whose Holders must consent to an amendment, supplement or waiver;

(2) reduce the principal of or change the fixed maturity of any Note or alter the provisions with respect to the redemption of the Notes (other than provisions relating to the covenants described above under the caption "-- Repurchase at the Option of Holders");

(3) reduce the rate of or change the time for payment of interest on any Note;

(4) waive a Default or Event of Default in the payment of principal of or premium and Additional Amounts, if any, or interest on the Notes (except a rescission of acceleration of the Notes by the Holders of at least a majority in aggregate principal amount of the Notes and a waiver of the payment default that resulted from such acceleration);

(5) make any Note payable in money other than that stated in the Notes;

(6) make any change in the provisions of the Indenture relating to waivers of past Defaults or the rights of Holders of Notes to receive payments of principal of or premium and Additional Amounts, if any, or interest on the Notes;

(7) waive a redemption payment with respect to any Note (other than a payment required by one of the covenants described above under the caption "-- Repurchase at the Option of Holders"); or

(8) make any change in the foregoing amendment and waiver provisions.

In addition, any amendment to the provisions of Article 10 of the Indenture (which relates to subordination) will require the consent of the Holders of at least 75% in aggregate principal amount of the Notes then outstanding if such amendment would adversely affect the rights of Holders of Notes.

Notwithstanding the foregoing, without the consent of any Holder of Notes, the Company and the Trustee may amend or supplement the Indenture or the Notes:

(1) to cure any ambiguity, defect or inconsistency;

(2) to provide for uncertificated Notes in addition to or in place of certificated Notes;

(3) to provide for the assumption of the Company's obligations to Holders of Notes in the case of a merger or consolidation;

(4) to make any change that would provide any additional rights or benefits to the Holders of Notes or that does not adversely affect the legal rights under the Indenture of any such Holder; or

(5) to comply with requirements of the Commission in order to effect or maintain the qualification of the Indenture under the Trust Indenture Act.

CONCERNING THE TRUSTEE

The Indenture contains certain limitations on the rights of the Trustee, should it become a creditor of the Company, to obtain payment of claims in certain cases, or to realize on certain property received in respect of any such claim as security or otherwise. The Trustee is permitted to engage in other transactions; however, if it acquires any conflicting interest it must eliminate such conflict within 90 days, apply to the Commission for permission to continue or resign.

The Holders of a majority in principal amount of the then outstanding Notes have the right to direct the time, method and place of conducting any proceeding for exercising any remedy available to the Trustee, subject to certain exceptions. The Indenture provides that in case an Event of Default shall occur (which shall not be cured), the Trustee will be required, in the exercise of its power, to use

the degree of care of a prudent person in the conduct of such person's affairs. Subject to such provisions, the Trustee will be under no obligation to exercise any of its rights or powers under the Indenture at the request of any Holder of Notes, unless such Holder shall have offered to the Trustee security and indemnity satisfactory to it against any loss, liability or expense.

ADDITIONAL INFORMATION

Anyone who receives this prospectus may obtain a copy of the Indenture and Registration Rights Agreement without charge by writing to L-3 Communications Corporation, 600 Third Avenue, New York, New York 10016, Attention: Senior Vice President -- Finance.

BOOK-ENTRY, DELIVERY AND FORM

The Exchange Notes will be represented by one or more global notes in registered, global form without interest coupons (collectively, the "Global Exchange Note"). The Global Exchange Note initially will be deposited upon issuance with the Trustee as custodian for The Depository Trust Company ("DTC"), in New York, New York, and registered in the name of DTC or its nominee, in each case for credit to an account of a direct or indirect participant as described below.

Except as set forth below, the Global Exchange Notes may be transferred, in whole and not in part, only to another nominee of DTC or to a successor of DTC or its nominee. Beneficial interests in the Global Exchange Notes may not be exchanged for Exchange Notes in certificated form except in the limited circumstances described below. See "-- Exchange of Book-Entry Notes for Certificated Notes." In addition, transfer of beneficial interests in the Global Notes will be subject to the applicable rules and procedures of DTC and its direct or indirect participants (including, if applicable, those of Euroclear and Clearstream), which may change from time to time.

The Notes may be presented for registration of transfer and exchange at the offices of the registrar.

DEPOSITORY PROCEDURES

DTC has advised the Company that DTC is a limited-purpose trust company created to hold securities for its participating organizations (collectively, the "Participants") and to facilitate the clearance and settlement of transactions in those securities between Participants through electronic book-entry changes in accounts of Participants. The Participants include securities brokers and dealers (including the initial purchasers), banks, trust companies, clearing corporations and certain other organizations. Access to DTC's system is also available to other entities such as banks, brokers, dealers and trust companies that clear through or maintain a custodial relationship with a Participant, either directly or indirectly (collectively, "Indirect Participants"). Persons who are not Participants may beneficially own securities held by or on behalf of DTC only through the Participants or Indirect Participants. The ownership interest and transfer of ownership interest of each actual purchaser of each security held by or on behalf of DTC are recorded on the records of the Participants and Indirect Participants.

DTC has also advised the Company that pursuant to procedures established by it:

(1) upon deposit of the Global Exchange Note, DTC will credit the accounts of Participants with portions of the principal amount of Global Exchange Note; and

(2) ownership of such interests in the Global Exchange Note will be shown on, and the transfer of ownership thereof will be effected only through, records maintained by DTC (with respect to Participants) or by Participants and the Indirect Participants (with respect to other owners of beneficial interests in the Global Exchange Note).

Investors in the Global Exchange Note may hold their interests therein directly through DTC, if they are Participants in such system, or indirectly through organizations (including Euroclear and

Clearstream) that are Participants in such system. All interests in a Global Exchange Note, including those held through Euroclear or Clearstream, may be subject to the procedures and requirements of DTC. Those interests held by Euroclear or Clearstream may also be subject to the procedures and requirements of such system.

The laws of some states require that certain persons take physical delivery in definitive form of securities that they own. Consequently, the ability to transfer beneficial interest in a Global Exchange Note to such persons may be limited to that extent. Because DTC can act only on behalf of Participants, which in turn act on behalf of Indirect Participants and certain banks, the ability of a person having a beneficial interest in a Global Exchange Note to pledge such interest to persons or entities that do not participate in DTC system, or otherwise take actions in respect of such interests, may be affected by the lack of physical certificate evidencing such interests. For certain other restrictions on the transferability of the Notes see, "-- Exchange of Book-Entry Notes for Certificated Notes."

EXCEPT AS DESCRIBED BELOW, OWNERS OF INTERESTS IN THE GLOBAL EXCHANGE NOTES WILL NOT HAVE NOTES REGISTERED IN THEIR NAMES, WILL NOT RECEIVE PHYSICAL DELIVERY OF EXCHANGE NOTES IN CERTIFICATED FORM AND WILL NOT BE CONSIDERED THE REGISTERED OWNERS OR HOLDERS THEREOF UNDER THE INDENTURE FOR ANY PURPOSE.

Payments in respect of the principal and premium and Additional Amounts, if any, and interest on a Global Exchange Note registered in the name of DTC or its nominee will be payable by the Trustee to DTC or its nominee in its capacity as the registered Holder under the Indenture. Under the terms of the Indenture, the Company and the Trustee will treat the persons in whose names the Exchange Notes, including the Global Exchange Notes, are registered as the owners thereof for the purpose of receiving such payments and for any and all other purposes whatsoever. Consequently, neither the Company, the Trustee nor any agent of the Company or the Trustee has or will have any responsibility or liability for:

(1) any aspect of DTC's records or any Participant's or Indirect Participant's records relating to or payments made on account of beneficial ownership interests in the Global Exchange Notes, or for maintaining, supervising or reviewing any of DTC's records or any Participant's or Indirect Participant's records relating to the beneficial ownership interests in the Global Exchange Notes; or

(2) any other matter relating to the actions and practices of DTC or any of its Participants or Indirect Participants.

DTC has advised the Company that its current practices, upon receipt of any payment in respect of securities such as the Exchange Notes (including principal and interest), is to credit the accounts of the relevant Participants with the payment on the payment date, in amounts proportionate to their respective holdings in principal amount of beneficial interests in the relevant security such as the Global Exchange Notes as shown on the records of DTC. Payments by Participants and the Indirect Participants to the beneficial owners of Notes will be governed by standing instructions and customary practices and will be the responsibility of the Participants or the Indirect Participants and will not be the responsibility of DTC, the Trustee or the Company. Neither the Company nor the Trustee will be liable for any delay by DTC or its Participants in identifying the beneficial owners of the Exchange Notes, and the Company and the Trustee may conclusively rely on and will be protected in relying on instructions from DTC or its nominee as the registered owner of the Exchange Notes for all purposes.

Except for trades involving only Euroclear and Clearstream participants, interests in the Global Exchange Notes will trade in DTC's Same-Day Funds Settlement System and secondary market trading activity in such interests will, therefore, settle in immediately available funds, subject in all cases to the rules and procedures of DTC and its participants.

Transfers between Participants in DTC will be effected in accordance with DTC's procedures, and will be settled in same-day funds. Transfers between participants in Euroclear and Clearstream will be effected in the ordinary way in accordance with their respective rules and operating procedures.

Subject to compliance with the transfer restrictions applicable to the Exchange Notes described herein, crossmarket transfers between Participants in DTC, on the one hand, and Euroclear or

Clearstream participants, on the other hand, will be effected through DTC in accordance with DTC's rules on behalf of Euroclear or Clearstream, as the case may be, by its respective depository; however, such cross-market transactions will require delivery of instructions to Euroclear or Clearstream, as the case may be, by the counterparty in such system in accordance with the rules and procedures and within the established deadlines (Brussels time) of such system. Euroclear or Clearstream, as the case may be, will, if the transaction meets its settlement requirements, deliver instructions to its respective depository to take action to effect final settlement on its behalf by delivering or receiving interests in the relevant Global Exchange Note in DTC, and making or receiving payment in accordance with normal procedures for same-day fund settlement applicable to DTC. Euroclear participants and Clearstream participants may not deliver instructions directly to the Depositaries for Euroclear or Clearstream.

Because of time zone differences, the securities accounts of a Euroclear or Clearstream participant purchasing an interest in a Global Exchange Note from a Participant in DTC will be credited, and any such crediting will be reported to the relevant Euroclear or Clearstream participant, during the securities settlement processing day (which must be a business day for Euroclear or Clearstream) immediately following the settlement date of DTC. Cash received in Euroclear or Clearstream as a result of sales of interests in a Global Exchange Note by or through a Euroclear or Clearstream participant to a Participant in DTC will be received with value on the settlement date of DTC but will be available in the relevant Euroclear or Clearstream cash account only as of the business day for Euroclear or Clearstream following DTC's settlement date.

DTC has advised the Company that it will take any action permitted to be taken by a Holder of Exchange Notes only at the direction of one or more Participants to whose account DTC interests in the Global Exchange Notes are credited and only in respect of such portion of the aggregate principal amount of the Notes as to which such Participant or Participants has or have given direction. However, if there is an Event of Default under the Notes, DTC reserves the right to exchange Global Exchange Notes for legended Exchange Notes in certificated form, and to distribute such Exchange Notes to its Participants.

The information in this section concerning DTC, Euroclear and Clearstream and their book-entry systems has been obtained from sources that the Company believes to be reliable, but the Company takes no responsibility for the accuracy thereof.

Although DTC, Euroclear and Clearstream have agreed to the foregoing procedures to facilitate transfers of interests in the Global Exchange Note among participants in DTC, Euroclear and Clearstream, they are under no obligation to perform or to continue to perform such procedures, and such procedures may be discontinued at any time, None of the Company, the initial purchasers or the Trustee will have any responsibility for the performance by DTC, Euroclear or Clearstream or their respective participants or indirect participants of their respective obligations under the rules and procedures governing their operations.

EXCHANGE OF BOOK-ENTRY NOTES FOR CERTIFICATED NOTES

A Global Exchange Note is exchangeable for definitive Exchange Notes in registered certificated form if:

(1) DTC (A) notifies the Company that it is unwilling or unable to continue as depository for the Global Exchange Note and the Company thereupon fails to appoint a successor depository or (B) has ceased to be a clearing agency registered under the Exchange Act; or

(2) the Company, at its option, notifies the Trustee in writing that it elects to cause issuance of the Exchange Notes in certificated form.

In addition, beneficial interests in a Global Exchange Note may be exchanged for certificated Exchange Notes upon request but only upon at least 20 days prior written notice given to the Trustee by or on behalf of DTC in accordance with customary procedures. In all cases, certificated Exchange Notes delivered in exchange for any Global Exchange Note or beneficial interest therein will be registered in names, and issued in any approved denominations, requested by or on behalf of DTC (in accordance with its customary procedures).

CERTIFICATED NOTES

Subject to certain conditions, any person having a beneficial interest in the Global Exchange Note may, upon request to the Trustee, exchange such beneficial interest for Exchange Notes in the form of certificated Exchange Notes. Upon any such issuance, the Trustee is required to register such certificated Exchange Notes in the name of, and cause the same to be delivered to, such person or persons (or the nominee of any thereof). In addition, if (i) the Company notifies the Trustee in writing that DTC is no longer willing or able to act as a depository and the Company is unable to locate a qualified successor within 90 days or (ii) the Company, at its option, notifies the Trustee in writing that it elects to cause the issuance of Exchange Notes in the form of certificated Exchange Notes under the Indenture, then, upon surrender by the Global Exchange Note Holder of its Global Note, Notes in such form will be issued to each person that the Global Exchange Note Holder and DTC identify as being the beneficial owner of the related Exchange Notes.

Neither the Company nor the Trustee will be liable for any delay by the Global Exchange Note Holder or DTC in identifying the beneficial owners of Exchange Notes and the Company and the Trustee may conclusively rely on, and will be protected in relying on, instructions from the Global Exchange Note Holder or DTC for all purposes.

SAME DAY SETTLEMENT AND PAYMENT

The Indenture requires that payments in respect of the Exchange Notes represented by the Global Exchange Note (including principal, premium, if any, interest and Additional Amounts, if any) be made by wire transfer of immediately available funds to the accounts specified by the Global Exchange Note Holder. With respect to certificated Exchange Notes, the Company will make all payments of principal, premium, if any, interest and Additional Amounts, if any, by wire transfer of immediately available funds to the accounts specified by the Holders thereof or, if no such account is specified, by mailing a check to each such Holder's registered address. The Company expects that secondary trading in the certificated Exchange Notes will also be settled in immediately available funds.

REGISTRATION RIGHTS; ADDITIONAL AMOUNTS

The Company, the Guarantors and the initial purchasers entered into the Registration Rights Agreement on May 21, 2003. Pursuant to the Registration Rights Agreement, the Company and the Guarantors agreed to file with the Commission the Exchange Offer Registration Statement on the appropriate form under the Securities Act with respect to the Exchange Notes. Upon the effectiveness of the Exchange Offer Registration Statement, the Company will offer to the Holders of Transfer Restricted Securities pursuant to the Exchange Offer who are able to make certain representations the opportunity to exchange their Transfer Restricted Securities for Exchange Notes. If:

(1) the Company and the Guarantors are not required to file the Exchange Offer Registration Statement or permitted to consummate the Exchange Offer because the Exchange Offer is not permitted by applicable law or Commission policy; or

(2) any Holder of Transfer Restricted Securities notifies the Company prior to the 20th day following consummation of the Exchange Offer that:

(a) it is prohibited by law or Commission policy from participating in the Exchange Offer; or

(b) it may not resell the Exchange Notes acquired by it in the Exchange Offer to the public without delivering a prospectus and the prospectus contained in the Exchange Offer Registration Statement is not appropriate or available for such resales; or

(c) it is a broker-dealer and owns Notes acquired directly from the Company or an affiliate of the Company,

the Company and the Guarantors will file with the Commission a Shelf Registration Statement to cover resales of the Notes by the Holders thereof who satisfy certain conditions relating to the

provision of information in connection with the Shelf Registration Statement. The Company and the Guarantors will use their reasonable best efforts to cause the applicable registration statement to be declared effective as promptly as possible by the Commission.

For purposes of the foregoing, "Transfer Restricted Securities" means each outstanding note until:

(1) the date on which such outstanding note has been exchanged by a person other than a broker-dealer for an Exchange Note in the Exchange Offer;

(2) following the exchange by a broker-dealer in the Exchange Offer of an outstanding note for an Exchange Note, the date on which such Exchange Note is sold to a purchaser who receives from such broker-dealer on or prior to the date of such sale a copy of the prospectus contained in the Exchange Offer Registration Statement;

(3) the date on which such outstanding note has been effectively registered under the Securities Act and disposed of in accordance with the Shelf Registration Statement; or

(4) the date on which such outstanding note is distributed to the public pursuant to Rule 144 under the Act.

The Registration Rights Agreement provides that:

(1) the Company and the Guarantors will file an Exchange Offer Registration Statement with the Commission on or prior to 90 days after the Issue Date;

(2) the Company and the Guarantors will use all commercially reasonable efforts to have the Exchange Offer Registration Statement declared effective by the Commission on or prior to 180 days after the Issue Date;

(3) unless the Exchange Offer would not be permitted by applicable law or Commission policy, the Company and the Guarantors will commence the Exchange Offer and use all commercially reasonable efforts to issue on or prior to 30 business days after the date on which the Exchange Offer Registration Statement was declared effective by the Commission, Exchange Notes in exchange for all Notes tendered prior thereto in the Exchange Offer; and

(4) if obligated to file the Shelf Registration Statement, the Company and the Guarantors will use their best efforts to file the Shelf Registration Statement with the Commission on or prior to 30 days after such filing obligation arises and to use all commercially reasonable efforts to cause the Shelf Registration Statement to be declared effective by the Commission on or prior to 90 days after such obligation arises.

If:

(a) the Company and the Guarantors fail to file any of the Registration Statements required by the Registration Rights Agreement on or before the date specified above for such filing;

(b) any of such Registration Statements is not declared effective by the Commission on or prior to the date specified for such effectiveness (the "Effectiveness Target Date");

(c) the Company and the Guarantors fail to consummate the Exchange Offer within 30 business days of the Effectiveness Target Date with respect to the Exchange Offer Registration Statement; or

(d) the Shelf Registration Statement or the Exchange Offer Registration Statement is declared effective but thereafter ceases, subject to certain exceptions, to be effective or usable in connection with resales of Transfer Restricted Securities during the periods specified in the Registration Rights Agreement (each such event referred to in clauses (a) through (d) above a "Registration Default"),

then the Company and the Guarantors will pay Additional Amounts to each Holder of outstanding notes, with respect to the first 90-day period immediately following the occurrence of the first Registration Default in an amount equal to $.05 per week per $1,000 principal amount of outstanding notes held by such Holder.

The amount of the Additional Amounts will increase by an additional $.05 per week per $1,000 principal amount of outstanding notes with respect to each subsequent 90-day period until all Registration Defaults have been cured, up to a maximum amount of Additional Amounts of $.50 per week per $1,000 principal amount of outstanding notes.

All accrued Additional Amounts will be paid by the Company and the Guarantors on each Damages Payment Date to the Global Note Holder by wire transfer of immediately available funds or by federal funds check and to Holders of certificated outstanding notes by wire transfer to the accounts specified by them or by mailing checks to their registered addresses if no such accounts have been specified.

Following the cure of all Registration Defaults, the accrual of Additional Amounts will cease.

Holders of outstanding notes will be required to make certain representations to the Company and the Guarantors (as described in the Registration Rights Agreement) in order to participate in the Exchange Offer and will be required to deliver information to be used in connection with the Shelf Registration Statement and to provide comments on the Shelf Registration Statement within the time periods set forth in the Registration Rights Agreement in order to have their outstanding notes included in the Shelf Registration Statement and benefit from the provisions regarding Additional Amounts set forth above.

CERTAIN DEFINITIONS

Set forth below are certain defined terms used in the Indenture. Reference is made to the Indenture for a full disclosure of all such terms, as well as any other capitalized terms used herein for which no definition is provided.

"2000 Convertible Notes" means the $300,000,000 in aggregate principal amount of Holdings' 5.25% Convertible Senior Subordinated Notes due 2009, issued pursuant to the 2000 Convertible Note Indenture in November and December of 2000 and guaranteed by the Company and the other guarantors thereof.

"2000 Convertible Note Indenture" means the indenture, dated as of November 21, 2000, among The Bank of New York, as trustee, Holdings, the Company, as a guarantor, and the other guarantors named therein, with respect to the 2000 Convertible Notes.

"2001 CODES" means the $420,000,000 in aggregate principal amount of Holdings' 4.00% Senior Subordinated Convertible Contingent Debt Securities (CODES) due 2011, issued pursuant to the 2001 CODES Indenture in October and November 2001 and guaranteed by the Company and the other guarantors thereof.

"2001 CODES Indenture" means the indenture, dated as of October 24, 2001, among The Bank of New York, as trustee, Holdings, the Company, as a guarantor, and the other guarantors named therein, with respect to the 2001 CODES.

"2002 Indenture" means the indenture, dated as of June 28, 2002, among The Bank of New York, as trustee, the Comany and the guarantors thereto, with respect to the 2002 Notes.

"2002 Notes" means the $750,000,000 in aggregate principal amount of the Company's 7 5/8% Senior Subordinated Notes due 2012, issued pursuant to the 2002 Indenture on June 28, 2002.

"Acquired Debt" means, with respect to any specified Person:

(1) Indebtedness of any other Person existing at the time such other Person is merged with or into or became a Restricted Subsidiary of such specified Person, including, without limitation, Indebtedness incurred in connection with, or in contemplation of, such other Person merging with or into or becoming a Restricted Subsidiary of such specified Person; and

(2) Indebtedness secured by a Lien encumbering any asset acquired by such specified Person.

"Additional Amounts" means all additional amounts then owing pursuant to Section 5 of the Registration Rights Agreement.

"Affiliate" of any specified Person means any other Person directly or indirectly controlling or controlled by or under direct or indirect common control with such specified Person. For purposes of this definition, "control" (including, with correlative meanings, the terms "controlling", "controlled by" and "under common control with"), as used with respect to any Person, shall mean the possession, directly or indirectly, of the power to direct or cause the direction of the management or policies of such Person, whether through the ownership of voting securities, by agreement or otherwise; provided that beneficial ownership of 10% or more of the voting securities of a Person shall be deemed to be control.

"Asset Sale" means:

(1) the sale, lease, conveyance or other disposition of any assets or rights (including, without limitation, by way of a sale and leaseback) other than sales of inventory in the ordinary course of business (provided that the sale, lease, conveyance or other disposition of all or substantially all of the assets of the Company and its Restricted Subsidiaries taken as a whole will be governed by the provisions of the Indenture described above under the caption "-- Change of Control" and/or the provisions described above under the caption "-- Merger, Consolidation or Sale of Assets" and not by the provisions of the Asset Sale covenant); and

(2) the issue or sale by the Company or any of its Subsidiaries of Equity Interests of any of the Company's Restricted Subsidiaries,

in the case of either clause (1) or (2), whether in a single transaction or a series of related transactions (A) that have a fair market value in excess of $5.0 million or (B) for net proceeds in excess of $5.0 million.

Notwithstanding the foregoing:

(1) a transfer of assets by the Company to a Restricted Subsidiary or by a Restricted Subsidiary to the Company or to another Restricted Subsidiary;

(2) an issuance of Equity Interests by a Restricted Subsidiary to the Company or to another Restricted Subsidiary;

(3) a Restricted Payment that is permitted by the covenant described above under the caption "-- Certain Covenants -- Restricted Payments"; and

(4) a disposition of Cash Equivalents in the ordinary course of business will not be deemed to be an Asset Sale.

"Attributable Debt" in respect of a sale and leaseback transaction means, at the time of determination, the present value (discounted at the rate of interest implicit in such transaction, determined in accordance with GAAP) of the obligation of the lessee for net rental payments during the remaining term of the lease included in such sale and leaseback transaction (including any period for which such lease has been extended or may, at the option of the lessor, be extended).

"Capital Lease Obligation" means, at the time any determination thereof is to be made, the amount of the liability in respect of a capital lease that would at such time be required to be capitalized on a balance sheet in accordance with GAAP.

"Capital Stock" means:

(1) in the case of a corporation, corporate stock;

(2) in the case of an association or business entity, any and all shares, interests, participations, rights or other equivalents (however designated) of corporate stock;

(3) in the case of a partnership or limited liability company, partnership or membership interests (whether general or limited); and

(4) any other interest or participation that confers on a Person the right to receive a share of the profits and losses of, or distributions of assets of, the issuing Person.

"Cash Equivalents" means:

(1) United States dollars;

(2) securities issued or directly and fully guaranteed or insured by the United States government or any agency or instrumentality thereof having maturities of not more than one year from the date of acquisition;

(3) certificates of deposit and eurodollar time deposits with maturities of six months or less from the date of acquisition, bankers' acceptances with maturities not exceeding six months and overnight bank deposits, in each case with any domestic financial institution to the Senior Credit Facilities or with any domestic commercial bank having capital and surplus in excess of $500.0 million and a Thompson Bank Watch Rating of "B" or better;

(4) repurchase obligations with a term of not more than seven days for underlying securities of the types described in clauses (2) and (3) above entered into with any financial institution meeting the qualifications specified in clause (3) above;

(5) commercial paper having the highest rating obtainable from Moody's or S&P and in each case maturing within six months after the date of acquisition;

(6) investment funds investing 95% of their assets in securities of the types described in clauses (1)-(5) above; and

(7) readily marketable direct obligations issued by any State of the United States of America or any political subdivision thereof having maturities of not more than one year from the date of acquisition and having one of the two highest rating categories obtainable from either Moody's or S&P.

"Change of Control" means the occurrence of any of the following:

(1) the sale, lease, transfer, conveyance or other disposition (other than by way of merger or consolidation), in one or a series of related transactions, of all or substantially all of the assets of the Company and its Restricted Subsidiaries taken as a whole to any "person" (as such term is used in Section 13(d)(3) of the Exchange Act) other than the Principals or their Related Parties (as defined below);

(2) the adoption of a plan relating to the liquidation or dissolution of the Company;

(3) the consummation of any transaction (including, without limitation, any merger or consolidation) the result of which is that any "person" (as defined above), other than the Principals and their Related Parties, becomes the "beneficial owner" (as such term is defined in Rule 13d-3 and Rule 13d-5 under the Exchange Act), directly or indirectly, of more than 50% of the Voting Stock of the Company (measured by voting power rather than number of shares); or

(4) the first day on which a majority of the members of the Board of Directors of the Company are not Continuing Directors.

"Consolidated Cash Flow" means, with respect to any Person for any period, the Consolidated Net Income of such Person for such period plus:

(1) an amount equal to any extraordinary loss plus any net loss realized in connection with an Asset Sale (to the extent such losses were deducted in computing such Consolidated Net Income); plus

(2) provision for taxes based on income or profits of such Person and its Restricted Subsidiaries for such period, to the extent that such provision for taxes was included in computing such Consolidated Net Income; plus

(3) consolidated interest expense of such Person and its Restricted Subsidiaries for such period, whether paid or accrued and whether or not capitalized (including, without limitation, original issue discount, non-cash interest payments, the interest component of any deferred

payment obligations, the interest component of all payments associated with Capital Lease Obligations, imputed interest with respect to Attributable Debt, commissions, discounts and other fees and charges incurred in respect of letter of credit or bankers' acceptance financings, and net payments (if any) pursuant to Hedging Obligations), to the extent that any such expense was deducted in computing such Consolidated Net Income; plus

(4) depreciation, amortization (including amortization of goodwill, debt issuance costs and other intangibles but excluding amortization of other prepaid cash expenses that were paid in a prior period) and other non-cash expenses (excluding any such non-cash expense to the extent that it represents an accrual of or reserve for cash expenses in any future period or amortization of a prepaid cash expense that was paid in a prior period) of such Person and its Restricted Subsidiaries for such period to the extent that such depreciation, amortization and other non-cash expenses were deducted in computing such Consolidated Net Income; minus

(5) non-cash items (excluding any items that were accrued in the ordinary course of business) increasing such Consolidated Net Income for such period, in each case, on a consolidated basis and determined in accordance with GAAP.

"Consolidated Net Income" means, with respect to any Person for any period, the aggregate of the Net Income of such Person and its Restricted Subsidiaries for such period, on a consolidated basis, determined in accordance with GAAP; provided that:

(1) the Net Income of any Person that is not a Restricted Subsidiary or that is accounted for by the equity method of accounting shall be included only to the extent of the amount of dividends or distributions paid in cash to the referent Person or a Restricted Subsidiary thereof;

(2) the Net Income of any Restricted Subsidiary shall be excluded to the extent that the declaration or payment of dividends or similar distributions by that Restricted Subsidiary of that Net Income is not at the date of determination permitted without any prior governmental approval (that has not been obtained) or, directly or indirectly, by operation of the terms of its charter or any agreement, instrument, judgment, decree, order, statute, rule or governmental regulation applicable to that Restricted Subsidiary or its stockholders;

(3) the Net Income of any Person acquired in a pooling of interests transaction for any period prior to the date of such acquisition shall be excluded;

(4) the cumulative effect of a change in accounting principles shall be excluded;

(5) the Net Income of any Unrestricted Subsidiary shall be excluded, whether or not distributed to the Company or one of its Restricted Subsidiaries; and

(6) the Net Income of any Restricted Subsidiary shall be calculated after deducting preferred stock dividends payable by such Restricted Subsidiary to Persons other than the Company and its other Restricted Subsidiaries.

"Consolidated Tangible Assets" means, with respect to the Company, the total consolidated assets of the Company and its Restricted Subsidiaries, less the total intangible assets of the Company and its Restricted Subsidiaries, as shown on the most recent internal consolidated balance sheet of the Company and such Restricted Subsidiaries calculated on a consolidated basis in accordance with GAAP.

"Continuing Directors" means, as of any date of determination, any member of the Board of Directors of the Company who:

(1) was a member of such Board of Directors on the date of the Indenture; or

(2) was nominated for election or elected to such Board of Directors with the approval of a majority of the Continuing Directors who were members of such Board at the time of such nomination or election.

"Credit Facilities" means, with respect to the Company, one or more debt facilities (including, without limitation, the Senior Credit Facilities) or commercial paper facilities with banks or other institutional lenders providing for revolving credit loans, term loans, receivables financing (including through the sale of receivables to such lenders or to special purpose entities formed to borrow from such lenders against such receivables) or letters of credit, in each case, as amended, restated, modified, renewed, refunded, replaced or refinanced in whole or in part from time to time.

"December 1998 Indenture" means the indenture, dated as of December 11, 1998, between The Bank of New York, as trustee, the Company and the guarantors party thereto, with respect to the December 1998 Notes.

"December 1998 Notes" means the $200,000,000 in aggregate principal amount of the Company's 8% Senior Subordinated Notes due 2008, issued pursuant to the December 1998 Indenture on December 11, 1998.

"Default" means any event that is, or with the passage of time or the giving of notice or both would be, an Event of Default.

"Designated Senior Debt" means:

(1) any Indebtedness outstanding under the Senior Credit Facilities; and

(2) any other Senior Debt permitted under the Indenture the principal amount of which is $25.0 million or more and that has been designated by the Company as "Designated Senior Debt."

"Disqualified Stock" means any Capital Stock that, by its terms (or by the terms of any security into which it is convertible, or for which it is exchangeable, at the option of the holder thereof), or upon the happening of any event, matures or is mandatorily redeemable, pursuant to a sinking fund obligation or otherwise, or redeemable at the option of the Holder thereof, in whole or in part, on or prior to the date that is 91 days after the date on which the Notes mature; provided, however, that any Capital Stock that would constitute Disqualified Stock solely because the holders thereof have the right to require the Company to repurchase such Capital Stock upon the occurrence of a Change of Control or an Asset Sale shall not constitute Disqualified Stock if the terms of such Capital Stock provide that the Company may not repurchase or redeem any such Capital Stock pursuant to such provisions unless such repurchase or redemption complies with the covenant described above under the caption "-- Certain Covenants -- Restricted Payments"; and provided further, that if such Capital Stock is issued to any plan for the benefit of employees of the Company or its Subsidiaries or by any such plan to such employees, such Capital Stock shall not constitute Disqualified Stock solely because it may be required to be repurchased by the Company in order to satisfy applicable statutory or regulatory obligations.

"Equity Interests" means Capital Stock and all warrants, options or other rights to acquire Capital Stock (but excluding any debt security that is convertible into, or exchangeable for, Capital Stock).

"Equity Offering" means any public or private sale of equity securities (excluding Disqualified Stock) of the Company or Holdings, other than any private sales to an Affiliate of the Company or Holdings.

"Exchange Act" means the Securities Exchange Act of 1934, as amended.

"Existing Indebtedness" means any Indebtedness of the Company and its Restricted Subsidiaries (other than Indebtedness under the Senior Credit Facilities and the Notes) in existence on the date of the Indenture, until such amounts are repaid.

"Fixed Charges" means, with respect to any Person for any period, the sum, without duplication, of:

(1) the consolidated interest expense of such Person and its Restricted Subsidiaries for such period, whether paid or accrued (including, without limitation, original issue discount, non-cash interest payments, the interest component of any deferred payment obligations, the interest component of all payments associated with Capital Lease Obligations, imputed interest with respect to Attributable Debt, commissions, discounts and other fees and charges incurred in respect of letter of credit or bankers' acceptance financings, and net payments (if any) pursuant to Hedging Obligations, but excluding amortization of debt issuance costs);

(2) the consolidated interest of such Person and its Restricted Subsidiaries that was capitalized during such period;

(3) any interest expense on Indebtedness of another Person that is guaranteed by such Person or one of its Restricted Subsidiaries or secured by a Lien on assets of such Person or one of its Restricted Subsidiaries (whether or not such Guarantee or Lien is called upon); and

(4) the product of:

(a) all dividend payments, whether or not in cash, on any series of preferred stock of such Person or any of its Restricted Subsidiaries, other than dividend payments on Equity Interests payable solely in Equity Interests of the Company, times

(b) a fraction, the numerator of which is one and the denominator of which is one minus the then current combined federal, state and local statutory tax rate of such Person, expressed as a decimal,

in each case, on a consolidated basis and in accordance with GAAP.

"Fixed Charge Coverage Ratio" means, with respect to any Person for any period, the ratio of the Consolidated Cash Flow of such Person for such period to the Fixed Charges of such Person and its Restricted Subsidiaries for such period. In the event that the Company or any of its Restricted Subsidiaries incurs, assumes, Guarantees or redeems any Indebtedness (other than revolving credit borrowings) or issues preferred stock subsequent to the commencement of the period for which the Fixed Charge Coverage Ratio is being calculated but on or prior to the date on which the event for which the calculation of the Fixed Charge Coverage Ratio is made (the "Calculation Date"), then the Fixed Charge Coverage Ratio shall be calculated giving pro forma effect to such incurrence, assumption, Guarantee or redemption of Indebtedness, or such issuance or redemption of preferred stock, as if the same had occurred at the beginning of the applicable four-quarter reference period. In addition, for purposes of making the computation referred to above:

(1) acquisitions that have been made by the Company or any of its Restricted Subsidiaries, including through mergers or consolidations and including any related financing transactions, during the four-quarter reference period or subsequent to such reference period and on or prior to the Calculation Date shall be deemed to have occurred on the first day of the four-quarter reference period and Consolidated Cash Flow for such reference period shall be calculated without giving effect to clause (3) of the proviso set forth in the definition of Consolidated Net Income;

(2) the Consolidated Cash Flow attributable to discontinued operations, as determined in accordance with GAAP, and operations or businesses disposed of prior to the Calculation Date, shall be excluded; and

(3) the Fixed Charges attributable to discontinued operations, as determined in accordance with GAAP, and operations or businesses disposed of prior to the Calculation Date, shall be excluded, but only to the extent that the obligations giving rise to such Fixed Charges will not be obligations of the referent Person or any of its Restricted Subsidiaries following the Calculation Date.

"Foreign Subsidiary" means a Restricted Subsidiary of the Company that was not organized or existing under the laws of the United States, any state thereof, the District of Columbia or any territory thereof or has not guaranteed or otherwise provided credit support for any Indebtedness of the Company.

"GAAP" means generally accepted accounting principles set forth in the opinions and pronouncements of the Accounting Principles Board of the American Institute of Certified Public Accountants and statements and pronouncements of the Financial Accounting Standards Board or in such other statements by such other entity as have been approved by a significant segment of the accounting profession, which were in effect on April 30, 1997.

"Guarantee" means a guarantee (other than by endorsement of negotiable instruments for collection in the ordinary course of business), direct or indirect, in any manner (including, without limitation, letters of credit and reimbursement agreements in respect thereof), of all or any part of any Indebtedness.

"Guarantors" means each Subsidiary of the Company that executes a Subsidiary Guarantee in accordance with the provisions of the Indenture, and their respective successors and assigns.

"Hedging Obligations" means, with respect to any Person, the obligations of such Person under:

(1) currency exchange or interest rate swap agreements, interest rate cap agreements and currency exchange or interest rate collar agreements; and

(2) other agreements or arrangements designed to protect such Person against fluctuations in currency exchange rates or interest rates.

"Holdings" means L-3 Communications Holdings, Inc., a Delaware corporation.

"Indebtedness" means, with respect to any Person, any indebtedness of such Person, whether or not contingent, in respect of borrowed money or evidenced by bonds, notes, debentures or similar instruments or letters of credit (or reimbursement agreements in respect thereof) or banker's acceptances or representing Capital Lease Obligations or the balance deferred and unpaid of the purchase price of any property or representing any Hedging Obligations, except any such balance that constitutes an accrued expense or trade payable, if and to the extent any of the foregoing indebtedness (other than letters of credit and Hedging Obligations) would appear as a liability upon a balance sheet of such Person prepared in accordance with GAAP, as well as all indebtedness of others secured by a Lien on any asset of such Person (whether or not such indebtedness is assumed by such Person) and, to the extent not otherwise included, the Guarantee by such Person of any indebtedness of any other Person. The amount of any Indebtedness outstanding as of any date shall be:

(1) the accreted value thereof, in the case of any Indebtedness that does not require current payments of interest; and

(2) the principal amount thereof, together with any interest thereon that is more than 30 days past due, in the case of any other Indebtedness.

"Investments" means, with respect to any Person, all investments by such Person in other Persons (including Affiliates) in the forms of direct or indirect loans (including guarantees of Indebtedness or other obligations), advances or capital contributions (excluding commission, travel, moving and similar loans or advances to officers and employees made in the ordinary course of business), purchases or other acquisitions for consideration of Indebtedness, Equity Interests or other securities, together with all items that are or would be classified as investments on a balance sheet prepared in accordance with GAAP. If the Company or any Restricted Subsidiary of the Company sells or otherwise disposes of any Equity Interests of any direct or indirect Restricted Subsidiary of the Company such that, after giving effect to any such sale or disposition, such Person is no longer a Subsidiary of the Company, the Company shall be deemed to have made an Investment on the date of any such sale or disposition equal to the fair market value of the Equity Interests of such Subsidiary not sold or disposed of in an amount determined as provided in the last paragraph of the covenant described above under the caption "-- Restricted Payments."

"Issue Date" means May 21, 2003.

"Lehman Investor" means Lehman Brothers Holdings Inc. and any of its Affiliates.

"Lien" means, with respect to any asset, any mortgage, lien, pledge, charge, security interest or encumbrance of any kind in respect of such asset, whether or not filed, recorded or otherwise

perfected under applicable law (including any conditional sale or other title retention agreement, any lease in the nature thereof, any option or other agreement to sell or give a security interest in and any filing of or agreement to give any financing statement under the Uniform Commercial Code (or equivalent statutes) of any jurisdiction).

"Marketable Securities" means, with respect to any Asset Sale, any readily marketable equity securities that are:

(1) traded on The New York Stock Exchange, the American Stock Exchange or the Nasdaq National Market; and

(2) issued by a corporation having a total equity market capitalization of not less than $250.0 million;

provided that the excess of:

(a) the aggregate amount of securities of any one such corporation held by the Company and any Restricted Subsidiary; over

(b) ten times the average daily trading volume of such securities during the 20 immediately preceding trading days

shall be deemed not to be Marketable Securities; as determined on the date of the contract relating to such Asset Sale.

"May 1998 Indenture" means the indenture, dated as of May 22, 1998, between the Bank of New York, as trustee, and the Company, with respect to the May 1998 Notes.

"May 1998 Notes" means the $180,000,000 in aggregate principal amount of the Company's 8 1/2% Senior Subordinated notes due 2008, issued pursuant to the May 1998 Indenture on May 22, 1998.

"Moody's" means Moody's Investors Services, Inc.

"Net Income" means, with respect to any Person, the net income (loss) of such Person, determined in accordance with GAAP and before any reduction in respect of preferred stock dividends, excluding, however:

(1) any gain or loss, together with any related provision for taxes thereon, realized in connection with:

(a) any Asset Sale (including, without limitation, dispositions pursuant to sale and leaseback transactions); or

(b) the disposition of any securities by such Person or any of its Restricted Subsidiaries or the extinguishment of any Indebtedness of such Person or any of its Restricted Subsidiaries; and

(2) any extraordinary gain or loss, together with any related provision for taxes on such extraordinary gain or loss; and

(3) the cumulative effect of a change in accounting principles.

"Net Proceeds" means the aggregate cash proceeds received by the Company or any of its Subsidiaries in respect of any Asset Sale (including, without limitation, any cash received upon the sale or other disposition of any non-cash consideration received in any Asset Sale), net of the direct costs relating to such Asset Sale (including, without limitation, legal, accounting and investment banking fees, and sales commissions) and any relocation expenses incurred as a result thereof, taxes paid or payable as a result thereof (after taking into account any available tax credits or deductions and any tax sharing arrangements), amounts required to be applied to the repayment of Indebtedness secured by a Lien on the asset or assets that were the subject of such Asset Sale and any reserve for adjustment in respect of the sale price of such asset or assets established in accordance with GAAP.

"Non-Recourse Debt" means Indebtedness:

(1) as to which neither the Company nor any of its Restricted Subsidiaries:

(a) provides credit support of any kind (including any undertaking, agreement or instrument that would constitute Indebtedness);

(b) is directly or indirectly liable (as a guarantor or otherwise); or

(c) constitutes the lender;

(2) no default with respect to which (including any rights that the holders thereof may have to take enforcement action against an Unrestricted Subsidiary) would permit (upon notice, lapse of time or both) any holder of any other Indebtedness (other than Indebtedness incurred under Credit Facilities) of the Company or any of its Restricted Subsidiaries to declare a default on such other Indebtedness or cause the payment thereof to be accelerated or payable prior to its stated maturity; and

(3) as to which the lenders have been notified in writing that they will not have any recourse to the stock or assets of the Company or any of its Restricted Subsidiaries.

"Obligations" means any principal, premium (if any), Additional Amounts (if any), interest (including interest accruing on or after the filing of any petition in bankruptcy or for reorganization, whether or not a claim for post-filing interest is allowed in such proceeding), penalties, fees, charges, expenses, indemnifications, reimbursement obligations, damages, guarantees and other liabilities or amounts payable under the documentation governing any Indebtedness or in respect thereto.

"Permitted Investment" means:

(1) any Investment in the Company or in a Restricted Subsidiary of the Company that is a Guarantor;

(2) any Investment in cash or Cash Equivalents;

(3) any Investment by the Company or any Restricted Subsidiary of the Company in a Person, if as a result of such Investment:

(a) such Person becomes a Restricted Subsidiary of the Company and a Guarantor; or

(b) such Person is merged, consolidated or amalgamated with or into, or transfers or conveys substantially all of its assets to, or is liquidated into, the Company or a Restricted Subsidiary of the Company that is a Guarantor;

(4) any Restricted Investment made as a result of the receipt of non-cash consideration from an Asset Sale that was made pursuant to and in compliance with the covenant described above under the caption "-- Repurchase at the Option of Holders -- Asset Sales" or any disposition of assets not constituting an Asset sale;

(5) any acquisition of assets solely in exchange for the issuance of Equity Interests (other than Disqualified Stock) of the Company;

(6) advances to employees not to exceed $2.5 million at any one time outstanding;

(7) any Investment acquired in connection with or as a result of a workout or bankruptcy of a customer or supplier;

(8) Hedging Obligations permitted to be incurred under the covenant described above under the caption "-- Incurrence of Indebtedness and Issuance of Preferred Stock";

(9) any Investment in a Similar Business that is not a Restricted Subsidiary; provided that the aggregate fair market value of all Investments outstanding pursuant to this clause (9) (valued on the date each such Investment was made and without giving effect to subsequent changes in value) may not at any one time exceed 10% of the Consolidated Tangible Assets of the Company; and

(10) other Investments in any Person having an aggregate fair market value (measured on the date each such Investment was made and without giving effect to subsequent changes in value), when taken together with all other Investments made pursuant to this clause (10) that are at the time outstanding, not to exceed $30.0 million.

"Permitted Joint Venture" means any joint venture, partnership or other Person designated by the Board of Directors (until designation by the Board of Directors to the contrary); provided that:

(1) at least 25% of the Capital Stock thereof with voting power under ordinary circumstances to elect directors (or Persons having similar or corresponding powers and responsibilities) is at the time owned (beneficially or directly) by the Company and/or by one or more Restricted Subsidiaries of the Company; and

(2) such joint venture, partnership or other Person is engaged in a Similar Business. Any such designation or designation to the contrary shall be evidenced to the Trustee by promptly filing with the Trustee a copy of the resolution giving effect to such designation and an Officers' Certificate certifying that such designation complied with the foregoing provisions.

"Permitted Junior Securities" means Equity Interests in the Company or debt securities that are subordinated to all Senior Debt (and any debt securities issued in exchange for Senior Debt) to substantially the same extent as, or to a greater extent than, the Notes and the Subsidiary Guarantees are subordinated to Senior Debt under the Indenture.

"Permitted Liens" means:

(1) Liens securing Senior Debt of the Company or any Guarantor that was permitted by the terms of the Indenture to be incurred;

(2) Liens in favor of the Company or any Guarantor;

(3) Liens on property of a Person existing at the time such Person is merged into or consolidated with the Company or any Restricted Subsidiary of the Company; provided that such Liens were in existence prior to the contemplation of such merger or consolidation and do not extend to any assets other than those of the Person merged into or consolidated with the Company;

(4) Liens on property existing at the time of acquisition thereof by the Company or any Subsidiary of the Company, provided that such Liens were in existence prior to the contemplation of such acquisition and do not extend to any other assets of the Company or any of its Restricted Subsidiaries;

(5) Liens to secure the performance of statutory obligations, surety or appeal bonds, performance bonds or other obligations of a like nature incurred in the ordinary course of business;

(6) Liens to secure Indebtedness (including Capital Lease Obligations) permitted by clause (4) of the second paragraph of the covenant entitled "-- Incurrence of Indebtedness and Issuance of Preferred Stock" covering only the assets acquired with such Indebtedness;

(7) Liens existing on the Issue Date;

(8) Liens for taxes, assessments or governmental charges or claims that are not yet delinquent or that are being contested in good faith by appropriate proceedings promptly instituted and diligently concluded, provided that any reserve or other appropriate provision as shall be required in conformity with GAAP shall have been made therefor;

(9) Liens incurred in the ordinary course of business of the Company or any Restricted Subsidiary of the Company with respect to obligations that do not exceed $50.0 million at any one time outstanding;

(10) Liens on assets of Guarantors to secure Senior Debt of such Guarantors that was permitted by the Indenture to be incurred;

(11) Liens securing Permitted Refinancing Indebtedness, provided that any such Lien does not extend to or cover any property, shares or debt other than the property, shares or debt securing the Indebtedness so refunded, refinanced or extended;

(12) Liens incurred or deposits made to secure the performance of tenders, bids, leases, statutory obligations, surety and appeal bonds, government contracts, performance and return of money bonds and other obligations of a like nature, in each case incurred in the ordinary course of business (exclusive of obligations for the payment of borrowed money);

(13) Liens upon specific items of inventory or other goods and proceeds of any Person securing such Person's obligations in respect of bankers' acceptances issued or created for the account of such Person to facilitate the purchase, shipment or storage of such inventory or other goods in the ordinary course of business;

(14) Liens encumbering customary initial deposits and margin deposits, and other Liens incurred in the ordinary course of business that are within the general parameters customary in the industry, in each case securing Indebtedness under Hedging Obligations; and

(15) Liens encumbering deposits made in the ordinary course of business to secure nondelinquent obligations arising from statutory or regulatory, contractual or warranty requirements of the Company or its Subsidiaries for which a reserve or other appropriate provision, if any, as shall be required by GAAP shall have been made.

"Permitted Refinancing Indebtedness" means any Indebtedness of the Company or any of its Subsidiaries issued in exchange for, or the net proceeds of which are used to extend, refinance, renew, replace, defease or refund other Indebtedness of the Company or any of its Restricted Subsidiaries; provided that:

(1) the principal amount (or accreted value, if applicable) of such Permitted Refinancing Indebtedness does not exceed the principal amount of (or accreted value, if applicable), plus accrued interest on, the Indebtedness so extended, refinanced, renewed, replaced, defeased or refunded (plus the amount of reasonable expenses and prepayment premiums incurred in connection therewith);

(2) such Permitted Refinancing Indebtedness has a final maturity date no earlier than the final maturity date of, and has a Weighted Average Life to Maturity equal to or greater than the Weighted Average Life to Maturity of, the Indebtedness being extended, refinanced, renewed, replaced, defeased or refunded;

(3) if the Indebtedness being extended, refinanced, renewed, replaced, defeased or refunded is subordinated in right of payment to the Notes, such Permitted Refinancing Indebtedness is subordinated in right of payment to the Notes on terms at least as favorable to the Holders of Notes as those contained in the documentation governing the Indebtedness being extended, refinanced, renewed, replaced, defeased or refunded; and

(4) such Indebtedness is incurred either by the Company or by the Restricted Subsidiary who is the obligor on the Indebtedness being extended, refinanced, renewed, replaced, defeased or refunded.

"Permitted Securities" means, with respect to any Asset Sale, Voting Stock of a Person primarily engaged in one or more Similar Businesses; provided that after giving effect to the Asset Sale such Person shall become a Restricted Subsidiary and, unless the Asset Sale relates to a Foreign Subsidiary, a Guarantor.

"Principals" means any Lehman Investor, Frank C. Lanza and Robert V. LaPenta.

"Related Party" with respect to any Principal means:

(1) any controlling stockholder, 50% (or more) owned Subsidiary, or spouse or immediate family member (in the case of an individual) of such Principal; or

(2) any trust, corporation, partnership or other entity, the beneficiaries, stockholders, partners, owners or Persons beneficially holding a more than 50% controlling interest of which consist of such Principal and/or such other Persons referred to in the immediately preceding clause (1).

"Representative" means the indenture trustee or other trustee, agent or representative for any Senior Debt.

"Restricted Investment" means an Investment other than a Permitted Investment.

"Restricted Subsidiary" means, with respect to any Person, each Subsidiary of such Person that is not an Unrestricted Subsidiary.

"Senior Credit Facilities" means the Second Amended and Restated 364 Day Credit Agreement, dated as of May 16, 2001, as in effect on the date of the Indenture among the Company, the lenders party thereto, Banc of America, N.A., as administrative agent, and Lehman Commercial Paper Inc., as syndication agent and documentation agent, and the Third Amended and Restated Credit Agreement, dated as of May 16, 2001, as in effect on the date of the Indenture among the Company, the lenders party thereto, Banc of America, N.A., as administrative agent, and Lehman Commercial Paper Inc., as syndication agent and documentation agent, and any related notes, collateral documents, letters of credit and guarantees, including any appendices, exhibits or schedules to any of the foregoing (as the same may be in effect from time to time), in each case, as such agreements may be amended, modified, supplemented or restated from time to time, or refunded, refinanced, restructured, replaced, renewed, repaid or extended from time to time (whether with the original agents and lenders or other agents and lenders or otherwise, and whether provided under the original credit agreement or other credit agreements or otherwise).

"Senior Debt" means:

(1) all Indebtedness of the Company or any of its Restricted Subsidiaries outstanding under Credit Facilities and all Hedging Obligations with respect thereto;

(2) any other Indebtedness permitted to be incurred by the Company or any of its Restricted Subsidiaries under the terms of the Indenture, unless the instrument under which such Indebtedness is incurred expressly provides that it is on a parity with or subordinated in right of payment to the Notes; and

(3) all Obligations with respect to the foregoing.

Notwithstanding anything to the contrary in the foregoing, Senior Debt will not include:

(1) any liability for federal, state, local or other taxes owed or owing by the Company;

(2) any Indebtedness of the Company to any of its Subsidiaries or other Affiliates;

(3) any trade payables; or

(4) any Indebtedness that is incurred in violation of the Indenture. The May 1998 Notes, the December 1998 Notes, the 2000 Convertible Notes, the 2001 CODES and the 2002 Notes will be pari passu with the Notes and will not constitute Senior Debt.

"Significant Subsidiary" means any Subsidiary which is a "significant subsidiary" within the meaning of Rule 405 under the Securities Act.

"Similar Business" means a business, a majority of whose revenues in the most recently ended calendar year were derived from:

(1) the sale of defense products, electronics, communications systems, aerospace products, avionics products and/or communications products;

(2) any services related thereto;

(3) any business or activity that is reasonably similar thereto or a reasonable extension, development or expansion thereof or ancillary thereto; and

(4) any combination of any of the foregoing.

"Stated Maturity" means, with respect to any installment of interest or principal on any series of Indebtedness, the date on which such payment of interest or principal was scheduled to be paid in the

original documentation governing such Indebtedness, and shall not include any contingent obligations to repay, redeem or repurchase any such interest or principal prior to the date originally scheduled for the payment thereof.

"Subsidiary" means, with respect to any Person:

(1) any corporation, association or other business entity of which more than 50% of the total voting power of shares of Capital Stock entitled (without regard to the occurrence of any contingency) to vote in the election of directors, managers or trustees thereof is at the time owned or controlled, directly or indirectly, by such Person or one or more of the other Subsidiaries of that Person (or a combination thereof); and

(2) any partnership (A) the sole general partner or the managing general partner of which is such Person or a Subsidiary of such Person or (B) the only general partners of which are such Person or of one or more Subsidiaries of such Person (or any combination thereof).

"S&P" means Standard and Poor's Corporation.

"Transaction Documents" means the Indenture, the Notes, the Purchase Agreement and the Registration Rights Agreement.

"Unrestricted Subsidiary" means any Subsidiary that is designated by the Board of Directors as an Unrestricted Subsidiary pursuant to a board resolution, but only to the extent that such Subsidiary:

(1) has no Indebtedness other than Non-Recourse Debt;

(2) is not party to any agreement, contract, arrangement or understanding with the Company or any Restricted Subsidiary of the Company unless the terms of any such agreement, contract, arrangement or understanding are no less favorable to the Company or such Restricted Subsidiary than those that might be obtained at the time from Persons who are not Affiliates of the Company;

(3) is a Person with respect to which neither the Company nor any of its Restricted Subsidiaries has any direct or indirect obligation:

(a) to subscribe for additional Equity Interests; or

(b) to maintain or preserve such Person's financial condition or to cause such Person to achieve any specified levels of operating results;

(4) has not guaranteed or otherwise directly or indirectly provided credit support for any Indebtedness of the Company or any of its Restricted Subsidiaries; and

(5) has at least one director on its board of directors that is not a director or executive officer of the Company or any of its Restricted Subsidiaries.

Any such designation by the Board of Directors shall be evidenced to the Trustee by filing with the Trustee a certified copy of the Board Resolution giving effect to such designation and an Officers' Certificate certifying that such designation complied with the foregoing conditions and was permitted by the covenant described above under the caption "-- Certain Covenants -- Restricted Payments." If, at any time, any Unrestricted Subsidiary would fail to meet the foregoing requirements as an Unrestricted Subsidiary, it shall thereafter cease to be an Unrestricted Subsidiary for purposes of the Indenture and any Indebtedness of such Subsidiary shall be deemed to be incurred by a Restricted Subsidiary of the Company as of such date (and, if such Indebtedness is not permitted to be incurred as of such date under the covenant described under the caption "-- Certain Covenants -- Incurrence of Indebtedness and Issuance of Preferred Stock", the Company shall be in default of such covenant).

The Board of Directors of the Company may at any time designate any Unrestricted Subsidiary to be a Restricted Subsidiary; provided that such designation shall be deemed to be an incurrence of Indebtedness by a Restricted Subsidiary of the Company of any outstanding Indebtedness of such Unrestricted Subsidiary and such designation shall only be permitted if:

(1) such Indebtedness is permitted under the covenant described under the caption "-- Certain Covenants -- Incurrence of Indebtedness and Issuance of Preferred Stock," calculated on a pro forma basis as if such designation had occurred at the beginning of the four-quarter reference period; and

(2) no Default or Event of Default would be in existence following such designation.

"Voting Stock" of any Person as of any date means the Capital Stock of such Person that is at the time entitled to vote in the election of the Board of Directors of such Person.

"Weighted Average Life to Maturity" means, when applied to any Indebtedness at any date, the number of years obtained by dividing:

(1) the sum of the products obtained by multiplying (A) the amount of each then remaining installment, sinking fund, serial maturity or other required payments of principal, including payment at final maturity, in respect thereof, by (B) the number of years (calculated to the nearest one-twelfth) that will elapse between such date and the making of such payment; by

(2) the then outstanding principal amount of such Indebtedness.

"Wholly Owned" means, when used with respect to any Subsidiary or Restricted Subsidiary of a Person, a Subsidiary (or Restricted Subsidiary, as appropriate) of such Person all of the outstanding Capital Stock or other ownership interests of which (other than directors' qualifying shares) shall at the time be owned by such Person or by one or more Wholly Owned Subsidiaries (or Wholly Owned Restricted Subsidiaries, as appropriate) of such Person and one or more Wholly Owned Subsidiaries (or Wholly Owned Restricted Subsidiaries, as appropriate) of such Person.

CERTAIN UNITED STATES FEDERAL INCOME TAX CONSIDERATIONS

EXCHANGE OF NOTES

The exchange of outstanding notes for exchange notes in the exchange offer will not constitute a taxable event to holders for United States federal income tax purposes. Consequently, no gain or loss will be recognized by a holder upon receipt of an exchange note, the holding period of the exchange note will include the holding period of the outstanding note exchanged therefor and the basis of the exchange note will be the same as the basis of the outstanding note immediately before the exchange.

IN ANY EVENT, PERSONS CONSIDERING THE EXCHANGE OF OUTSTANDING NOTES FOR EXCHANGE NOTES SHOULD CONSULT THEIR OWN TAX ADVISORS CONCERNING THE UNITED STATES FEDERAL INCOME TAX CONSEQUENCES IN LIGHT OF THEIR PARTICULAR SITUATIONS AS WELL AS ANY CONSEQUENCES ARISING UNDER THE LAWS OF ANY OTHER TAXING JURISDICTION.

The following is a summary of certain United States federal income tax consequences as of the date of this prospectus regarding the purchase, ownership and disposition of the exchange notes. Except where noted, this summary deals only with exchange notes that are held as capital assets by a non-United States holder.

A "non-United States holder" means a holder of exchange notes that is not any of the following for U.S. federal income tax purposes:

- a citizen or resident of the United States;
- a corporation or partnership created or organized in or under the laws of the United States or any political subdivision thereof;
- an estate the income of which is subject to United States federal income taxation regardless of its source; or
- a trust if it (1) is subject to the primary supervision of a court within the United States and one or more United States persons have the authority to control all of its substantial decisions, or (2) has a valid election in effect under applicable United States Treasury regulations to be treated as a United States person.

This summary is based upon provisions of the Internal Revenue Code of 1986, as amended (the "Code"), and regulations, rulings and judicial decisions as of the date of this prospectus. Those authorities may be changed, perhaps retroactively, so as to result in United States federal income tax consequences different from those summarized below. This summary does not represent a detailed description of the federal income tax consequences to you in light of your particular circumstances. In addition, it does not represent a detailed description of the United States federal income tax consequences applicable to you if you are subject to special treatment under the United States federal income tax laws (including if you are a United States expatriate, "controlled foreign corporation," "passive foreign investment company" or "foreign personal holding company"). We cannot assure you that a change in law will not alter significantly the tax considerations that we describe in this summary.

If a partnership holds our exchange notes, the tax treatment of a partner will generally depend upon the status of the partner and the activities of the partnership. If you are a partner of a partnership holding our exchange notes, you should consult your tax advisors.

YOU SHOULD CONSULT YOUR OWN TAX ADVISORS CONCERNING THE UNITED STATES FEDERAL INCOME TAX AND ESTATE TAX CONSEQUENCES TO YOU IN LIGHT OF YOUR PARTICULAR SITUATION, AS WELL AS THE CONSEQUENCES TO YOU ARISING UNDER THE LAWS OF ANY OTHER TAXING JURISDICTION.

UNITED STATES FEDERAL WITHHOLDING TAX

The 30% United States federal withholding tax will not apply to any payment of principal or interest on the exchange notes under the "portfolio interest rule," provided that:

- interest paid on the note is not effectively connected with your conduct of a trade or business in the United States;
- you do not actually or constructively own 10% or more of the total combined voting power of all classes of our voting stock within the meaning of the Code and applicable United States Treasury regulations;
- you are not a controlled foreign corporation that is related to us through stock ownership;
- you are not a bank whose receipt of interest on the exchange notes is described in Section 881(c)(3)(A) of the Code; and
- either (a) you provide your name and address on an IRS Form W-8BEN (or other applicable form), and certify, under penalties of perjury, that you are not a United States person or (b) you hold your exchange notes through certain foreign intermediaries and satisfy the certification requirements of applicable United States Treasury regulations.

Special certification rules apply to certain non-United States holders that are entities rather than individuals.

If you cannot satisfy the requirements described above, payments of premium, if any, and interest made to you will be subject to the 30% United States federal withholding tax, unless you provide us with a properly executed:

- IRS Form W-8BEN (or other applicable form) claiming an exemption from, or reduction in, withholding under the benefit of an applicable income tax treaty; or
- IRS Form W-8ECI (or successor form) stating that interest paid on the exchange notes is not subject to withholding tax because it is effectively connected with your conduct of a trade or business in the United States (as discussed below under "--United States Federal Income Tax").

The 30% United States federal withholding tax generally will not apply to any gain that you realize on the sale, exchange, retirement or other disposition of exchange notes.

UNITED STATES FEDERAL INCOME TAX

If you are engaged in a trade or business in the United States and premium, if any, or interest on the exchange notes is effectively connected with the conduct of that trade or business, you will be subject to United States federal income tax on that premium or interest on a net income basis (although exempt from the 30% withholding tax, provided certain certification and disclosure requirements discussed above under "--United States Federal Withholding Tax" are satisfied), in the same manner as if you were a United States person, as defined under the Code. In addition, if you are a foreign corporation, you may be subject to a branch profits tax equal to 30% (or lower applicable income tax treaty rate) of your effectively connected earnings and profits for the taxable year, subject to adjustments.

Any gain realized on the disposition of the exchange notes generally will not be subject to United States federal income tax unless:

- the gain is effectively connected with your conduct of a trade or business in the United States; or
- you are an individual who is present in the United States for 183 days or more in the taxable year of that disposition, and certain other conditions are met.

UNITED STATES FEDERAL ESTATE TAX

Your estate will not be subject to United States federal estate tax on exchange notes beneficially owned by you at the time of your death provided that any payment to you on the exchange notes would be eligible for exemption from the 30% withholding tax under the "portfolio interest rule" described under "--United States Federal Withholding Tax" without regard to the fifth bullet point.

INFORMATION REPORTING AND BACKUP WITHHOLDING

Information reporting will generally apply to payments of interest on the exchange notes and the amount of tax, if any, withheld with respect to such payments. Copies of the information returns reporting such interest payments and any withholding may also be made available to the tax authorities in the country in which you reside under the provisions of an applicable income tax treaty.

In general, no backup withholding will be required with respect to payments if a statement described in the fifth bullet point under "--United States Federal Withholding Tax" has been received (and the payor does not have actual knowledge or reason to know that you are a United States person).

In addition, information reporting and, depending on the circumstances, backup withholding, will apply to the proceeds of the sale of a note within the United States or conducted through United States-related financial intermediaries unless the statement described in the fifth bullet point under "--United States Federal Withholding Tax" has been received (and the payor does not have actual knowledge or reason to know that you are a United States person) or you otherwise establish an exemption.

Any amounts withheld under the backup withholding rules will be allowed as a refund or a credit against your United States federal income tax liability provided the required information is furnished to the Internal Revenue Service.

PLAN OF DISTRIBUTION

Each broker-dealer that receives exchange notes for its own account pursuant to the exchange offer must acknowledge that it will deliver a prospectus in connection with any resale of the exchange notes. This prospectus, as it may be amended or supplemented from time to time, may be used by a broker-dealer in connection with resales of exchange notes received in exchange for outstanding notes where the outstanding notes were acquired as a result of market-making activities or other trading

activities. To the extent any such broker-dealer participates in the exchange offer and so notifies L-3, or causes L-3 to be so notified in writing, L-3 has agreed that for a period of 180 days after the date of this prospectus, it will make this prospectus, as amended or supplemented, available to such broker-dealer for use in connection with any such resale, and will promptly send additional copies of this prospectus and any amendment or supplement to this prospectus to any broker-dealer that requests such documents in the letter of transmittal.

We will not receive any proceeds from any sale of exchange notes by broker-dealers. Exchange notes received by broker-dealers for their own accounts pursuant to the exchange offer may be sold from time to time in one or more transactions in the over-the-counter market, in negotiated transactions, through the writing of options on the exchange notes or a combination of these methods of resale, at market prices prevailing at the time of resale, at prices related to the prevailing market prices or negotiated prices. Any resale may be made directly to purchasers or to or through brokers or dealers who may receive compensation in the form of commissions or concessions from any broker-dealer or the purchasers of any exchange notes. Any broker-dealer that resells exchange notes that were received by it for its own account pursuant to the exchange offer and any broker or dealer that participates in a distribution of the exchange notes may be deemed to be an "underwriter" within the meaning of the Securities Act and any profit on any resale of exchange notes and any commissions or concessions received by these persons may be deemed to be underwriting compensation under the Securities Act. The letter of transmittal states that by acknowledging that it will deliver and by delivering a prospectus, a broker-dealer will not be deemed to admit that it is an "underwriter" within the meaning of the Securities Act.

We have agreed to pay all expenses incident to the exchange offer, including the expenses of one counsel for the holders of the outstanding notes, other than commissions or concessions of any brokers or dealers and will indemnify the holders of outstanding notes, including any broker-dealers, against certain liabilities, including liabilities under the Securities Act.

By its acceptance of the exchange offer, any broker-dealer that receives exchange notes pursuant to the exchange offer hereby agrees to notify L-3 prior to using the prospectus in connection with the sale or transfer of exchange notes, and acknowledges and agrees that, upon receipt of notice from L-3 of the happening of any event which makes any statement in this prospectus untrue in any material respect or which requires the making of any changes in this prospectus in order to make the statements therein not misleading or which may impose upon L-3 disclosure obligations that may have a material adverse effect on L-3 (which notice L-3 agrees to deliver promptly to such broker-dealer) such broker-dealer will suspend use of this prospectus until L-3 has notified such broker-dealer that delivery of this prospectus may resume and has furnished copies of any amendment or supplement to this prospectus to such broker-dealer.

LEGAL MATTERS

The validity of the exchange notes offered by this prospectus will be passed upon for us by Simpson Thacher & Bartlett LLP, New York, New York.

EXPERTS

Our consolidated financial statements as of December 31, 2002 and 2001, and for the three years ended December 31, 2002 included in this prospectus have been so included in reliance on the report of PricewaterhouseCoopers LLP, independent auditors, given on the authority of said firm as experts in auditing and accounting.

INDEX TO FINANCIAL STATEMENTS

L-3 COMMUNICATIONS HOLDINGS, INC. AND L-3 COMMUNICATIONS CORPORATION

L-3 COMMUNICATIONS HOLDINGS, INC. AND L-3 COMMUNICATIONS CORPORATION

UNAUDITED CONDENSED CONSOLIDATED FINANCIAL STATEMENTS AS OF MARCH 31, 2003 AND DECEMBER 31, 2002 AND FOR THE THREE MONTHS ENDED MARCH 31, 2003 AND 2002

L-3 COMMUNICATIONS HOLDINGS, INC.
AND L-3 COMMUNICATIONS CORPORATION

UNAUDITED CONDENSED CONSOLIDATED BALANCE SHEETS

(IN THOUSANDS, EXCEPT PER SHARE DATA)

	MARCH 31, 2003	DECEMBER 31, 2002
ASSETS		
Current assets:		
Cash and cash equivalents	$ 34,392	$ 134,856
Contracts in process	1,340,865	1,317,993
Deferred income taxes	138,162	143,634
Other current assets	40,202	42,891
Total current assets	1,553,621	1,639,374
Property, plant and equipment, net	467,699	458,639
Goodwill	2,960,318	2,794,548
Intangible assets	88,679	90,147
Deferred income taxes	137,316	147,190
Deferred debt issue costs	47,461	48,839
Other assets	65,689	63,571
Total assets	$5,320,783	$5,242,308
LIABILITIES AND SHAREHOLDERS' EQUITY		
Current liabilities:		
Accounts payable, trade	$ 157,020	$ 167,240
Accrued employment costs	203,953	187,754
Accrued expenses	57,964	56,763
Customer advances	54,299	71,751
Accrued interest	34,168	20,509
Income taxes	36,584	33,729
Other current liabilities	155,770	158,893
Total current liabilities	699,758	696,639
Pension and postretirement benefits	355,585	343,527
Other liabilities	78,136	78,947
Long-term debt	1,843,742	1,847,752
Total liabilities	2,977,221	2,966,865
Commitments and contingencies		
Minority interest	73,525	73,241
Shareholders' equity:		
L-3 Holdings' common stock $.01 par value; authorized 300,000,000 shares, issued and outstanding 95,465,910 and 94,577,331 shares (L-3 Communications common stock: $.01 par value, 100 shares authorized, issued and outstanding)	1,815,537	1,794,976
Retained earnings	529,564	479,827
Unearned compensation	(6,383)	(3,302)
Accumulated other comprehensive loss	(68,681)	(69,299)
Total shareholders' equity	2,270,037	2,202,202
Total liabilities and shareholders' equity	$5,320,783	$5,242,308

See notes to unaudited condensed consolidated financial statements.

L-3 COMMUNICATIONS HOLDINGS, INC.
AND L-3 COMMUNICATIONS CORPORATION

UNAUDITED CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS

(IN THOUSANDS, EXCEPT PER SHARE DATA)

	THREE MONTHS ENDED MARCH 31,	
	2003	2002
Sales:		
Contracts, primarily U.S. Government	$ 964,796	$ 618,604
Commercial, primarily products	124,251	78,236
Total sales	1,089,047	696,840
Costs and expenses:		
Contracts, primarily U.S. Government	858,620	546,587
Commercial, primarily products:		
Cost of sales	80,975	43,528
Selling, general and administrative expenses	31,768	25,527
Research and development expenses	8,847	9,891
Total costs and expenses	980,210	625,533
Operating income	108,837	71,307
Interest and other income	1,377	1,027
Interest expense	32,216	26,093
Minority interest	284	988
Income before income taxes and cumulative effect of a change in accounting principle	77,714	45,253
Provision for income taxes	27,977	15,974
Income before cumulative effect of a change in accounting principle	49,737	29,279
Cumulative effect of a change in accounting principle, net of income taxes of $6,428	--	(24,370)
Net income	$ 49,737	$ 4,909
L-3 Holdings' earnings per common share:		
Basic:		
Income before accounting change	$ 0.52	$ 0.37
Accounting change	--	(0.31)
Net income	$ 0.52	$ 0.06
Diluted:		
Income before accounting change	$ 0.50	$ 0.36
Accounting change	--	(0.30)
Net income	$ 0.50	$ 0.06
L-3 Holdings' weighted average common shares outstanding:		
Basic	95,137	78,900
Diluted	105,026	82,354

See notes to unaudited condensed consolidated financial statements.

L-3 COMMUNICATIONS HOLDINGS, INC.
AND L-3 COMMUNICATIONS CORPORATION

UNAUDITED CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS

(IN THOUSANDS)

	THREE MONTHS ENDED MARCH 31,	
	2003	2002
OPERATING ACTIVITIES:		
Net income	$ 49,737	$ 4,909
Adjustments to reconcile net income to net cash from operating activities:		
Cumulative effect of a change in accounting principle	--	24,370
Depreciation	18,415	12,860
Amortization of intangibles and other assets	4,364	2,347
Amortization of deferred debt issue costs (included in interest expense)	2,019	1,747
Deferred income tax provision	18,687	12,447
Minority interest	284	988
Other non-cash items, principally contributions to employee savings plans in L-3 Holdings' common stock	6,496	6,644
Changes in operating assets and liabilities, excluding acquired amounts:		
Contracts in process	(6,212)	(65,378)
Other current assets	(3,105)	(1,778)
Other assets	(1,969)	(3,651)
Accounts payable	(16,099)	28,503
Customer advances	(17,467)	(8,115)
Accrued interest	13,659	11,101
Accrued expenses and other current liabilities	21,162	9,823
Pension and postretirement benefits and other liabilities	12,556	5,238
All other operating activities, principally foreign currency translation	3,599	(663)
Total adjustments	56,389	36,483
Net cash from operating activities	106,126	41,392
INVESTING ACTIVITIES:		
Acquisition of businesses, net of cash acquired	(197,421)	(1,201,547)
Capital expenditures	(16,499)	(10,358)
Disposition of property, plant and equipment	496	85
Other investing activities	--	(387)
Net cash used in investing activities	(213,424)	(1,212,207)
FINANCING ACTIVITIES:		
Borrowings under revolving credit facilities	--	441,000
Repayment of borrowings under revolving credit facilities	--	(91,000)
Borrowings under bridge loan facility	--	500,000
Debt issuance costs	(641)	(1,281)
Proceeds from exercise of stock options	2,793	10,103
Distributions paid to minority interest	--	(287)
Other financing activities	4,682	(2,737)
Net cash from financing activities	6,834	855,798
Net decrease in cash	(100,464)	(315,017)
Cash and cash equivalents, beginning of the period	134,856	361,022
Cash and cash equivalents, end of the period	$ 34,392	$ 46,005

See notes to unaudited condensed consolidated financial statements.

1. DESCRIPTION OF BUSINESS

L-3 Communications Holdings, Inc. conducts its operations and derives all its operating income and cash flow through its wholly owned subsidiary, L-3 Communications Corporation ("L-3 Communications"). L-3 Communications Holdings, Inc. ("L-3 Holdings" and together with its subsidiaries, "L-3" or "the Company") is a merchant supplier of secure communications and intelligence, surveillance and reconnaissance (ISR) systems, training, simulation and support services, aviation products and aircraft modernization, as well as specialized products. The Company's customers include the U.S. Department of Defense (DoD) and prime contractors thereof, certain U.S. Government intelligence agencies, major aerospace and defense contractors, foreign governments, commercial customers and certain other U.S. federal, state and local government agencies. The Company has the following four reportable segments: (1) Secure Communications & ISR; (2) Training, Simulation & Support Services; (3) Aviation Products & Aircraft Modernization; and (4) Specialized Products.

Secure Communications & ISR. The businesses in this segment provide products and services for the global ISR market, specializing in signals intelligence (SIGINT) and communications intelligence (COMINT) systems. These products and services provide to the warfighter in real-time the unique ability to collect and analyze unknown electronic signals from command centers, communication nodes and air defense systems for real-time situation awareness and response. This segment also provides secure, high data rate communications systems for military and other U.S. Government and foreign government reconnaissance and surveillance applications. These systems and products are critical elements of virtually all major communication, command and control, intelligence gathering and space systems. The Company's systems and products are used to connect a variety of airborne, space, ground and sea-based communication systems and are used in the transmission, processing, recording, monitoring and dissemination functions of these communication systems. The major secure communications programs and systems include:

- secure data links for airborne, satellite, ground and sea-based remote platforms for real-time information collection and dissemination to users;
- highly specialized fleet management and support, including procurement, systems integration, sensor development, modifications and maintenance for signals intelligence and ISR special mission aircraft and airborne surveillance systems;
- strategic and tactical signals intelligence systems that detect, collect, identify, analyze and disseminate information;
- secure telephone and network equipment and encryption management; and
- communication systems for surface and undersea vessels and manned space flights.

Training, Simulation & Support Services. The businesses in this segment provide a full range of training, simulation and support services, including:

- services designed to meet customer training requirements for aircrews, navigators, mission operators, gunners and maintenance technicians for virtually any platform, including military fixed and rotary wing aircraft, air vehicles and various ground vehicles;
- communication software support, information services and a wide range of engineering development services and integration support;
- high-end engineering and information support services used for command, control, communications and ISR architectures, as well as for air warfare modeling and simulation tools for

applications used by the DoD, Department of Homeland Security and U.S. Government intelligence agencies, including missile and space systems, Unmanned Aerial Vehicles (UAVs) and military aircraft;

- developing and managing extensive programs in the United States and internationally that focus on teaching, training and education, logistics, strategic planning, organizational design, democracy transition and leadership development;
- producing crisis management software and providing command and control for homeland security applications; and
- design, prototype development and production of ballistic missile targets for missile defense applications, including present and future threat scenarios.

Aviation Products & Aircraft Modernization. The businesses in this segment provide aviation products and aircraft modernization services, including:

- airborne traffic and collision avoidance systems (TCAS) for commercial and military applications;
- commercial, solid-state, crash-protected cockpit voice recorders, flight data recorders and maritime hardened voyage recorders;
- ruggedized custom displays for military and high-end commercial applications;
- turnkey aviation life cycle management services that integrate custom developed and commercial off-the-shelf products for various military and commercial wide-body and rotary wing aircraft, including heavy maintenance and structural modifications and Head-of-State and commercial interior completions; and
- engineering, modification, maintenance, logistics and upgrades for U.S. Special Operations Command aircraft, vehicles and personnel equipment.

Specialized Products. The businesses in this segment supply products, including components, subsystems and systems, to military and commercial customers in several niche markets. These products include:

- ocean products, including acoustic undersea warfare products for mine hunting, dipping and anti-submarine sonars and naval power distribution, conditioning, switching and protection equipment for surface and undersea platforms;
- ruggedization and integration of commercial off-the-shelf technology for displays, computers and electronic systems for military and commercial applications;
- integrated video security and surveillance systems that provide perimeter security used by the U.S. Immigration and Naturalization Service and U.S. Border Patrol to monitor and protect U.S. borders;
- security systems for aviation, port and border applications to detect explosives, concealed weapons, contraband and illegal narcotics, to inspect agricultural products and to examine cargo;
- telemetry, instrumentation, space and navigation products, including tracking and flight termination;
- premium fuzing products;

- microwave components used in radar communication satellites, wireless communication equipment, electronic surveillance, communication and electronic warfare applications and countermeasure systems;

- high performance antennas and ground based radomes;

- training devices and motion simulators which produce advanced virtual reality simulation and high-fidelity representations of cockpits and mission stations for fixed and rotary wing aircraft and land vehicles; and

- precision stabilized electro-optic surveillance systems, including high magnification lowlight, daylight and forward looking infrared sensors, laser range finders, illuminators and designators, and digital and wireless communication systems.

2. BASIS OF PRESENTATION

These unaudited condensed consolidated financial statements should be read in conjunction with the Consolidated Financial Statements of L-3 Holdings and L-3 Communications for the fiscal year ended December 31, 2002, included in their Annual Report on Form 10-K for the fiscal year ended December 31, 2002.

The unaudited condensed consolidated financial statements comprise the unaudited condensed consolidated financial statements of L-3 Holdings and L-3 Communications. L-3 Holdings' only asset is its investment in the common stock of L-3 Communications, its wholly-owned subsidiary, and its only obligations are its 5 1/4% Convertible Senior Subordinated Notes due 2009 and its 4% Senior Subordinated Convertible Contingent Debt Securities due 2011 (CODES). L-3 Holdings has also guaranteed the borrowings under the senior credit facilities of L-3 Communications. L-3 Holdings' obligations have been jointly, severally, fully and unconditionally guaranteed by L-3 Communications and certain of its domestic subsidiaries, and accordingly, such debt has been reflected as debt of L-3 Communications in its unaudited condensed consolidated financial statements in accordance with the U.S. Securities and Exchange Commission's (SEC) Staff Accounting Bulletin (SAB) No. 54. In addition, all issuances of equity securities including grants of stock options and restricted stock by L-3 Holdings to employees of L-3 Communications have been reflected in the unaudited condensed consolidated financial statements of L-3 Communications. As a result, the unaudited condensed consolidated financial positions, results of operations and cash flows of L-3 Holdings and L-3 Communications are substantially the same. See Note 14 for additional information.

The Company presents its sales and cost and expenses in two categories in the statement of operations, "Contracts, primarily U.S. Government" and "Commercial, primarily products", which are based on how the Company recognizes revenue. Sales and costs and expenses for the Company's businesses that are primarily U.S. Government contractors are presented as "Contracts, primarily U.S. Government." The sales for the Company's U.S. Government contractor businesses are transacted using written contractual arrangements or contracts, most of which require the Company to design, develop, manufacture and/or modify complex products, and/or perform related services according to specifications provided by the customer. These contracts are within the scope of the American Institute of Certified Public Accountants Statement of Position 81-1, Accounting for Performance of Construction-Type and certain Production-Type Contracts (SOP 81-1) and Accounting Research Bulletin No. 43, Chapter 11, Section A, Government Contracts, Cost-Plus-Fixed Fee Contracts (ARB 43). Sales reported under "Contracts, primarily U.S. Government" also include certain sales by the Company's U.S. Government contractor businesses transacted using contracts for domestic and foreign commercial customers which also are within the scope of SOP 81-1. Sales and costs and expenses for the Company's businesses whose

customers are primarily commercial customers are presented as "Commercial, primarily products". These sales to commercial customers are not within the scope of SOP 81-1 or ARB 43, and are recognized in accordance with the SEC's SAB No. 101, Revenue Recognition in Financial Statements. The Company's commercial businesses are substantially comprised of Aviation Communication & Surveillance Systems (ACSS), Aviation Recorders, Microwave components, Detection Systems business acquired from PerkinElmer, Inc., Satellite Networks, and PrimeWave Communications.

The unaudited condensed consolidated financial statements have been prepared in accordance with generally accepted accounting principles in the United States of America for interim financial information and with the instructions to Form 10-Q and Article 10 of Regulation S-X of the SEC. Accordingly, they do not include all of the information and notes required by generally accepted accounting principles in the United States of America for a complete set of financial statements. In the opinion of management, all adjustments (consisting of normal recurring accruals) considered necessary for a fair presentation of the results for the interim periods presented have been included. The results of operations for the interim periods are not necessarily indicative of results for the full year.

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of sales and costs and expenses during the reporting period. The most significant of these estimates and assumptions relate to estimates of total contract revenue and total costs at completion for contracts in process; estimated costs in excess of billings to complete contracts in process in a loss position; market values for inventories reported at lower of cost or market; pension and postretirement benefit obligations; recoverability and valuation of recorded amounts of long-lived assets and intangible assets, including goodwill; income taxes; litigation reserves; and environmental obligations. Changes in estimates are reflected in the periods during which they become known. Actual results will differ from these estimates.

Certain reclassifications have been made to conform prior period amounts to the current period presentation.

3. STOCK-BASED COMPENSATION

The Company accounts for employee stock-based compensation under the recognition and measurement principles of Accounting Principles Board (APB) Opinion No. 25, Accounting for Stock Issued to Employees. Compensation expense for employee stock-based compensation is recognized in income based on the excess, if any, of L-3 Holdings' fair value of the stock at the grant date of the award or other measurement date over the amount an employee must pay to acquire the stock. When the exercise price for stock-based compensation arrangements granted to employees equals or exceeds the fair value of the L-3 Holdings common stock at the date of grant, the Company does not recognize compensation expense. The Company elected not to adopt the fair value based method of accounting for stock-based employee compensation as permitted by the Financial Accounting Standards Board's (FASB) Statement of Financial Accounting Standards (SFAS) No. 123, Accounting for Stock-Based Compensation (SFAS 123), as amended by SFAS No. 148, Accounting for Stock-Based Compensation--Transition and Disclosure--an amendment of SFAS No. 123. Had the Company adopted the fair value based method provisions of SFAS 123, it would have recorded a non-cash expense for the estimated fair value of the stock-based compensation arrangements that the Company has granted to its employees. The table below compares the "as reported" net income and L-3 Holdings earnings per share (EPS) to the "pro forma" net income and L-3 Holdings EPS that the Company would have reported if the Company had elected to recognize compensation expense in accordance with the fair value based method of accounting of SFAS 123.

(DOLLARS IN THOUSANDS, EXCEPT PER SHARE DATA)

	THREE MONTHS ENDED MARCH 31,	
	2003	2002
Net income:		
As reported	$ 49,737	$ 4,909
Pro forma	44,708	1,960
L-3 Holdings Basic EPS:		
As reported	$ 0.52	$ 0.06
Pro forma	0.47	0.02
L-3 Holdings Diluted EPS:		
As reported	$ 0.50	$ 0.06
Pro forma	0.45	0.02

4. ACQUISITIONS

Avionics Systems. On March 28, 2003, the Company acquired 100% of the common stock of the Avionics Systems business of Goodrich Corporation for $188,512 in cash, plus acquisition costs. The acquisition was financed using cash on hand. The purchase price includes an increase to the contract purchase price of $512 related to additional assets received at closing and is subject to final adjustment based on closing date net working capital, as defined. Avionics Systems develops and manufactures innovative avionics solutions for substantially all segments of the aviation market, and sells its products to the military, business jet, general aviation, rotary wing aircraft and air transport markets. The acquisition provides the Company with enhanced manufacturing capabilities, expanded marketing expertise, an expanded distribution network and increased efficiencies in research and development initiatives, which the Company expects to use to sell its avionics portfolio, including advanced displays, aviation recorders, transponders, collision avoidance and proximity awareness products. Avionics Systems also provides a unique set of products to add to the Company's existing product line for the commercial air transport, business jet and military aircraft markets. Based on a preliminary purchase price allocation for Avionics Systems, goodwill of $155,771 was assigned to the Aviation Products & Aircraft Modernization segment, most of which is expected to be deductible for income tax purposes.

All of the Company's acquisitions have been accounted for as purchase business combinations and are included in the Company's results of operations from their respective effective dates. The Company values its acquired contracts in process on the date of acquisition at contract value less the Company's estimated costs to complete the contract and a reasonable profit allowance on the Company's completion effort commensurate with the profit margin that the Company earns on similar contracts. The assets and liabilities recorded in connection with the purchase price allocations for the acquisitions of Detection Systems, Telos, ComCept, Technology, Management and Analysis Corporation, Electron Devices, Ruggedized Command & Control, Wolf Coach, International Microwave Corporation, Westwood, Wescam, Ship Analytics, and Avionics Systems are based upon preliminary estimates of fair values for contracts in process, inventories, estimated costs in excess of billings to complete contracts in process, identifiable intangibles and deferred income taxes. Actual adjustments will be based on the final purchase prices and final appraisals and other analyses of fair values which are in process. The Company does not expect the differences between the preliminary and final purchase price allocations for these acquisitions to be material. The Company expects to complete the purchase price allocations for these acquisitions during the first half of 2003, except for the acquisition of the Avionics Systems business. We expect to complete the purchase price allocation for the Avionics Systems business by the end of 2003.

The Company is continuing its discussions with Raytheon Company regarding the adjustment of the purchase price for the acquisition of Aircraft Integration Systems (AIS). The Company's proposed

(DOLLARS IN THOUSANDS, EXCEPT PER SHARE DATA)

purchase price adjustment amounts to a $100,000 reduction to the final purchase price for AIS submitted by Raytheon to the Company. Any amount received by the Company for a reduction to the AIS purchase price will be reported as a reduction to goodwill.

Pro Forma Statement of Operations Data. Had the acquisition of Avionics Systems and the related financing transaction occurred on January 1, 2003, the unaudited pro forma sales, net income and diluted earnings per share would have been approximately $1,113,300, $52,700 and $0.53, respectively, for the three months ended March 31, 2003. Had the acquisitions of L-3 Integrated Systems, Detection Systems, Telos, ComCept, Technology, Management and Analysis Corporation, Electron Devices, Ruggedized Command & Control, Wolf Coach, International Microwave Corporation, Westwood, Wescam, Ship Analytics, and Avionics Systems and the related financing transactions occurred on January 1, 2002, the unaudited pro forma sales, net loss and diluted loss per share would have been approximately $1,096,800, $(9,300) and $(0.10), respectively, for the three months ended March 31, 2002. The pro forma results are based on various assumptions and are not necessarily indicative of the result of operations that would have occurred had the Company completed the acquisitions and the related financing transactions on January 1, 2002 and 2003.

5. CONTRACTS IN PROCESS

The components of contracts in process are presented in the table below.

	MARCH 31, 2003	DECEMBER 31, 2002
Billed receivables, less allowances of $13,778 and $12,801 ..	$ 568,701	$ 568,382
Unbilled contract receivables	502,215	490,678
Less: unliquidated progress payments	(207,018)	(171,457)
Unbilled contract receivables, net	295,197	319,221
Inventoried contract costs, gross	338,682	320,043
Less: unliquidated progress payments	(9,093)	(13,507)
Inventoried contract costs, net	329,589	306,536
Inventories at lower of cost or market	147,378	123,854
Total contracts in process	$1,340,865	$1,317,993

Inventoried contract costs for the Company's businesses that are primarily U.S. Government contractors include selling, general and administrative (SG&A) costs, including independent research and development (R&D) and bid and proposal (B&P) costs. The table below presents a summary of the changes in the SG&A, independent R&D and B&P costs included in inventoried contract costs, including those that have been used in the determination of the Company's costs and expenses for "Contracts, primarily U.S. Government", which are presented on the Company's statements of operations.

	FOR THE THREE MONTHS ENDED MARCH 31,	
	2003	2002
Balance at beginning of period	$ 52,253	$ 19,970
Add: Acquired inventoried contract costs	--	15,491
Incurred costs(1)	117,103	86,404
Less: Costs and expenses	(116,423)	(84,127)
Balance at end of period	$ 52,933	$ 37,738

(DOLLARS IN THOUSANDS, EXCEPT PER SHARE DATA)

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(1) Incurred costs include independent R&D and B&P costs of $34,208 and $24,562 for the three months ended March 31, 2003 and 2002, respectively.

The cost data in the table above does not include the SG&A and R&D expenses for the Company's businesses that are primarily not U.S. Government contractors, which are separately presented on the Company's statement of operations under costs and expenses for "Commercial, primarily products".

6. GOODWILL AND IDENTIFIABLE INTANGIBLE ASSETS

Effective January 1, 2002, the Company ceased recording goodwill amortization expense and began testing goodwill for impairment based on estimated fair values at the beginning of the year using a discounted cash flows valuation. Based on the estimated fair values of the Company's reporting units at January 1, 2002, the goodwill for certain space and broadband commercial communications businesses included in the Specialized Products segment was impaired. Effective the first quarter of 2002, the Company completed its valuation of the assets and liabilities for these businesses and recorded an impairment charge of $24,370, net of a $6,428 income tax benefit. The impairment charge was recorded as a cumulative effect of a change in accounting principle effective January 1, 2002, in accordance with the adoption provisions of SFAS No. 142.

The table below presents the changes in goodwill allocated to the reportable segments during the three months ended March 31, 2003.

	SECURE COMMUNICATIONS & ISR	TRAINING SIMULATION & SUPPORT SERVICES	AVIATION PRODUCTS & AIRCRAFT MODERNIZATION	SPECIALIZED PRODUCTS	CONSOLIDATED TOTAL
BALANCE JANUARY 1, 2003	$722,135	$445,427	$620,289	$1,006,697	$2,794,548
Acquisitions	(7)	1,549	156,261	7,967	165,770
BALANCE MARCH 31, 2003	$722,128	$446,976	$776,550	$1,014,664	$2,960,318

During the three months ended March 31, 2003, the Company completed its annual impairment test for the goodwill of each of its reporting units, which resulted in no impairment losses.

The gross carrying amount and accumulated amortization balances for the Company's identifiable intangible assets that are subject to amortization are presented in the tables below.

	MARCH 31, 2003		
	GROSS CARRYING AMOUNT	ACCUMULATED AMORTIZATION	NET CARRYING AMOUNT
Identifiable intangible assets that are subject to amortization:			
Customer relationships	$80,826	$1,772	$79,054
Unpatented technology	9,825	2,087	7,738
Non-compete agreements	2,000	113	1,887
Total	$92,651	$3,972	$88,679

(DOLLARS IN THOUSANDS, EXCEPT PER SHARE DATA)

	DECEMBER 31, 2002		
	GROSS CARRYING AMOUNT	ACCUMULATED AMORTIZATION	NET CARRYING AMOUNT
Identifiable intangible assets that are subject to amortization:			
Customer relationships	$80,826	$ 600	$80,226
Unpatented technology	9,825	1,844	7,981
Non-compete agreements	2,000	60	1,940
Total	$92,651	$2,504	$90,147

The Company recorded $1,468 and $170 of identifiable intangible asset amortization for the three months ended March 31, 2003 and 2002, respectively. Identifiable intangible asset amortization, based on gross carrying amounts at March 31, 2003, is estimated to be $5,861 for 2003, $8,580 for 2004, $9,240 for 2005, $8,538 for 2006, and $8,197 for 2007.

7. OTHER CURRENT LIABILITIES AND OTHER LIABILITIES

The components of other current liabilities are presented in the table below.

	MARCH 31, 2003	DECEMBER 31, 2002
Accrued product warranty	$ 60,461	$ 56,487
Negative balances in contracts in process	26,153	36,841
Estimated cost in excess of billings to complete contracts in process in a loss position	14,596	12,451
Notes payable and capital lease obligations	12,044	3,380
Other	42,516	49,734
Total other current liabilities	$155,770	$158,893

The table below presents the changes in the Company's accrual for product warranties for the three months ended March 31, 2003.

Balance January 1, 2003	$ 56,487
Acquisitions during the period	2,642
Accruals for product warranties issued during the period	5,299
Accruals related to pre-existing product warranties	127
Settlements made during the period	(4,094)
Balance March 31, 2003	$ 60,461

The components of other liabilities are presented in the table below.

(DOLLARS IN THOUSANDS, EXCEPT PER SHARE DATA)

	MARCH 31, 2003	DECEMBER 31, 2002
Non-current portion of net deferred gains on terminations of interest rate swap agreements	$18,170	$14,026
Estimated cost in excess of billings to complete contracts in process in a loss position	13,303	13,303
Notes payable and capital lease obligations	4,633	8,631
Other non-current liabilities	42,030	42,987
Total other liabilities	$78,136	$78,947

8. DEBT

The components of long-term debt and a reconciliation to the carrying amount of long-term debt are presented in the table below.

	MARCH 31, 2003	DECEMBER 31, 2002
L-3 Communications:		
Borrowings under Senior Credit Facilities	$ --	$ --
8 1/2% Senior Subordinated Notes due 2008	180,000	180,000
8% Senior Subordinated Notes due 2008	200,000	200,000
7 5/8% Senior Subordinated Notes due 2012	750,000	750,000
	1,130,000	1,130,000
L-3 Holdings:		
5 1/4% Convertible Senior Subordinated Notes due 2009	300,000	300,000
4% Senior Subordinated Convertible Contingent Debt Securities due 2011 (CODES)	420,000	420,000
Principal amount of long-term debt	$1,850,000	$1,850,000
Less: unamortized discount on CODES	(2,184)	(2,248)
Fair value of interest rate swap agreements	(4,074)	--
Carrying amount of long-term debt	$1,843,742	$1,847,752

Available borrowings under the Company's senior credit facilities at March 31, 2003 were $676,447, after reductions for outstanding letters of credit of $73,553. There were no borrowings outstanding under the senior credit facilities at March 31, 2003. On February 25, 2003, the maturity date of the $250,000 364-day revolving credit facility was extended to February 24, 2004.

In January of 2003, L-3 Communications entered into interest rate swap agreements on $200,000 of its 7 5/8% Senior Subordinated Notes due 2012. These swap agreements exchanged the fixed interest rate for a variable interest rate on $200,000 of the $750,000 principal amount outstanding. In March of 2003, L-3 Communications terminated these interest rate swap agreements and received cash proceeds of $6,440. Prior to the termination of the swap agreements, L-3 Communications recorded a reduction to interest expense for the three months ended March 31, 2003 of $1,202. This reduction represented interest savings for the period prior to the termination of these swap agreements earned from the lower average variable interest rates of 4.0% that the Company paid under the swap agreements compared to the 7 5/8% fixed interest rate on the notes subject to the swaps. The remaining $5,238 of the proceeds represented the future value of the swap agreements at the termination date that was recorded as a deferred gain. The

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deferred gain will be amortized as a reduction of interest expense over the remaining term of the 7 5/8% Senior Subordinated Notes due 2012 at an amount of $142 per quarter, or $566 annually.

In March of 2003, L-3 Communications entered into interest rate swap agreements on $200,000 of its 7 5/8% Senior Subordinated Notes due 2012. These swap agreements exchanged the fixed interest rate for a variable interest rate on $200,000 of its $750,000 principal amount outstanding. Under the terms of these swap agreements, L-3 Communications will pay or receive the difference between the fixed interest rate of 7 5/8% on the senior subordinated notes and a variable interest rate determined two business days prior to the end of the interest period. The variable interest rate is equal to (1) the six month LIBOR rate, plus (2) an average of 327.75 basis points. The difference to be paid or received on these swap agreements as interest rates change is recorded as an adjustment to interest expense. These swap agreements are accounted for as fair value hedges.

The aggregate net deferred gains recorded in connection with the terminations of the interest rate swap agreements was $20,850 at March 31, 2003 and $16,140 at December 31, 2002. These net deferred gains will be amortized as reductions to interest expense through 2012. The current portion of the net deferred gains of $2,680 at March 31, 2003 and $2,114 at December 31, 2002 that will be amortized over the next 12 months is included in accrued interest. The non-current portions of the net deferred gains is included in other liabilities.

9. COMPREHENSIVE INCOME

Comprehensive income for the three months ended March 31, 2003 and 2002 is presented in the table below.

	THREE MONTHS ENDED MARCH 31,	
	2003	2002
Net income	$49,737	$4,909
Other comprehensive income (loss):		
Foreign currency translation adjustments, net of $467 tax expense in 2003 and $236 tax benefit in 2002	709	(433)
Unrealized gains (losses) on hedging instruments:		
Unrealized losses arising during the period, net of tax benefits of $58 in 2003 and $40 in 2002	(91)	(74)
Reclassification adjustment for losses included in net income, net of tax expense of $198	--	323
Comprehensive income	$50,355	$4,725

The changes in the Company's accumulated other comprehensive balances for the three months ended March 31, 2003 and for the year ended December 31, 2002 are presented in the table below.

(DOLLARS IN THOUSANDS, EXCEPT PER SHARE DATA)

	FOREIGN CURRENCY TRANSLATION ADJUSTMENTS	UNREALIZED LOSSES ON SECURITIES	UNREALIZED LOSSES ON HEDGING INSTRUMENTS	MINIMUM PENSION LIABILITY ADJUSTMENTS	ACCUMULATED OTHER COMPREHENSIVE LOSS
MARCH 31, 2003					
Balance January 1, 2003	$ (2,787)	$ (246)	$ (277)	$ (65,989)	$ (69,299)
Period change	709	--	(91)	--	618
Balance March 31, 2003	$ (2,078)	$ (246)	$ (368)	$ (65,989)	$ (68,681)
DECEMBER 31, 2002					
Balance January 1, 2002	$ (2,852)	$ (246)	$ (163)	$ (20,409)	$ (23,670)
Period change	65	--	(114)	(45,580)	(45,629)
Balance December 31, 2002	$ (2,787)	$ (246)	$ (277)	$ (65,989)	$ (69,299)

10. L-3 HOLDINGS EARNINGS PER SHARE

A reconciliation of basic and diluted EPS is presented in the table below.

	THREE MONTHS ENDED MARCH 31,	
	2003	2002
	(IN THOUSANDS, EXCEPT PER SHARE DATA)	
BASIC:		
Income before cumulative effect of a change in accounting principle	$ 49,737	$ 29,279
Cumulative effect of a change in accounting principle, net of income taxes	--	(24,370)
Net income	$ 49,737	$ 4,909
Weighted average common shares outstanding	95,137	78,900
Basic earnings per share before cumulative effect of a change in accounting principle	$ 0.52	$ 0.37
Basic earnings per share	$ 0.52	$ 0.06
DILUTED:		
Income before cumulative effect of a change in accounting principle	$ 49,737	$ 29,279
After-tax interest expense savings on the assumed conversion of Convertible Notes	2,588	--
Income before cumulative effect of a change in accounting principle, including assumed conversion of Convertible Notes	52,325	29,279
Cumulative effect of a change in accounting principle, net of income taxes	--	(24,370)
Net income, including assumed conversion of Convertible Notes	$ 52,325	$ 4,909
Common and potential common shares:		
Weighted average common shares outstanding	95,137	78,900
Assumed exercise of stock options	7,374	7,944
Assumed purchase of common shares for treasury	(4,847)	(4,490)
Assumed conversion of Convertible Notes	7,362	--
Common and potential common shares	105,026	82,354
Diluted earnings per share before cumulative effect of a change in accounting principle	$ 0.50	$ 0.36
Diluted earnings per share	$ 0.50	$ 0.06

The 7,361,964 shares of L-3 Holdings common stock that are issuable upon conversion of the Convertible Notes were not included in the computation of diluted EPS for the three months ended March 31, 2002 because the effect of the assumed conversion would have been anti-dilutive for that period.

The 7,804,878 shares of L-3 Holdings' common stock that are issuable upon conversion of the CODES were not included in the computation of diluted EPS for the three months ended March 31, 2003 and 2002 because the conditions required for the CODES to become convertible were not satisfied.

11. CONTINGENCIES

The Company is engaged in providing products and services under contracts directly or as a subcontractor with the U.S. Government and to a lesser degree, under foreign government contracts, some of which are funded by the U.S. Government. All such contracts are subject to extensive legal and regulatory requirements, and, from time to time, agencies of the U.S. Government investigate whether such contracts were and are being conducted in accordance with these requirements. Under U.S. Government procurement regulations, an indictment of the Company by a federal grand jury could result in the Company being suspended for a period of time from eligibility for awards of new government contracts. A conviction could result in debarment from contracting with the federal government for a specified term. Additionally, in the event that U.S. Government expenditures for products and services of the type manufactured and provided by the Company are reduced, and not offset by greater commercial sales or other new programs or products, or acquisitions, there may be a reduction in the volume of contracts or subcontracts awarded to the Company.

Management continually assesses the Company's obligations with respect to applicable environmental protection laws. While it is difficult to determine the timing and ultimate cost to be incurred by the Company in order to comply with these laws, based upon available internal and external assessments, with respect to those environmental loss contingencies of which management is aware, the Company believes that even without considering potential insurance recoveries, if any, there are no environmental loss contingencies that, individually or in the aggregate, would be material to the Company's consolidated results of operations. The Company accrues for these contingencies when it is probable that a liability has been incurred and the amount of the loss can be reasonably estimated.

On August 6, 2002, Aviation Communications & Surveillance Systems, LLC (ACSS) was sued by Honeywell International Inc. and Honeywell Intellectual Properties, Inc. (collectively, "Honeywell") for alleged infringement of patents that relate to terrain awareness avionics. The lawsuit was filed in the United States District Court for the District of Delaware. In December of 2002, Honeywell withdrew without prejudice the lawsuit against ACSS and agreed to proceed with non-binding arbitration. If the matter is not resolved through arbitration, Honeywell may reinstitute the litigation after August 14, 2003. The Company had previously investigated the Honeywell patents and believes that ACSS has valid defenses against Honeywell's patent infringement suit. In addition, ACSS has been indemnified to a certain extent by Thales Avionics, which provided ACSS with the alleged infringing technology. Thales Avionics owns 30% of ACSS. In the opinion of management, the ultimate disposition of Honeywell's pending claim will not result in a material liability to the Company.

On November 18, 2002, the Company initiated a proceeding against OSI Systems, Inc. (OSI) in the United States District Court sitting in the Southern District of New York (the "New York action") seeking, among other things, a declaratory judgment that the Company had fulfilled all of its obligations under a letter of intent with OSI (the "OSI Letter of Intent"). Under the OSI Letter of Intent, the Company was to negotiate definitive agreements with OSI for the sale of certain businesses the Company acquired from PerkinElmer, Inc. on June 14, 2002. On December 23, 2002, OSI responded by filing suit against the Company in the United States District Court sitting in the Central District of California (the "California action") alleging, among other things, that the Company breached its obligations under the OSI Letter of Intent and seeking damages in excess of $100,000, not including punitive damages. On February 7, 2003, OSI filed an answer and counterclaims in the New York action that asserted substantially the same claims OSI had raised in the California action. The California action was dismissed by the California District Court in favor of the New York action. Under the OSI Letter of Intent, the Company proposed selling to OSI the conventional detection business and the ARGUS business that the Company recently acquired from PerkinElmer, Inc. Negotiations with OSI lasted for almost one year and

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ultimately broke down over issues regarding, among other things, intellectual property, product-line definitions, allocation of employees and due diligence. The Company believes that the claims asserted by OSI in its suit are without merit and intends to defend against the OSI claims vigorously.

The Company is periodically subject to litigation, claims or assessments and various contingent liabilities incidental to its business. With respect to those investigative actions, items of litigation, claims or assessments of which they are aware, management of the Company is of the opinion that the probability is remote that, after taking into account certain provisions that have been made with respect to these matters, the ultimate resolution of any such investigative actions, items of litigation, claims or assessments will have a material adverse effect on the consolidated financial position, results of operations or cash flows of the Company.

12. SEGMENT INFORMATION

The Company has four reportable segments: (1) Secure Communications & ISR, (2) Training, Simulation & Support Services, (3) Aviation Products & Aircraft Modernization and (4) Specialized Products, which are described in Note 1. The Company evaluates the performance of its operating segments and reportable segments based on their sales and operating income.

The tables below present sales, operating income, depreciation and amortization and total assets by reportable segment.

	THREE MONTHS ENDED MARCH 31,	
	2003	2002
SALES:		
Secure Communications & ISR	$ 321,388	$157,736
Training, Simulation & Support Services	241,569	197,302
Aviation Products & Aircraft Modernization	159,720	107,309
Specialized Products	383,569	237,713
Elimination of intersegment sales	(17,199)	(3,220)
Consolidated total	$1,089,047	$696,840
OPERATING INCOME:		
Secure Communications & ISR	$ 33,301	$ 16,409
Training, Simulation & Support Services	28,498	21,470
Aviation Products & Aircraft Modernization	19,887	17,470
Specialized Products	27,151	15,958
Consolidated total	$ 108,837	$ 71,307
DEPRECIATION AND AMORTIZATION:		
Secure Communications & ISR	$ 7,118	$ 4,242
Training, Simulation & Support Services	1,998	2,005
Aviation Products & Aircraft Modernization	3,916	2,441
Specialized Products	9,747	6,519
Consolidated total	$ 22,779	$ 15,207

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	MARCH 31, 2003	DECEMBER 31, 2002
TOTAL ASSETS:		
Secure Communications & ISR	$1,084,461	$1,149,016
Training, Simulation & Support Services	678,023	648,554
Aviation Products & Aircraft Modernization	1,198,590	965,038
Specialized Products	1,935,446	1,940,982
Corporate	424,263	538,718
Consolidated total	$5,320,783	$5,242,308

13. RECENTLY ISSUED ACCOUNTING STANDARDS

In May of 2002, the FASB issued SFAS No. 145, Rescission of SFAS Nos. 4, 44 and 64, Amendment of SFAS No. 13, and Technical Corrections as of April 2002. SFAS No. 145, rescinds SFAS No. 4, Reporting Gains and Losses from Extinguishment of Debt, and SFAS No. 64, Extinguishments of Debt made to Satisfy Sinking-Fund Requirements. Under the provisions of SFAS No. 145, gains and losses from extinguishment of debt can only be classified as extraordinary items if they meet the criteria in APB Opinion No. 30. The provisions of this Statement related to the rescission of SFAS No. 4 shall be applied in fiscal years beginning after May 15, 2002. Earlier application is permitted. This statement also amends SFAS No. 13, Accounting for Leases, to eliminate an inconsistency between the accounting for sale-leaseback transactions and certain lease modifications that have economic effects that are similar and is effective for transactions occurring after May 15, 2002. This Statement also amends other existing authoritative pronouncements to make various technical corrections, clarify meanings, or describe their applicability under changed conditions and are effective for financial statements issued on or after May 15, 2002. In accordance with the provisions of SFAS No. 145, beginning on January 1, 2003, the loss on the retirement of debt of $16,187 ($9,858 after-tax or $0.11 per diluted share) that the Company recorded in June 2002 has been presented as a separate caption within income from continuing operations and the related income tax benefit has been included in the provision for income taxes.

In January of 2003, the FASB issued FASB Interpretation No. 46, Consolidation of Variable Interest Entities (FIN 46). This interpretation provides guidance on the identification of, and financial reporting for, entities over which control is achieved through means other than voting rights. Such entities have been termed by FIN 46 as variable interest entities (VIE). Once effective, FIN 46 will be the guidance that determines (1) whether consolidation is required under the "controlling financial interest" model of ARB Bulletin No. 51, Consolidated Financial Statements, or (2) whether the variable-interest model under FIN 46 should be used to account for existing and new entities. FIN 46 includes guidance for identifying the enterprise that will consolidate a VIE, which is the enterprise that is exposed to the majority of an entity's risks or receives the majority of the benefits from an entity's activities. FIN 46 also requires that the enterprises that hold a significant variable interest in a VIE make new disclosures in their financial statements. The transitional disclosures of FIN 46, which are effective immediately, require an enterprise to identify the entities in which it holds a variable interest, if the enterprise believes that those entities might be considered VIEs upon the adoption of FIN 46. The implementation and remaining disclosure requirements of FIN 46 are effective immediately for VIEs created after January 31, 2003, and on July 1, 2003 for all VIEs created before January 31, 2003. The Company does not believe that it holds any interests in VIEs, however, the Company is currently evaluating whether it holds a variable interest in entities that might be considered VIEs.

In March of 2003, the Emerging Issues Task Force (EITF) issued EITF No. 00-21, Accounting for Revenue Arrangements with Multiple Deliverables. EITF No. 00-21 addresses how to determine whether a contractual arrangement involving multiple deliverables contains more than one accounting unit and how consideration should be measured and allocated to the separate accounting units. EITF No. 00-21 applies to all deliverables within contractually binding arrangements in all industries, except to the extent that a deliverable in a contractual arrangement is subject to other existing higher-level authoritative literature, and is effective for revenue arrangements entered into in fiscal periods beginning after June 15, 2003. The Company is currently evaluating the effect of EITF No. 00-21 on the Company's revenue recognition accounting policies and on its consolidated results of operations and financial position.

In May of 2003, the FASB issued SFAS No. 150, Accounting for Certain Financial Instruments with Characteristics of both Liabilities and Equity. This Statement applies to certain financial instruments that, under previous guidance, issuers could account for as equity. SFAS No. 150 requires that those instruments be classified as liabilities in statements of financial position. SFAS No. 150 also requires disclosures about alternative ways of settling the instruments and the capital structure of entities whose shares are all mandatorily redeemable. SFAS No. 150 is effective for these financial instruments entered into or modified after May 31, 2003. For these financial instruments entered into before May 31, 2003, SFAS No. 150 is effective for the Company's interim period beginning July 1, 2003. SFAS No. 150 is not expected to have a material effect on the Company's consolidated results of operations or financial position.

14. UNAUDITED FINANCIAL INFORMATION OF L-3 COMMUNICATIONS AND ITS SUBSIDIARIES

L-3 Communications is a wholly owned subsidiary of L-3 Holdings. The debt of L-3 Communications, including its outstanding Senior Subordinated Notes and borrowings under amounts drawn against the senior credit facilities are guaranteed, on a joint and several, full and unconditional basis, by certain of its wholly-owned domestic subsidiaries (the "Guarantor Subsidiaries"). The foreign subsidiaries and certain domestic subsidiaries of L-3 Communications (the "Non-Guarantor Subsidiaries") do not guarantee the debt of L-3 Communications. None of the debt of L-3 Communications has been issued by its subsidiaries. There are no restrictions on the payment of dividends from the Guarantor Subsidiaries to L-3 Communications.

The following unaudited condensed combining financial information present the results of operations, financial position and cash flows of (i) L-3 Holdings, excluding L-3 Communications and its consolidated subsidiaries, (ii) L-3 Communications, excluding its consolidated subsidiaries (the "Parent"), (iii) the Guarantor Subsidiaries, (iv) the Non-Guarantor Subsidiaries and (v) the eliminations to arrive at the information for L-3 Communications on a consolidated basis.

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	L-3 HOLDINGS	L-3 COMMUNICATIONS (PARENT)	GUARANTOR SUBSIDIARIES	NON-GUARANTOR SUBSIDIARIES	ELIMINATIONS	CONSOLIDATED L-3 COMMUNICATION
CONDENSED COMBINING BALANCE SHEETS:						
AS OF MARCH 31, 2003:						
Current assets:						
Cash and cash equivalents	$ --	$ 33,150	$ (16,788)	$ 18,030	$ --	$ 34,392
Contracts in process	--	560,347	589,793	190,725	--	1,340,865
Other current assets	--	145,129	29,209	4,026	--	178,364
Total current assets	--	738,626	602,214	212,781	--	1,553,621
Goodwill	--	754,671	1,867,136	338,511	--	2,960,318
Other assets	--	362,292	361,608	82,944	--	806,844
Investment in and amounts due from consolidated subsidiaries	2,987,853	2,863,967	469,406	37,870	(6,359,096)	--
Total assets	$2,987,853	$4,719,556	$3,300,364	$672,106	$ (6,359,096)	$5,320,783
Current liabilities	--	343,996	267,381	88,381	--	699,758
Long-term debt	717,816	1,843,742	--	--	(717,816)	1,843,742
Other long-term liabilities	--	261,781	160,380	11,560	--	433,721
Minority interest	--	--	--	73,525	--	73,525
Shareholders' equity	2,270,037	2,270,037	2,872,603	498,640	(5,641,280)	2,270,037
Total liabilities and shareholders' equity	$2,987,853	$4,719,556	$3,300,364	$672,106	$ (6,359,096)	$5,320,783
AS OF DECEMBER 31, 2002:						
Current assets:						
Cash and cash equivalents	$ --	$ 126,421	$ (7,248)	$ 15,683	$ --	$ 134,856
Contracts in process	--	524,500	630,351	163,142	--	1,317,993
Other current assets	--	155,387	28,319	2,819	--	186,525
Total current assets	--	806,308	651,422	181,644	--	1,639,374
Goodwill	--	753,672	1,702,384	338,492	--	2,794,548
Other assets	--	372,207	355,866	80,313	--	808,386
Investment in and amounts due from consolidated subsidiaries	2,919,954	2,688,750	398,282	53,779	(6,060,765)	--
Total assets	$2,919,954	$4,620,937	$3,107,954	$654,228	$ (6,060,765)	$5,242,308
Current liabilities	--	322,747	298,646	75,246	--	696,639
Long-term debt	717,752	1,847,752	--	--	(717,752)	1,847,752
Other long-term liabilities	--	248,236	166,188	8,050	--	422,474
Minority interest	--	--	--	73,241	--	73,241
Shareholders' equity	2,202,202	2,202,202	2,643,120	497,691	(5,343,013)	2,202,202
Total liabilities and shareholders' equity	$2,919,954	$4,620,937	$3,107,954	$654,228	$ (6,060,765)	$5,242,308

(DOLLARS IN THOUSANDS, EXCEPT PER SHARE DATA)

	L-3 HOLDINGS	L-3 COMMUNICATIONS (PARENT)	GUARANTOR SUBSIDIARIES	NON-GUARANTOR SUBSIDIARIES	ELIMINATIONS	CONSOLIDATED L-3 COMMUNICATIONS
CONDENSED COMBINING STATEMENTS OF OPERATIONS:						
FOR THE THREE MONTHS ENDED MARCH 31, 2003:						
Sales	$ --	$ 456,436	$548,596	$ 92,054	$ (8,039)	$1,089,047
Costs and expenses	--	404,907	497,403	85,939	(8,039)	980,210
Operating income	--	51,529	51,193	6,115	--	108,837
Interest and other income (expense)	--	3,424	(70)	(223)	(1,754)	1,377
Interest expense	8,488	31,835	223	1,912	(10,242)	32,216
Minority interest	--	--	--	284	--	284
Provision (benefit) for income taxes	(3,056)	8,322	18,324	1,331	3,056	27,977
Equity in net income of consolidated subsidiaries	55,169	34,941	--	--	(90,110)	--
Net income	$ 49,737	$ 49,737	$ 32,576	$ 2,365	$ (84,678)	$ 49,737
FOR THE THREE MONTHS ENDED MARCH 31, 2002:						
Sales	$ --	$ 340,703	$302,700	$ 56,634	$ (3,197)	$ 696,840
Costs and expenses	--	299,699	281,043	47,988	(3,197)	625,533
Operating income	--	41,004	21,657	8,646	--	71,307
Interest and other income	--	822	75	130	--	1,027
Interest expense	8,092	24,760	1,261	72	(8,092)	26,093
Minority interest	--	--	--	988	--	988
Provision (benefit) for income taxes	(2,856)	6,024	7,226	2,724	2,856	15,974
Cumulative effect of a change in accounting principle	--	(14,749)	--	(9,621)	--	(24,370)
Equity in net income (loss) of consolidated subsidiaries	10,145	8,616	--	--	(18,761)	--
Net income (loss)	$ 4,909	$ 4,909	$ 13,245	$ (4,629)	$ (13,525)	$ 4,909

(DOLLARS IN THOUSANDS, EXCEPT PER SHARE DATA)

	L-3 HOLDINGS	L-3 COMMUNICATIONS (PARENT)	GUARANTOR SUBSIDIARIES	NON-GUARANTOR SUBSIDIARIES	ELIMINATIONS	CONSOLIDATED L-3 COMMUNICATIONS
CONDENSED COMBINING STATEMENTS OF CASH FLOWS:						
FOR THE THREE MONTHS ENDED MARCH 31, 2003:						
Net cash from (used in) operating activities	$ --	$ 45,333	$ 66,271	$ (5,478)	$ --	$ 106,126
INVESTING ACTIVITIES:						
Acquisition of businesses, net of cash acquired	--	(1,836)	(193,711)	(1,874)	--	(197,421)
Other investing activities	(20,561)	(203,365)	(6,911)	(1,312)	216,146	(16,003)
Net cash used in investing activities	(20,561)	(205,201)	(200,622)	(3,186)	216,146	(213,424)
FINANCING ACTIVITIES:						
Other financing activities	20,561	66,597	124,811	11,011	(216,146)	6,834
Net cash from financing activities	20,561	66,597	124,811	11,011	(216,146)	6,834
Net increase (decrease) in cash	--	(93,271)	(9,540)	2,347	--	(100,464)
Cash and cash equivalents, beginning of period	--	126,421	(7,248)	15,683	--	134,856
Cash and cash equivalents, end of period	$ --	$ 33,150	$ (16,788)	$ 18,030	$ --	$ 34,392
FOR THE THREE MONTHS ENDED MARCH 31, 2002:						
Net cash from (used in) operating activities	$ --	$ (11,782)	$ 57,015	$ (3,841)	$ --	$ 41,392
INVESTING ACTIVITIES:						
Acquisition of businesses, net of cash acquired	--	(344)	(1,155,257)	(45,946)	--	(1,201,547)
Other investing activities	(25,379)	(1,207,229)	(2,455)	(2,179)	1,226,582	(10,660)
Net cash used in investing activities	(25,379)	(1,207,573)	(1,157,712)	(48,125)	1,226,582	(1,212,207)
FINANCING ACTIVITIES:						
Borrowings under revolving credit facilities	--	350,000	--	--	--	350,000
Borrowings under bridge loan facility	--	500,000	--	--	--	500,000
Other financing activities	25,379	86,675	1,098,842	21,484	(1,226,582)	5,798
Net cash from financing activities	25,379	936,675	1,098,842	21,484	(1,226,582)	855,798
Net decrease in cash	--	(282,680)	(1,855)	(30,482)	--	(315,017)
Cash and cash equivalents, beginning of period	--	320,210	(4,412)	45,224	--	361,022
Cash and cash equivalents, end of period	$ --	$ 37,530	$ (6,267)	$ 14,742	$ --	$ 46,005

L-3 COMMUNICATIONS HOLDINGS, INC. AND L-3 COMMUNICATIONS CORPORATION

CONSOLIDATED FINANCIAL STATEMENTS AS OF DECEMBER 31, 2002 AND 2001
AND FOR THE YEARS ENDED DECEMBER 31, 2002, 2001 AND 2000

REPORT OF INDEPENDENT AUDITORS

To the Board of Directors and Shareholders of
L-3 Communications Holdings, Inc.

We have audited the accompanying consolidated balance sheets of L-3 Communications Holdings, Inc. ("L-3 Holdings") and L-3 Communications Corporation ("L-3 Communications") and subsidiaries (collectively, the "Company") as of December 31, 2002 and 2001, and the related consolidated statements of operations, shareholders' equity and cash flows for each of the three years ended December 31, 2002. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free of material misstatements. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the consolidated financial position of L-3 Holdings and L-3 Communications and subsidiaries as of December 31, 2002 and 2001 and their respective consolidated results of operations and cash flows for each of the three years ended December 31, 2002, in conformity with accounting principles generally accepted in the United States of America.

As indicated in Note 5 to the financial statements, in 2002 the Company adopted the provisions of Statement of Financial Accounting Standards No. 142, Goodwill and Other Intangible Assets.

As indicated in Note 2 to the financial statements, in 2003 the Company adopted the provisions of Statement of Financial Accounting Standards No. 145, Recission of SFAS Nos. 4, 44 and 64, Amendment of SFAS No. 13, and Technical Corrections as of April 2002.

/s/ PricewaterhouseCoopers LLP

New York, New York
January 27, 2003, except for the first paragraph of
Recently Issued Accounting Standards
in Note 2, for which the date is June 10, 2003.

L-3 COMMUNICATIONS HOLDINGS, INC.
AND L-3 COMMUNICATIONS CORPORATION

CONSOLIDATED BALANCE SHEETS

(IN THOUSANDS, EXCEPT PER SHARE DATA)

	DECEMBER 31,	
	2002	2001
ASSETS		
Current assets:		
Cash and cash equivalents	$ 134,856	$ 361,022
Contracts in process	1,317,993	801,824
Deferred income taxes	143,634	62,965
Other current assets	42,891	16,590
Total current assets	1,639,374	1,242,401
Property, plant and equipment, net	458,639	203,374
Goodwill	2,794,548	1,707,718
Intangible assets	90,147	3,833
Deferred income taxes	147,190	97,883
Deferred debt issue costs	48,839	40,190
Other assets	63,571	43,850
Total assets	$ 5,242,308	$ 3,339,249
LIABILITIES AND SHAREHOLDERS' EQUITY		
Current liabilities:		
Accounts payable, trade	$ 167,240	$ 129,538
Accrued employment costs	187,754	126,981
Accrued expenses	56,763	38,823
Customer advances	71,751	74,060
Accrued interest	20,509	13,288
Income taxes	33,729	16,768
Other current liabilities	158,893	125,113
Total current liabilities	696,639	524,571
Pension and postretirement benefits	343,527	155,052
Other liabilities	78,947	60,585
Long-term debt	1,847,752	1,315,252
Total liabilities	2,966,865	2,055,460
Commitments and contingencies		
Minority interest	73,241	69,897
Shareholders' equity:		
L-3 Holdings' common stock; $.01 par value; authorized 300,000,000 shares, issued and outstanding 94,577,331 and 78,496,626 shares (L-3 Communications' common stock; $.01 par value, 100 shares authorized, issued and outstanding)	1,794,976	939,037
Retained earnings	479,827	301,730
Unearned compensation	(3,302)	(3,205)
Accumulated other comprehensive loss	(69,299)	(23,670)
Total shareholders' equity	2,202,202	1,213,892
Total liabilities and shareholders' equity	$ 5,242,308	$ 3,339,249

See notes to consolidated financial statements.

L-3 COMMUNICATIONS HOLDINGS, INC.
AND L-3 COMMUNICATIONS CORPORATION

CONSOLIDATED STATEMENTS OF OPERATIONS

(IN THOUSANDS, EXCEPT PER SHARE DATA)

	YEAR ENDED DECEMBER 31,		
	2002	2001	2000
Sales:			
Contracts, primarily U.S. Government	$ 3,581,102	$ 1,932,205	$ 1,584,824
Commercial, primarily products	430,127	415,217	325,237
Total sales	4,011,229	2,347,422	1,910,061
Costs and expenses:			
Contracts, primarily U.S. Government	3,137,561	1,699,617	1,388,263
Commercial, primarily products:			
Cost of sales	270,800	252,790	204,989
Selling, general and administrative expenses	114,052	93,238	70,039
Research and development expenses	34,837	26,447	24,052
Total costs and expenses	3,557,250	2,072,092	1,687,343
Operating income	453,979	275,330	222,718
Interest and other income	4,921	1,739	4,393
Interest expense	122,492	86,390	93,032
Minority interest	6,198	4,457	--
Loss on retirement of debt	16,187	--	--
Income before income taxes and cumulative effect of a change in accounting principle	314,023	186,222	134,079
Provision for income taxes	111,556	70,764	51,352
Income before cumulative effect of a change in accounting principle	202,467	115,458	82,727
Cumulative effect of a change in accounting principle, net of income taxes of $6,428 (Note 5)	(24,370)	--	--
Net income	$ 178,097	$ 115,458	$ 82,727
L-3 Holdings' earnings per common share:			
Basic:			
Income before accounting change	$ 2.33	$ 1.54	$ 1.24
Accounting change	(0.28)	--	--
Net income	$ 2.05	$ 1.54	$ 1.24
Diluted:			
Income before accounting change	$ 2.18	$ 1.47	$ 1.18
Accounting change	(0.25)	--	--
Net income	$ 1.93	$ 1.47	$ 1.18
L-3 Holdings' weighted average common shares outstanding:			
Basic	86,943	74,880	66,710
Diluted	97,413	85,438	69,906

See notes to consolidated financial statements.

L-3 COMMUNICATIONS HOLDINGS, INC.
AND L-3 COMMUNICATIONS CORPORATION

CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY

(IN THOUSANDS)

	L-3 HOLDINGS'			
	SHARES ISSUED	PAR VALUE	ADDITIONAL PAID-IN CAPITAL	RETAINED EARNINGS
Balance December 31, 1999	65,590	$ 655	$ 483,039	$ 103,545
Comprehensive income:				
Net income				82,727
Minimum pension liability, net of ($553) tax benefit.				
Foreign currency translation adjustment				
Unrealized loss on securities, net of ($2,316) tax benefit				
Shares issued:				
Employee savings plans	469	5	12,637	
Exercise of stock options	1,154	12	18,050	
Grant of restricted stock			1,512	
Amortization of unearned compensation				
Other			16	
Balance December 31, 2000	67,213	672	515,254	186,272
Comprehensive income:				
Net income				115,458
Minimum pension liability, net of ($11,955) tax benefit				
Foreign currency translation adjustment, net of ($164) tax benefit				
Unrealized loss on securities, net of ($111) tax benefit				
Unrealized loss on securities reclassified to net income from other comprehensive loss, net of $2,274 of taxes				
Unrealized losses on hedging instruments, net of ($100) tax benefit				
Shares issued:				
Sale of common stock	9,150	92	353,530	
Employee savings plans	418	4	16,864	
Acquisition consideration	588	6	17,351	
Exercise of stock options	1,128	11	28,253	
Employee stock purchase plan contributions			4,861	
Grant of restricted stock			2,118	
Amortization of unearned compensation				
Other			21	
Balance December 31, 2001	78,497	785	938,252	301,730
Comprehensive income:				
Net income				178,097
Minimum pension liability, net of ($29,859) tax benefit				
Foreign currency translation adjustment, net of ($1,626) tax benefit				
Unrealized losses on hedging instruments reclassified to net income from other comprehensive loss, net of $198 of taxes				
Unrealized losses on hedging instruments, net of ($275) tax benefit				
Shares issued:				
Sale of common stock	14,000	140	766,640	
Employee savings plans	529	5	28,133	
Acquisition consideration	229	2	10,605	
Exercise of stock options	970	10	30,665	
Employee stock purchase plan contributions	352	4	17,474	
Grant of restricted stock			2,231	
Amortization of unearned compensation				
Other			30	
Balance December 31, 2002	94,577	$ 946	$ 1,794,030	$ 479,827

	UNEARNED COMPENSATION	ACCUMULATED OTHER COMPREHENSIVE INCOME (LOSS)	TOTAL
Balance December 31, 1999	$ (1,661)	$ (2,403)	$ 583,175
Comprehensive income:			
Net income			82,727
Minimum pension liability, net of ($553) tax benefit.		(819)	(819)
Foreign currency translation adjustment		(1,222)	(1,222)
Unrealized loss on securities, net of ($2,316) tax benefit		(2,728)	(2,728)
			77,958
Shares issued:			
Employee savings plans			12,642

Exercise of stock options			18,062
Grant of restricted stock	(1,512)		--
Amortization of unearned compensation	716		716
Other			16
Balance December 31, 2000	(2,457)	(7,172)	692,569
Comprehensive income:			
Net income			115,458
Minimum pension liability, net of ($11,955) tax benefit		(19,519)	(19,519)
Foreign currency translation adjustment, net of ($164) tax benefit		(268)	(268)
Unrealized loss on securities, net of ($111) tax benefit		(180)	(180)
Unrealized loss on securities reclassified to net income from other comprehensive loss, net of $2,274 of taxes		3,632	3,632
Unrealized losses on hedging instruments, net of ($100) tax benefit		(163)	(163)
			98,960
Shares issued:			
Sale of common stock			353,622
Employee savings plans			16,868
Acquisition consideration			17,357
Exercise of stock options			28,264
Employee stock purchase plan contributions			4,861
Grant of restricted stock	(2,118)		--
Amortization of unearned compensation	1,370		1,370
Other			21
Balance December 31, 2001	(3,205)	(23,670)	1,213,892
Comprehensive income:			
Net income			178,097
Minimum pension liability, net of ($29,859) tax benefit		(45,580)	(45,580)
Foreign currency translation adjustment, net of ($1,626) tax benefit		65	65
Unrealized losses on hedging instruments reclassified to net income from other comprehensive loss, net of $198 of taxes		323	323
Unrealized losses on hedging instruments, net of ($275) tax benefit		(437)	(437)
			132,468
Shares issued:			
Sale of common stock			766,780
Employee savings plans			28,138
Acquisition consideration			10,607
Exercise of stock options			30,675
Employee stock purchase plan contributions			17,478
Grant of restricted stock	(2,231)		--
Amortization of unearned compensation	2,134		2,134
Other			30
Balance December 31, 2002	$ (3,302)	$ (69,299)	$ 2,202,202

See notes to consolidated financial statements.

L-3 COMMUNICATIONS HOLDINGS, INC.
AND L-3 COMMUNICATIONS CORPORATION

CONSOLIDATED STATEMENTS OF CASH FLOWS

(IN THOUSANDS)

	YEAR ENDED DECEMBER 31,		
	2002	2001	2000
OPERATING ACTIVITIES:			
Net income	$ 178,097	$ 115,458	$ 82,727
Loss on retirement of debt	16,187	--	--
Cumulative effect of a change in accounting principle	24,370	--	--
Goodwill amortization	--	42,356	34,994
Depreciation	66,230	40,362	36,158
Amortization of intangibles and other assets	9,630	4,233	3,102
Amortization of deferred debt issue costs (included in interest expense)	7,392	6,388	5,724
Minority interest	6,198	4,457	--
Deferred income tax provision	79,092	52,638	25,103
Other non-cash items, principally contributions to employee savings plans in L-3 Holdings' common stock	28,653	17,576	12,517
Changes in operating assets and liabilities, net of amounts acquired:			
Contracts in process	(75,031)	(40,652)	(66,402)
Other current assets	(15,257)	1,643	(2,599)
Other assets	(16,641)	(12,033)	(416)
Accounts payable	(21,904)	(43,165)	38,065
Accrued employment costs	30,100	11,931	6,239
Accrued expenses	(2,581)	(20,300)	2,274
Customer advances	(11,272)	12,627	(17,087)
Accrued interest	7,199	(3,047)	3,637
Income taxes	30,852	14,431	13,161
Other current liabilities	(41,206)	(37,555)	(59,286)
Pension and postretirement benefits	(1,670)	4,550	(7,214)
Other liabilities	20,517	1,423	1,959
All other operating activities	(495)	(353)	1,149
Net cash from operating activities	318,460	172,968	113,805
INVESTING ACTIVITIES:			
Acquisition of businesses, net of cash acquired	(1,742,133)	(446,911)	(599,608)
Proceeds from sale of interest in subsidiary	--	75,206	--
Capital expenditures	(62,058)	(48,121)	(33,580)
Disposition of property, plant and equipment	3,548	1,237	18,060
Other investing activities	(9,885)	(6,301)	6,905
Net cash used in investing activities	(1,810,528)	(424,890)	(608,223)
FINANCING ACTIVITIES:			
Borrowings under revolving credit facility	566,000	316,400	858,500
Repayment of borrowings under revolving credit facility	(566,000)	(506,400)	(668,500)
Borrowings under bridge loan facility	500,000	--	--
Repayment of borrowings under bridge loan facility	(500,000)	--	--
Proceeds from sale of senior subordinated notes	750,000	420,000	300,000
Redemption of senior subordinated notes	(237,468)	--	--
Proceeds from sale of L-3 Holdings' common stock, net	766,780	353,622	--
Debt issuance costs	(19,759)	(16,671)	(12,916)
Proceeds from exercise of stock options	17,372	16,325	8,954
Employee stock purchase plan contributions	17,478	4,861	--
Distributions to minority interest	(2,854)	(2,530)	--
Other financing activities	(25,647)	(5,343)	(1,728)
Net cash from financing activities	1,265,902	580,264	484,310
Net increase (decrease) in cash	(226,166)	328,342	(10,108)
Cash and cash equivalents, beginning of period	361,022	32,680	42,788
Cash and cash equivalents, end of period	$ 134,856	$ 361,022	$ 32,680

See notes to consolidated financial statements.

1. DESCRIPTION OF BUSINESS

L-3 Communications Holdings, Inc. conducts its operations and derives all its operating income and cash flow through its wholly owned subsidiary, L-3 Communications Corporation ("L-3 Communications"). L-3 Communications Holdings, Inc. ("L-3 Holdings" and together with its subsidiaries, "L-3" or "the Company") is a merchant supplier of secure communications and intelligence, surveillance and reconnaissance (ISR) systems, training, simulation and support services, aviation products and aircraft modernization, as well as specialized products. The Company's customers include the U.S. Department of Defense (DoD) and prime contractors thereof, certain U.S. Government intelligence agencies, major aerospace and defense contractors, foreign governments, commercial customers and certain other U.S. federal, state and local government agencies. The Company has the following four reportable segments: (1) Secure Communications & ISR, (2) Training, Simulation & Support Services; (3) Aviation Products & Aircraft Modernization; and (4) Specialized Products.

Secure Communications & ISR. The businesses in this segment provide products and services for the global ISR market, specializing in signals intelligence (SIGINT) and communications intelligence (COMINT) systems. These products and services provide to the warfighter in real-time the unique ability to collect and analyze unknown electronic signals from command centers, communication nodes and air defense systems for real-time situation awareness and response. This segment also provides secure, high data rate communications systems for military and other U.S. Government and foreign government reconnaissance and surveillance applications. These systems and products are critical elements of virtually all major communication, command and control, intelligence gathering and space systems. The Company's systems and products are used to connect a variety of airborne, space, ground and sea-based communication systems and are used in the transmission, processing, recording, monitoring and dissemination functions of these communication systems. The major secure communication programs and systems include:

- secure data links for airborne, satellite, ground and sea-based remote platforms for real-time information collection and dissemination to users;
- highly specialized fleet management and support, including procurement, systems integration, sensor development, modifications and maintenance for signals intelligence and ISR special mission aircraft and airborne surveillance systems;
- strategic and tactical signals intelligence systems that detect, collect, identify, analyze and disseminate information;
- secure telephone and network equipment and encryption management; and
- communication systems for surface and undersea vessels and manned space flights.

Training, Simulation & Support Services. The businesses in this segment provide a full range of training, simulation and support services, including:

- services designed to meet customer training requirements for aircrews, navigators, mission operators, gunners and maintenance technicians for virtually any platform, including military fixed and rotary wing aircraft, air vehicles and various ground vehicles;
- communication software support, information services and a wide range of engineering development services and integration support;
- high-end engineering and information support services used for command, control, communications and ISR architectures, as well as for air warfare modeling and simulation tools for applications used by the DoD, Department of Homeland Security and U.S. Government intelligence agencies, including missile and space systems, Unmanned Aerial Vehicles (UAVs) and military aircraft;

- developing and managing extensive programs in the United States and internationally that focus on teaching, training and education, logistics, strategic planning, organizational design, democracy transition and leadership development;

- producing crisis management software and providing command and control for homeland security applications; and

- design, prototype development and production of ballistic missile targets for missile defense applications, including present and future threat scenarios.

Aviation Products & Aircraft Modernization. The businesses in this segment provide aviation products and aircraft modernization services, including:

- airborne traffic and collision avoidance systems (TCAS) for commercial and military applications;

- commercial, solid-state, crash-protected cockpit voice recorders, flight data recorders and maritime hardened voyage recorders;

- ruggedized custom displays for military and high-end commercial applications;

- turnkey aviation life cycle management services that integrate custom developed and commercial off-the-shelf products for various military and commercial wide-body and rotary wing aircraft, including heavy maintenance and structural modifications and Head-of-State and commercial interior completions; and

- engineering, modification, maintenance, logistics and upgrades for U.S. Special Operations Command aircraft, vehicles and personnel equipment.

Specialized Products. The businesses in this segment supply products, including components, subsystems and systems, to military and commercial customers in several niche markets. These products include:

- ocean products, including acoustic undersea warfare products for mine hunting, dipping and anti-submarine sonars and naval power distribution, conditioning, switching and protection equipment for surface and undersea platforms;

- ruggedization and integration of commercial-off-the-shelf technology for displays, computers and electronic systems for military and commercial applications;

- integrated video security and surveillance systems that provide perimeter security used by the U.S. Immigration and Naturalization Service and U.S. Border Patrol to monitor and protect U.S. borders;

- security systems for aviation, port and border applications to detect explosives, concealed weapons, contraband and illegal narcotics, to inspect agricultural products and to examine cargo;

- telemetry, instrumentation, space and navigation products, including tracking and flight termination;

- premium fuzing products;

- microwave components used in radar communication satellites, wireless communication equipment, electronic surveillance, communication and electronic warfare applications and counter measure systems;

- high performance antennas and ground based radomes;
- training devices and motion simulators which produce advanced virtual reality simulation and high-fidelity representations of cockpits and mission stations for fixed and rotary wing aircraft and land vehicles; and
- precision stabilized electro-optic surveillance systems, including high magnification lowlight, daylight and forward looking infrared sensors, laser range finders, illuminators and designators, and digital and wireless communication systems.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

BASIS OF PRESENTATION: The accompanying financial statements comprise the consolidated financial statements of L-3 Holdings and L-3 Communications. L-3 Holdings' only asset is its investment in the common stock of L-3 Communications, its wholly-owned subsidiary, and its only obligations are its 5 1/4% Convertible Senior Subordinated Notes due 2009 and its 4% Senior Subordinated Convertible Contingent Debt Securities due 2011 (CODES). L-3 Holdings has also guaranteed the borrowings under the senior credit facilities of L-3 Communications. L-3 Holdings' obligations have been jointly, severally, fully and unconditionally guaranteed by L-3 Communications and certain of its domestic subsidiaries, and accordingly, such debt has been reflected as debt of L-3 Communications in its consolidated financial statements in accordance with the U.S. Securities and Exchange Commission's (SEC) Staff Accounting Bulletin (SAB) No. 54. In addition, all issuances of equity securities including grants of stock options and restricted stock by L-3 Holdings to employees of L-3 Communications have been reflected in the consolidated financial statements of L-3 Communications. As a result, the consolidated financial positions, results of operations and cash flows of L-3 Holdings and L-3 Communications are substantially the same. See Note 20 for additional information.

SALES AND COSTS AND EXPENSES PRESENTATION: The Company presents its sales and cost and expenses in two categories in the statement of operations, "Contracts, primarily U.S. Government" and "Commercial, primarily products", which are based on how the Company recognizes revenue. Sales and costs and expenses for the Company's businesses that are primarily U.S. Government contractors are presented as "Contracts, primarily U.S. Government." The sales for the Company's U.S. Government contractor businesses are transacted using written contractual arrangements or contracts, most of which require the Company to design, develop, manufacture and/or modify complex products, and/or perform related services according to specifications provided by the customer. These contracts are within the scope of the American Institute of Certified Public Accountants Statement of Position 81-1, Accounting for Performance of Construction-Type and certain Production-Type Contracts (SOP 81-1) and Accounting Research Bulletin No. 43, Chapter 11, Section A, Government Contracts, Cost-Plus-Fixed Fee Contracts (ARB 43). Sales reported under "Contracts, primarily U.S. Government" also include certain sales by the Company's U.S. Government contractor businesses transacted using contracts for domestic and foreign commercial customers which also are within the scope of SOP 81-1. Sales and costs and expenses for the Company's businesses whose customers are primarily commercial customers are presented as "Commercial, primarily products". These sales to commercial customers are not within the scope of SOP 81-1 or ARB 43, and are recognized in accordance with the SEC's SAB No. 101, Revenue Recognition in Financial Statements. The Company's commercial businesses are substantially comprised of Aviation Communication & Surveillance Systems (ACSS), Aviation Recorders, Microwave components, Detection Systems business acquired from PerkinElmer, Inc., Satellite Networks, and PrimeWave Communications.

During 2002, certain commercial businesses of L-3 were combined with other larger L-3 businesses, which are primarily U.S. Government contractors. Sales and costs and expenses for these commercial businesses are now presented under the caption "Contracts, primarily U.S. Government." The Company has reclassified sales and costs and expenses for all prior periods presented to conform to the 2002 presentation.

PRINCIPLES OF CONSOLIDATION: The consolidated financial statements of the Company include all wholly-owned and significant majority-owned subsidiaries. All significant intercompany transactions are eliminated in consolidation. Investments over which the Company has significant influence but does not have voting control are accounted for by the equity method.

CASH AND CASH EQUIVALENTS: Cash equivalents consist of highly liquid investments with a maturity of three months or less at time of purchase.

REVENUE RECOGNITION: The substantial majority of the Company's direct and indirect sales to the U.S. Government and certain of the Company's sales to foreign governments and commercial customers are made pursuant to written contractual arrangements or "contracts" to design, develop, manufacture and/or modify complex products, and to the specifications of the buyers (customers) or to provide services related to the performance of such contracts. These contracts are within the scope of SOP 81-1, and sales and profits on them are recognized using percentage-of-completion methods of accounting. Sales and profits on fixed-price production contracts whose units are produced and delivered in a continuous or sequential process are recorded as units are delivered based on their selling prices (the "units-of-delivery" method). Sales and profits on other fixed-price contracts are recorded based on the ratio of total actual incurred costs to date to the total estimated costs for each contract (the "cost-to-cost method"). Amounts representing contract change orders or claims are included in sales only when they can be reliably estimated and their realization is reasonably assured. Losses on contracts are recognized in the period in which they are determined. The impact of revisions of contract estimates, which may result from contract modifications, performance or other reasons, are recognized on a cumulative catch-up basis in the period in which the revisions are made.

Revenue recognition on sales arrangements that are cost-reimbursable contracts with the U.S. Government are also specifically within the scope of ARB 43, in addition to SOP 81-1. Sales and profits on a cost-reimbursable contract are recognized as allowable costs are incurred on the contract and become billable to the customer, in an amount equal to the allowable costs plus the profit on those cost which is generally fixed or variable based on the contract fee arrangement.

Sales on arrangements that are not within the scope of SOP 81-1 or ARB 43 are recognized in accordance with the SEC's SAB No. 101. Sales are recognized when there is persuasive evidence of an arrangement, delivery has occurred or services have been performed, the selling price to the buyer is fixed or determinable and collectibility is reasonably assured.

CONTRACTS IN PROCESS: Contracts in process include receivables and inventories for contracts that are within the scope of SOP 81-1, as well as receivables and inventories related to other contractual arrangements. Billed Receivables represent the uncollected portion of amounts recorded as sales and billed to customers, including those amounts for sales arrangements that are not within the scope of SOP 81-1. Unbilled Contract Receivables represent accumulated incurred costs and earned profits or losses on contracts in process that have been recorded as sales, but have not yet been billed to customers. Inventoried Contract Costs represent incurred costs on contracts in process that have not been recognized as costs and expenses and which are recoverable under contracts. Incurred contract costs include direct costs and overhead costs. In accordance with SOP 81-1 and the AICPA Audit and Accounting Guidelines, Audits of Federal Government Contractors, the Company's inventoried contract costs for U.S. Government contracts, and contracts with prime contractors or subcontractors of the U.S. Government, also include allocated general and administrative costs, independent research and development costs and bid and proposal costs. Contracts in Process may contain amounts relating to contracts and programs with long performance cycles, a portion of which may not be realized within one year. Provisions for contracts in a loss position in excess of the amounts included in Contracts in Process are reported in Estimated Costs in Excess of Billings to Complete Contracts in Process, which is a component of Other Current Liabilities and Other Liabilities. Under the contractual arrangements on certain contracts with the U.S. Government, the Company receives progress payments as it incurs costs. The U.S. Government has a security interest in the Unbilled Contract Receivables and Inventoried Contract Costs to which progress

payments have been applied, and such progress payments are reflected as a reduction of the related Unbilled Contract Receivables and Inventoried Contract Costs. Customer Advances are classified as current liabilities.

Inventories other than Inventoried Contract Costs are stated at the lower of cost or market primarily using the average cost method.

The Company values its acquired contracts in process on the date of acquisition at contract value less the Company's estimated costs to complete the contract and a reasonable profit allowance on the Company's completion effort commensurate with the profit margin that the Company earns on similar contracts.

DERIVATIVE FINANCIAL INSTRUMENTS: In connection with its risk management and financial derivatives, the Company has entered into interest rate swap agreements, interest rate cap and floor contracts and foreign currency forward contracts. Derivative financial instruments also include embedded derivatives. The Company's interest rate swap agreements are accounted for as fair value hedges. The difference between the variable interest rates paid on the interest rate swap agreements and the fixed interest rate on the debt instrument underlying the swap agreements is recorded as increases or decreases to interest expense. Upon termination of an interest rate swap agreement, the cash received or paid that relates to the future value of the swap agreements at the termination date is a deferred gain or loss, which is recognized as a decrease or increase to interest expense over the remaining term of the underlying debt instrument. The foreign currency forward contracts are accounted for as cash flow hedges. Upon settlement, gains and losses on foreign currency forward contracts are reported as a component of the underlying transaction within contracts in process. The embedded derivatives related to the issuance of the Company's debt are recorded at fair value with changes reflected in the statement of operations.

PROPERTY, PLANT AND EQUIPMENT: Property, plant and equipment are stated at cost, less accumulated depreciation. Depreciation is computed by applying principally the straight-line method to the estimated useful lives of the related assets. Useful lives range substantially from 10 to 40 years for buildings and improvements and 3 to 10 years for machinery, equipment, furniture and fixtures. Leasehold improvements are amortized over the shorter of the lease term or the estimated useful life of the improvements. When property or equipment is retired or otherwise disposed of, the net book value of the asset is removed from the Company's balance sheet and the net gain or loss is included in the determination of income.

DEBT ISSUANCE COSTS: Costs incurred to issue debt are deferred and amortized as interest expense over the term of the related debt using a method that approximates the effective interest method.

IDENTIFIABLE INTANGIBLES: Identifiable intangibles include contracts and customer relationships, unpatented technology and non-compete agreements. Effective January 1, 2002, the initial measurement of these intangible assets has been based on their fair values. Fair value for customer relationships and non-compete agreements are derived using the present value of estimated future cash flows, net of income taxes, that are expected to result from the programs. Identifiable intangibles are amortized over their useful lives, which range from 5 to 20 years.

GOODWILL: Effective January 1, 2002, the Company accounts for goodwill in accordance with Statement of Financial Accounting Standards (SFAS) No. 142, Goodwill and other Intangible Assets. The carrying value of goodwill and indefinite lived identifiable intangible assets are not amortized, but are tested for impairment based on their estimated fair values using discounted cash flows valuation at the beginning of each year, and whenever events or changes in circumstances indicate that the carrying amount of these assets may not be recoverable. Prior to January 1, 2002, goodwill was amortized on a straight-line basis over periods ranging from 15 to 40 years except for goodwill related to acquisitions consummated after June 30, 2001. Prior to the adoption of SFAS No. 142, the Company evaluated the carrying amount of goodwill by reference to current and estimated profitability and undiscounted cash flows.

INCOME TAXES: The Company provides for income taxes using the liability method. Deferred income tax assets and liabilities reflect tax carryforwards and the net tax effects of temporary differences between the carrying amounts of assets and liabilities for financial reporting and income tax purposes, as determined under enacted tax laws and rates. The effect of changes in tax laws or rates is accounted for in the period of enactment.

RESEARCH AND DEVELOPMENT: Independent research and development costs sponsored by the Company include bid and proposal costs, and relate to both U.S. Government products and services and those for commercial and foreign customers. The independent research and development (IRAD) and bid and proposal costs (B&P) for the Company's businesses that are U.S. Government contractors are allowable indirect contract costs that are allocated to our U.S. Government contracts in accordance with U.S. Government regulations. In accordance with SOP 81-1 and the AICPA Audit and Accounting Guide, Audits of Federal Government Contractors, the Company reports IRAD and B&P costs allocated to U.S. Government contracts as costs of sales when the related contract sales are recognized, and are not accounted for as period expenses. Research and development costs for the Company's businesses that are not U.S. Government contractors are expensed as incurred in accordance with SFAS No. 2, Accounting for Research and Development Costs.

Customer-funded research and development costs, including software development costs, are incurred pursuant to contracts under which the customer directs the scope of work and are accounted for as direct contract costs, which are not research and development expenses under SFAS No. 2.

COMPUTER SOFTWARE COSTS. The Company's software development costs for computer software to be sold, leased or marketed that are incurred after establishing technological feasibility for the computer software are capitalized as other assets and amortized on a product by product basis using the amount that is the greater of the straight-line method over the useful life or the ratio of current revenues to total estimated revenues in accordance with SFAS No. 86, Accounting for the Costs of Computer Software to Be Sold, Leased or Otherwise Marketed. Capitalized software development costs, net of accumulated amortization, was $25,724 at December 31, 2002 and $16,025 at December 31, 2001, and is included in other assets on the consolidated balance sheets.

STOCK OPTIONS: The Company accounts for stock options under the recognition and measurement principles of Accounting Principles Board (APB) Opinion No. 25, Accounting for Stock Issued to Employees. Compensation expense for incentive stock options is recognized in income based on the excess, if any, of L-3 Holdings' fair value of the stock at the grant date of the award or other measurement date over the amount an employee must pay to acquire the stock. When the exercise price for incentive stock options granted to employees equals or exceeds the fair value of the L-3 Holdings common stock at the date of grant, the Company does not recognize compensation expense. The table below presents pro forma net income and L-3 Holdings EPS had the Company elected to recognize compensation expense in accordance with the fair value approach of SFAS No. 123, Accounting for Stock-Based Compensation, as amended by SFAS No. 148, Accounting for Stock-Based Compensation -- Transition and Disclosure -- an amendment of SFAS No. 123.

(DOLLARS IN THOUSANDS, EXCEPT PER SHARE DATA)

	YEAR ENDED DECEMBER 31,		
	2002	2001	2000
Net income:			
As reported	$ 178,097	$ 115,458	$ 82,727
Pro forma	160,079	107,573	75,064
L-3 Holdings Basic EPS:			
As reported	$ 2.05	$ 1.54	$ 1.24
Pro forma	1.84	1.44	1.13
L-3 Holdings Diluted EPS:			
As reported	$ 1.93	$ 1.47	$ 1.18
Pro forma	1.75	1.38	1.07

The assumptions used to calculate the fair value of stock options at their grant dates are presented in Note 14.

PRODUCT WARRANTIES: Product warranty costs are accrued when the covered products are shipped to customers. Product warranty expense is recognized based on the terms of the product warranty and the related estimated costs. Accrued warranty costs are reduced as these costs are incurred.

USE OF ESTIMATES: The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of sales and costs and expenses during the reporting period. The most significant of these estimates and assumptions relate to contract estimates of sales and estimated costs to complete contracts in process, estimates of market values for inventories reported at lower of cost or market, estimates of pension and postretirement benefit obligations, recoverability of recorded amounts of fixed assets and goodwill, income taxes, litigation and environmental obligations. Actual amounts will differ from these estimates.

RECENTLY ISSUED ACCOUNTING STANDARDS: In May 2002, the FASB issued SFAS No. 145, Rescission of SFAS Nos. 4, 44 and 64, Amendment of SFAS No. 13, and Technical Corrections as of April 2002. SFAS No. 145 rescinds SFAS No. 4, Reporting Gains and Losses from Extinguishment of Debt, and SFAS No. 64, Extinguishments of Debt Made to Satisfy Sinking-Fund Requirements. Under the provisions of SFAS No. 145, gains and losses from extinguishment of debt can only be classified as extraordinary items if they meet the criteria in APB Opinion No. 30. The provisions of this Statement related to the rescission of SFAS No. 4 shall be applied in fiscal years beginning after May 15, 2002. Earlier application is permitted. This statement also amends SFAS No. 13, Accounting for Leases, to eliminate an inconsistency between the accounting for sale-leaseback transactions and certain lease modifications that have economic effects that are similar, and is effective for transactions occurring after May 15, 2002. This Statement also amends other existing authoritative pronouncements to make various technical corrections, clarify meanings, or describe their applicability under changed conditions and are effective for financial statements issued on or after May 15, 2002. In accordance with the provisions of SFAS No. 145, beginning on January 1, 2003, the loss on the retirement of debt of $16,187 ($9,858 after-tax or $0.11 per diluted share) that the Company recorded in June 2002 (see Note 8) has been presented as a separate caption within income from continuing operations and the related income tax benefit has been included in the provision for income taxes. All related data in these financial statements have been restated to conform with this presentation.

In August 2001, the FASB issued SFAS No. 143, Accounting for Asset Retirement Obligations. SFAS No. 143 applies to legal obligations associated with the retirement of tangible long-lived assets that result from the acquisition, construction, development or normal operation of a long-lived asset, except for certain obligations of lessees. This statement does not apply to obligations that arise solely from a plan to dispose of a long-lived asset. SFAS No. 143 requires that estimated asset retirement costs be measured at their fair values and recognized as assets and depreciated over the useful life of the related asset.

Similarly, liabilities for the present value of asset retirement obligations are to be recognized and accreted as interest expense each year to their estimated future value until the asset is retired. These provisions will be applied to existing asset retirement obligations as of the adoption date as a cumulative-effect of a change in accounting policy. SFAS No. 143 is effective for the Company's fiscal years beginning January 1, 2003. SFAS No. 143 is not expected to have a material effect on the Company's consolidated results of operations and financial position.

In July 2002, the FASB issued SFAS No. 146, Accounting for Costs Associated with Exit or Disposal Activities. SFAS No. 146 replaces FASBs' Emerging Issues Task Force (EITF) No. 94-3 Liability Recognition for Certain Employee Termination Benefits and Other Costs to Exit an Activity (including Certain Costs Incurred in a Restructuring). SFAS No. 146 requires companies to recognize costs associated with exit or disposal activities when they are incurred rather than at the date of a commitment to an exit or disposal plan as was required by EITF No. 94-3. Examples of costs covered by SFAS No. 146 include lease termination costs and certain employee severance costs that are associated with a restructuring, discontinued operation, plant closing, or other exit or disposal activity. SFAS No. 146 is to be applied to exit or disposal activities initiated after December 31, 2002. SFAS No. 146 is not expected to have a material effect on the Company's consolidated results of operations and financial position.

In November 2002, the FASB issued FASB Interpretation No. 45, Guarantor's Accounting and Disclosure Requirements for Guarantees, Including Indirect Guarantees of Indebtedness of Others (FIN 45). This interpretation addresses the disclosures to be made by a guarantor in its interim and annual financial statements about its obligations under guarantees and clarifies when a liability for the obligation undertaken should be recognized. The initial measurement of the liability is the fair value of the guarantee at its inception. This interpretation does not prescribe a specific account for the guarantor's offsetting entry when it recognizes the liability at the inception of a guarantee nor does it specify the subsequent measurement of the guarantors recognized liability. The initial recognition and measurement provisions shall be applied on a prospective basis to guarantees issued or modified after December 31, 2002. The disclosure requirements are included in Notes 6 and 15. FIN 45 is not expected to have a material effect on the Company's consolidated results of operation and financial position.

In December 2002, the FASB issued SFAS No. 148, Accounting for Stock-Based Compensation -- Transition and Disclosure -- an amendment of FASB Statement No. 123. This Statement amends FASB Statement No. 123, Accounting for Stock-Based Compensation, to provide alternative methods of transition for a voluntary change to the fair value based method of accounting for stock-based employee compensation. In addition, this Statement amends the disclosure requirements of Statement No. 123 to require prominent disclosures in both annual and interim financial statements about the method of accounting for stock-based employee compensation and the effect of the method used on reported results. The amendments to Statement No. 123 that relate to annual financial statements are effective for the Company's 2002 annual financial statements. The amendments to Statement No. 123 that relate to interim financial statements are effective for the Company's March 31, 2003 financial statements. The Company does not intend to adopt the fair value based method of accounting for stock-based employee compensation which would require the Company to record a non-cash expense for the estimated fair value of stock-based compensation grants. Instead the Company will continue to apply the disclosure-only provisions of SFAS No. 123 (see accounting policy for stock options above and Note 14). Therefore, SFAS No. 148 is not expected to have a material effect on the Company's consolidated results of operations and financial position.

In January 2003, the FASB issued FASB Interpretation No. 46, Consolidation of Variable Interest Entities (FIN 46). This interpretation provides guidance on the identification of, and financial reporting for, entities over which control is achieved through means other than voting rights. Such entities have been termed by FIN 46 as variable interest entities (VIE). Once effective, FIN 46 will be the guidance that determines (1) whether consolidation is required under the "controlling financial interest" model of ARB Bulletin No. 51, Consolidated Financial Statements, or (2) whether the variable-interest model under FIN 46 should be used to account for existing and new entities. FIN 46 includes guidance for identifying the

enterprise that will consolidate a VIE, which is the enterprise that is exposed to the majority of an entity's risks or receives the majority of the benefits from an entity's activities. FIN 46 also requires that the enterprises that hold a significant variable interest in a VIE make new disclosures in their financial statements. The transitional disclosures of FIN 46, which are effective immediately, require an enterprise to identify the entities in which it holds a variable interest if the enterprise believes that those entities might be considered VIEs upon the adoption of FIN 46. The implementation and remaining disclosure requirements of FIN 46 are effective immediately for VIE's created after January 31, 2003, and on July 1, 2003 for all VIE's created before January 31, 2003. The Company does not believe that it holds any interests in VIEs, however, the Company is currently evaluating whether it holds a variable interest in entities that might be considered VIEs.

RECLASSIFICATIONS: Certain reclassifications have been made to conform prior-year amounts to the current-year presentation.

3. ACQUISITIONS, DIVESTITURE AND OTHER TRANSACTIONS

ACQUISITIONS

Aircraft Integration Systems. On March 8, 2002, the Company acquired the assets of Aircraft Integration Systems ("AIS"), a division of Raytheon Company (Raytheon), for $1,148,700 in cash, which includes $1,130,000 for the original contract purchase price, and an increase to the contract purchase price of $18,700 related to additional net assets received at closing, plus acquisition costs. Following the acquisition, the Company changed AIS's name to L-3 Communications Integrated Systems ("IS"). The purchase price is subject to adjustment based on the IS closing date net tangible book value, as defined. The acquisition was financed using approximately $229,000 of cash on hand, borrowings under the Company's senior credit facilities of $420,000 and a $500,000 senior subordinated bridge loan (See Note 8.). The Company acquired IS because it is a long-standing supplier of critical COMINT, SIGINT and unique sensor systems for special customers within the U.S. Government. The Company believes that IS has excellent operating prospects as its major customers increasingly focus on intelligence gathering and information distribution to the battlefield. The Company also believes there are significant opportunities to apply its proven business integration and cost control skills to further enhance IS's operating and financial performance. The Company also believes that IS creates significant opportunities for the sale of the Company's secure communications and aviation products, including communication links, signal processing, antennas, data recorders, displays and traffic control and collision avoidance systems.

The table below presents a summary of (1) the initial purchase price allocation for the IS acquired assets and assumed liabilities as was reported in the Company's unaudited condensed consolidated financial statements as of March 31, 2002, (2) the adjustments made to the initial purchase price allocation during the nine months ended December 31, 2002, and (3) the final purchase price allocation for IS, which includes the results from the audit of AIS's acquired net assets that was performed by the Company's independent auditors and the final appraisals and other valuations of fair value for the IS acquired assets and assumed liabilities. The AIS acquired contracts in process reflected in the Company's initial purchase price allocation for IS was based on the accounting records of AIS, which reflected September 2001 contract estimates prepared by AIS. In order to complete the audit of AIS's acquired net assets and prepare the Company's final purchase price allocation for IS as of March 1, 2002, the effective date of acquisition, the Company updated those September 2001 contract estimates for the five months of activity and changes in circumstances that occurred from September 2001 to March 1, 2002.

(DOLLARS IN THOUSANDS, EXCEPT PER SHARE DATA)

	IS PURCHASE PRICE ALLOCATION			
	INITIAL	ADJUSTMENT(A)	FINAL	
Contracts in process	$ 360,567	$ (157,245)	$ 203,322	(b)
Other current assets	1,678	81,844	83,522	(c)
Property, plant and equipment	182,307	20,408	202,715	(d)
Goodwill	663,215	99,155	762,370	(e)
Intangible assets	16,894	41,486	58,380	(f)
Other non-current assets	37,958	47,710	85,668	(c)
Total assets acquired	1,262,619	133,358	1,395,977	
Other current liabilities	17,020	100,425	117,445	(g)
Pension and postretirement benefits	95,000	24,606	119,606	(h)
Other long-term liabilities	1,279	3,334	4,613	(i)
Total liabilities assumed	113,299	128,365	241,664	
Net assets acquired	$1,149,320	$ 4,993	$1,154,313	

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(a) The adjustments to the initial purchase price allocation include the preliminary adjustments recorded by the Company in September 2002 that were reported in the Company's unaudited condensed consolidated financial statements as of September 30, 2002.

(b) The reduction to contracts in process includes $86,149 to update estimated costs to complete the AIS acquired contracts as of the date of acquisition to reflect changes in circumstances that occurred prior to the date of acquisition; $74,517 to value acquired contracts in process at estimated contract value less the Company's estimated costs to complete the contracts and a reasonable profit allowance on the Company's completion effort commensurate with the profit margin that the Company earns on similar contracts in accordance with SFAS 141, paragraph 37(c); $12,000 to reduce the estimated net realizable value of an assumed claim against an AIS subcontractor; $9,535 to properly translate receivables, inventoried contract costs and estimated billings and costs to complete a foreign contract from Australian dollars to U.S. dollars; $19,799 primarily to reduce the value of unbilled contract receivables and inventoried contract costs related to inactive and completed contracts for which there is no remaining contract value, to record the results of physical inventory counts and to adjust excess and obsolete inventories for amounts that will not be used on acquired contracts; $7,816 to reduce the percentage of completion sales on certain acquired contracts in process in order to reconcile them to AIS's September 2001 contract estimates at completion contained in the accounting records of AIS; and, $24,856 to record adjustments made by Raytheon prior to the Company's acquisition of AIS which were not reflected in the accounting records of AIS primarily relating to contracts and receivables retained by Raytheon. The AIS acquired contracts in process had an aggregate contract value of approximately $3,900,000, including funded and unfunded amounts, with approximately $1,000,000 of funded backlog at the date of acquisition. The majority of the revisions to estimated costs to complete acquired contracts relate to the Sea Sentinel contract, with other amounts relating to the Extract, Peace Pioneer, SIVAM, SRP and LC-130 contracts. The Company's aggregate adjustments to contracts in process discussed in this item (b) amounted to $234,672. In addition, the Company reclassified $77,427 of negative balances in contracts in process to other current liabilities (see item (g) below).

(c) The increases to other current assets and other non-current assets primarily represents estimated deferred income tax assets related to the differences between financial statement amounts and income tax basis amounts included in the final IS acquisition balance sheet and tax purchase price allocations for the acquired assets and assumed liabilities.

(d) The increase to property, plant and equipment includes a valuation adjustment of $26,719 to increase the carrying value of land and buildings to fair value based on an independent appraisal, partially offset by a reduction to internal-use software costs and other fixed assets included in the AIS historical net assets that will not be used by the IS business.

(e) The increase to goodwill represents the effect of the final adjustments to the purchase price allocation. Goodwill in the amount of $518,412 was assigned to the Secure Communications & ISR segment and $243,958 was assigned to the Aviation Products & Aircraft Modernization segment. Approximately $508,350 of the IS goodwill is expected to be deductible for income tax purposes, which is less than the amount of goodwill for financial reporting purposes because of differences in the financial statement amounts and income tax basis amounts for certain of the acquired asset and liabilities, pertaining primarily to contracts in process, property, plant and equipment, other current liabilities and pension and postretirement benefits.

(f) The increase to intangible assets is to value identifiable intangible assets relating to acquired contracts and customer-relationships and a non-compete agreement based on an independent valuation, reduced by $16,894 for certain technology rights included in the AIS historical net assets that will not be used by the IS business.

(g) The increase to other current liabilities is comprised of reclasses of $77,427 from contracts in process for contracts with credit balances (see item (b) above); $3,254 for employee termination costs; and $19,744 for accounts payable, accrued employment costs and accrued expenses assumed in the AIS acquisition that were not recorded in the accounting records of AIS.

(h) The increase to pension and postretirement benefits is based on the final actuarial valuation for the assumed liabilities.

(i) The increase to other long-term liabilities represents environmental remediation liabilities assumed in the IS acquisition that were not recorded in the accounting records of AIS.

The final IS purchase price allocation does not include an adjustment for the final purchase price of AIS which will be based on the difference between AIS's final closing date net tangible book value, as defined in the AIS asset purchase agreement, and AIS's net tangible book value as of September 30, 2001. The Company has submitted its proposed purchase price adjustment in accordance with the asset purchase agreement to the Raytheon Company, the seller of the AIS business, which amounts to a reduction of $100,000 to the final purchase price submitted by Raytheon to the Company. The Company expects to resolve the final purchase price for AIS with the seller in 2003. Any amount received by the Company for a reduction to the AIS purchase price will be recorded as a reduction to the goodwill for IS.

The cash required to fund the revisions that the Company made to the estimated costs to complete the AIS acquired contracts in process and estimated costs in excess of billings on the acquired contracts in a loss position will be reported as reductions to cash flows from operating activities on the Company's statement of cash flows as the costs are incurred.

Detection Systems. On June 14, 2002, the Company completed the acquisition of the detection systems business of PerkinElmer ("Detection Systems") for $110,000 in cash, which includes $100,000 for the original contract purchase price, and an increase to the contract purchase price of $10,000 related to a preliminary purchase price adjustment, plus acquisition costs. The purchase price is subject to final adjustment based on closing date net working capital, as defined. Detection Systems offers X-ray screening for several major security applications, including: (1) aviation systems for checked and oversized baggage, break bulk cargo and air freight; (2) port and border applications including pallets, break bulk and air freight; and (3) facility protection such as parcels, mail and cargo. Detection Systems has a broad range of systems and technology, and an installed base of over 16,000 units. Detection Systems' customer base includes major airlines and airports, a number of domestic agencies, such as the U.S. Customs Service, U.S. Marshals Service, U.S. Department of Agriculture and U.S. Department of State, and international authorities throughout Europe, Asia and South America. The acquisition

broadens the Company's capabilities and product offerings in the rapidly growing areas of airport security and other homeland defense markets, including explosive detection systems (EDS). The acquisition provides the Company with enhanced manufacturing and marketing capabilities, which will be used as the Company works to meet growing demand for its EDS products. Based on the preliminary purchase price allocation for Detection Systems, goodwill of $59,942 was assigned to the Specialized Products segment and is not expected to be deductible for income tax purposes.

Telos, ComCept and TMA. During the third quarter of 2002, in separate transactions the Company acquired three businesses for an aggregate consideration of $99,274, which was comprised of $88,667 in cash, 229,494 shares of L-3 Holdings common stock for part of the ComCept purchase price valued at $10,607, plus acquisition costs. The purchase prices for ComCept and Technology, Management and Analysis Corporation are subject to adjustment based on the closing date net assets or net working capital of the acquired businesses. The Company acquired:

- all of the outstanding common stock of Telos Corporation (Telos), a business incorporated in California, which provides software development for command, control and communications and other related services for military and national security requirements, on July 19, 2002;

- all of the outstanding common stock of ComCept, Inc. (ComCept), a company with network-centric warfare capabilities, including requirements development, modeling, simulation, communications and systems development and integration for ISR, on July 31, 2002. This acquisition is subject to additional consideration not to exceed 219,088 shares of L-3 Holdings common stock which is contingent upon the financial performance of ComCept for the fiscal years ending June 30, 2003 and 2004; and which will be accounted for as goodwill; and

- all of the outstanding common stock of Technology, Management and Analysis Corporation (TMA), a provider of professional services to the DoD, primarily in support of the Naval surface and combat fleet, on September 23, 2002. The core competencies of TMA include engineering, logistics, ship test and trials, network engineering and support and hardware and software products. This acquisition is subject to additional purchase price not to exceed $7,000 which is contingent upon the financial performance of TMA for the twelve months ending September 30, 2003 and which will be accounted for as goodwill.

Based on the preliminary purchase price allocations, the goodwill recognized for the acquisitions of Telos, ComCept and TMA was $87,109, of which $46,707 is expected to be deductible for income tax purposes. Goodwill of $22,421 was assigned to the Secure Communications & ISR segment and $64,688 was assigned to the Training, Simulation & Support Services segment.

Northrop Grumman's Electron Devices and Displays - Navigation Systems - San Diego Businesses, Wolf Coach Inc., International Microwave Corporation, Westwood Corporation, Wescam Inc. and Ship Analytics, Inc. During the fourth quarter of 2002, in separate transactions the Company acquired seven businesses for an aggregate purchase price of $338,766 in cash plus acquisition costs. Except for Westwood Corporation and Wescam Inc., the purchase prices are subject to adjustment based on the closing date net assets or net working capital of the acquired businesses. The Company acquired:

- the net assets of Northrop Grumman's Electron Devices and Displays - Navigation Systems - San Diego businesses on October 25, 2002. Electron Devices is a supplier of microwave power devices to all major prime contractors on key military programs, including missile seekers, aircraft navigation and landing systems, airborne and ground radar's and electronic warfare and communications systems. Following the acquisition, the Company changed Electron Devices name to L-3 Communications Electron Devices (Election Devices). Displays - Navigation Systems is a supplier of ruggedized displays and computer and electronic systems for both military and commercial applications. Following the acquisition, the Company changed Displays - Navigation Systems name to L-3 Communications Ruggedized Command and Control Solutions (Ruggedized C&C);

- all of the outstanding common shares of Wolf Coach, Inc. (Wolf Coach), a producer of mobile communications vehicles, for customers in the television industry, the military and for the homeland defense market, on November 1, 2002. The acquisition is subject to additional purchase price not to exceed $4,100 which is contingent upon the financial performance of Wolf Coach for the years ending December 31, 2003, 2004 and 2005, and which will be accounted for as goodwill;

- all of the outstanding common stock of International Microwave Corporation (IMC), a global communications company that provides wireless communications, network support services, information technology, defense communications and enhanced surveillance systems, on November 8, 2002. The acquisition is subject to additional purchase price not to exceed $5,000 which is contingent upon the financial performance of IMC for the year ending December 31, 2003, and which will be accounted for as goodwill;

- all of the outstanding common stock of Westwood Corporation (Westwood), a supplier of shipboard power control, switchgear and power distribution systems to the United States Navy, Army, Air Force and Coast Guard, on November 13, 2002;

- all of the outstanding common stock of Wescam Inc. (Wescam), a designer and manufacturer of systems for defense applications that capture images from mobile platforms and transmit them in real time to tactical command centers for interpretation and for commercial broadcast applications to production facilities. On November 21, 2002, the Company purchased approximately 78% of the outstanding common shares of Wescam. As of December 23, 2002, the Company had purchased all of the outstanding common shares of Wescam; and

- all of the outstanding common stock of Ship Analytics, Inc (Ship Analytics), a producer of crisis management software, providing command and control for homeland security applications, on December 19, 2002. Ship Analytics also designs, manufactures and operates real-time simulation systems for critical shipboard operations for commercial maritime and naval customers. The acquisition is subject to additional purchase price not to exceed $13,500 which is contingent upon the financial performance of Ship Analytics for the years ending December 31, 2003, 2004 and 2005, and which will be accounted for as goodwill.

Based on the preliminary purchase price allocations, the goodwill recognized for the acquisitions of Electron Devices, Ruggedized C&C, Wolf Coach, IMC, Westwood, Wescam and Ship Analytics was $199,038, of which $41,174 is expected to be deductible for income tax purposes. Goodwill of $195,575 was assigned to the Specialized Products segment and $3,463 was assigned to the Training, Simulation & Support Services segment.

Spar Aerospace. At December 31, 2001, the Company had acquired 70.3% of the outstanding common stock of Spar Aerospace Limited (Spar), a leading provider of high-end aviation product modernization, for $103,172 in cash, plus acquisition costs and acquired control of Spar and the ability to require the remaining stockholders to tender their shares. The Company acquired control of Spar on November 23, 2001 after an initial tender offer under which the Company acquired 65.8% of the outstanding common stock of Spar. During January 2002, the Company completed the acquisition and paid $43,641 for the remaining outstanding common stock of Spar which was not tendered to the Company at December 31, 2001.

SY Technology, BT Fuze and Emergent. During the fourth quarter of 2001, in separate transactions the Company acquired three other businesses for an aggregate purchase price of $149,273 in cash plus acquisition costs, including net purchase price increases of $10,183 based on the closing date balance sheets of the acquired businesses and $1,800 of additional purchase price based on the financial performance of the acquired companies for the year ended December 31, 2001. The Company acquired:

- the net assets of SY Technology, Inc. (SY), a provider of air warfare simulation services, on December 31, 2001. This acquisition is subject to additional purchase price not to exceed $3,000 which is contingent upon the financial performance of SY for the year ended December 31, 2002 and the year ending December 31, 2003 and which will be accounted for as goodwill;

- the net assets of Bulova Technologies, a producer of military fuzes that prevent the inadvertent firing and detonation of weapons during handling, on December 19, 2001. Bulova Technologies was later renamed BT Fuze Products (BT Fuze). This acquisition is subject to additional purchase price not to exceed $2,500 which is contingent upon the financial performance of BT Fuze for the year ending December 31, 2003 and which will be accounted for as goodwill; and

- all of the outstanding common stock of Emergent Government Services Group (Emergent), a provider of engineering and information services to the U.S. Air Force, Army, Navy and intelligence agencies, on November 30, 2001. Following the acquisition, the Company changed Emergent's name to L-3 Communications Analytics (L-3 Analytics).

Based on the final purchase price allocations, the goodwill recognized in the acquisitions of Spar, SY, BT Fuze and Emergent was $199,916, of which 78,497 is expected to be fully deductible for tax purposes. Goodwill of $103,804 was assigned to the Aviation Products & Aircraft Modernization segment, $61,075 was assigned to the Training, Simulation & Support Services segment and $35,037 was assigned to the Specialized Products segment.

KDI and EER. On May 4, 2001, the Company acquired all of the outstanding common stock of KDI Precision Products (KDI) for $78,862 in cash plus acquisition costs. On May 31, 2001, the Company acquired all of the outstanding common stock of EER Systems (EER) for $119,392 in cash plus acquisition costs. The purchase price for EER was increased on December 31, 2002 by $5,000, which will be paid to the EER shareholders in 2003, for a purchase price adjustment that was based on the financial performance of EER for the year ended December 31, 2002.

TDTS, TrexCom, TCAS, MPRI and Coleman. On February 10, 2000, the Company acquired the assets of the Training Devices and Training Services (TDTS) business of Raytheon Company for $160,000 in cash plus acquisition costs. Following the acquisition, the Company changed TDTS's name to L-3 Communications Link Simulation and Training ("Link Simulation and Training"). On February 14, 2000, the Company acquired the assets of the LNR and EMP businesses of Trex Communications Corporation (TrexCom) for $49,310 in cash plus acquisition costs. On April 28, 2000, the Company acquired the Traffic Alert and Collision Avoidance System (TCAS) product line from Honeywell Inc. for a purchase price of $239,200 in cash plus acquisition costs. On June 30, 2000, the Company acquired all the outstanding common stock of MPRI Inc. (MPRI) for $39,606 in cash plus acquisition costs. On December 29, 2000, the Company acquired all of the outstanding common stock of Coleman Research Corporation (Coleman), a subsidiary of Thermo Electron Corporation, for $60,000 in cash plus acquisition costs, and additional purchase price not to exceed $5,000 which is contingent upon the financial performance of Coleman for the year ended December 31, 2001.

Additionally, during the years ended December 31, 2002, 2001 and 2000, the Company purchased other businesses, which individually and in the aggregate were not material to its consolidated results of operations, financial position or cash flows in the year acquired.

Substantially all of the acquisitions were initially financed with cash on hand or borrowings on the Company's bank credit facilities.

All of the Company's acquisitions have been accounted for as purchase business combinations and are included in the Company's results of operations from their respective effective dates. The assets and liabilities recorded in connection with the purchase price allocations for the acquisitions of Detection Systems, Telos, ComCept, TMA, Electron Devices and Display -- Navigation Systems -- San Diego, Wolf Coach, IMC, Westwood, Wescam and Ship Analytics are based upon preliminary estimates of fair

values for contracts in process, inventories, estimated costs in excess of billings to complete contracts in process, identifiable intangibles and deferred income taxes. Actual adjustments will be based on the final purchase prices and final appraisals and other analyses of fair values which are in process. The Company does not expect the differences between the preliminary and final purchase price allocations for the acquisitions to be material. The Company expects to complete the purchase price allocations during the first half of 2003.

Pro Forma Statement of Operations Data. Had the acquisitions of IS, Detection Systems, Telos, ComCept, TMA, Electron Devices, Ruggedized C&C, Wolf Coach, IMC, Westwood, Wescam and Ship Analytics and the related financing transactions occurred on January 1, 2002, the unaudited pro forma sales, net income and diluted earnings per share would have been approximately $1,353,400, $76,600 and $0.76 for the three months ended December 31, 2002, and $4,699,100, $167,800 and $1.71 for the year ended December 31, 2002.

Had the acquisitions of KDI, EER, SY, BT Fuze, L-3 Analytics, Spar, IS, Detection Systems, Telos, ComCept, TMA, Electron Devices, Ruggedized C&C, Wolf Coach, IMC, Westwood, Wescam and Ship Analytics and the related financing transactions occurred on January 1, 2001, the unaudited pro forma sales, net income and diluted earnings per share would have been approximately $1,157,700, $20,300 and $0.22 for the three months ended December 31, 2001, and $4,139,600, $113,900 and $1.21 for the year ended December 31, 2001.

The pro forma results disclosed in the preceding paragraphs are based on various assumptions and are not necessarily indicative of the result of operations that would have occurred had the Company completed the acquisitions and the related financing transactions on January 1, 2001 and January 1, 2002.

Goodrich Avionics Systems. On January 29, 2003, the Company announced that it had agreed to acquire Goodrich Avionics Systems of Goodrich Corporation, for $188,000 in cash. Goodrich Avionics Systems develops and produces avionics products for commercial and military applications which are focused on aircraft safety and situational awareness, and include collision avoidance systems, display systems, weather avoidance systems, terrain awareness and warning systems, navigation systems and power supply and conditioning systems. Goodrich Avionics Systems also has a service, repair and overhaul operation.

DIVESTITURE AND OTHER TRANSACTIONS

On May 31, 2001, the Company sold a 30% interest in Aviation Communications and Surveillance Systems LLC (ACSS) which comprised the Company's TCAS business to Thales Avionics, a wholly owned subsidiary of Thales (formerly Thomson-CSF), for $75,206 of cash. L-3 continues to consolidate the financial statements of ACSS.

Interest and other income for the year ended December 31, 2001 includes a gain of $6,966 from the sale of a 30% interest in ACSS which was largely offset by a $6,341 write-down in the carrying amount of an investment in common stock. Also included in interest and other income for 2001 is a charge of $515 to account for the increase, in accordance with SFAS No. 133, in the fair value assigned to the embedded derivatives in L-3 Holdings' $420,000 4% Senior Subordinated Contingent Debt Securities due 2011 sold in the fourth quarter of 2001, and a loss of $751 from an equity method investment. Interest and other income for the year ended December 31, 2000 includes gains of $14,940 from the sales of the Company's interests in certain businesses. These gains were largely offset by losses of $12,456 on the write-down in the carrying value of certain investments and intangible assets. The net proceeds from the sales were $19,638, and are included in Other Investing Activities on the Statement of Cash Flows. In March 2001, the Company settled certain items with a third party provider related to an existing services agreement. In connection with the settlement, L-3 received a net cash payment of $14,200. The payment represents a credit for fees being paid over the term of the services agreement and incremental costs incurred by the Company over the same period arising from performance deficiencies under the services agreement. These incremental costs include additional operating costs for material management, vendor replacement,

(DOLLARS IN THOUSANDS, EXCEPT PER SHARE DATA)

rework, warranty, manufacturing and engineering support, and administrative activities. The $14,200 cash receipt was recorded as a reduction of costs and expenses in 2001.

4. CONTRACTS IN PROCESS

The components of contracts in process are presented in the table below. The unbilled contract receivables, inventoried contract costs and unliquidated progress payments are principally related to contracts with the U.S. Government and prime contractors or subcontractors of the U.S. Government.

	DECEMBER 31,	
	2002	2001
Billed receivables, less allowances of $12,801 and $11,649	$ 568,382	$ 330,795
Unbilled contract receivables	490,678	353,262
Less: unliquidated progress payments	(171,457)	(102,739)
Unbilled contract receivables, net	319,221	250,523
Inventoried contract costs, gross	320,043	122,211
Less: unliquidated progress payments	(13,507)	(6,575)
Inventoried contract costs, net	306,536	115,636
Inventories at lower of cost or market	123,854	104,870
Total contracts in process	$1,317,993	$ 801,824

The Company believes that approximately 93% of the unbilled contract receivables at December 31, 2002 will be billed and collected within one year.

The selling, general and administrative (SG&A) cost data presented in the table below pertains to the Company's businesses that are primarily U.S. Government contractors and have been used in the determination of the Company's costs and expenses for "Contracts, primarily U.S. Government", which are presented on the Company's statements of operations.

	YEAR ENDED DECEMBER 31,		
	2002	2001	2000
SG&A costs included in inventoried contract costs at December 31,	$ 52,253	$ 19,970	$ 24,396
SG&A costs included in inventoried contract costs related to businesses acquired during the period	34,417	1,575	3,066
SG&A incurred costs	429,386	298,317	256,470
SG&A included in costs and expenses for Contracts, primarily U.S. Government	431,520	304,318	258,777
Independent research and development, including bid and proposal costs included in SG&A incurred costs	125,108	81,019	77,831

The cost data in the table above does not include the SG&A and research and development expenses for the Company's businesses that are primarily not U.S. Government contractors, which are separately presented on the Company's statement of operations under costs and expenses for "Commercial, primarily products".

5. GOODWILL AND OTHER INTANGIBLE ASSETS

Effective January 1, 2002, the Company ceased recording goodwill amortization expense and began testing goodwill for impairment based on estimated fair values at the beginning of the year using a

(DOLLARS IN THOUSANDS, EXCEPT PER SHARE DATA)

discounted cash flows valuation. Based on the estimated fair values of the Company's reporting units as of January 1, 2002, the goodwill for certain space and broadband commercial communications businesses included in the Specialized Products segment was impaired. In the first quarter of 2002, the Company completed its valuation of the assets and liabilities for these businesses and has recorded an impairment charge of $24,370, net of a $6,428 income tax benefit. The impairment charge was recorded as a cumulative effect of a change in accounting principle effective January 1, 2002, in accordance with the adoption provisions of SFAS No. 142.

The table below presents net income and basic and diluted EPS for the year ended December 31, 2002 compared with those amounts for the same period in 2001 and 2000, adjusted to exclude goodwill amortization, net of income taxes for 2001 and 2000.

	YEAR ENDED DECEMBER 31,		
	2002	2001	2000
Reported income before accounting change	$ 202,467	$ 115,458	$ 82,727
Add: Goodwill amortization, net of income taxes and minority interest	--	33,899	29,617
Adjusted income before accounting change	$ 202,467	$ 149,357	$ 112,344
Adjusted net income	$ 178,097	$ 149,357	$ 112,344
BASIC EPS:			
Reported before accounting change	$ 2.33	$ 1.54	$ 1.24
Goodwill amortization, net of income tax and minority interest	--	0.45	0.44
Adjusted before accounting change	$ 2.33	$ 1.99	$ 1.68
Adjusted net income	$ 2.05	$ 1.99	$ 1.68
DILUTED EPS:			
Reported before accounting change	$ 2.18	$ 1.47	$ 1.18
Goodwill amortization, net of income tax and minority interest	--	0.40	0.43
Adjusted before accounting change	$ 2.18	$ 1.87	$ 1.61
Adjusted net income	$ 1.93	$ 1.87	$ 1.61

The table below presents the changes in goodwill allocated to the reportable segments during the year ended December 31, 2002.

	SECURE COMMUNICATIONS & ISR	TRAINING SIMULATION & SUPPORT SERVICES	AVIATION PRODUCTS & AIRCRAFT MODERNIZATION	SPECIALIZED PRODUCTS	CONSOLIDATED TOTAL
BALANCE JANUARY 1, 2002	$ 181,215	$ 377,127	$ 371,222	$ 778,154	$ 1,707,718
Acquisitions	540,920	68,300	249,067	259,341	1,117,628
Impairment losses	--	--	--	(30,798)	(30,798)
BALANCE DECEMBER 31, 2002	$ 722,135	$ 445,427	$ 620,289	$ 1,006,697	$ 2,794,548

The gross carrying amount and accumulated amortization balances of the Company's other intangible assets that are subject to amortization are presented in the tables below.

(DOLLARS IN THOUSANDS, EXCEPT PER SHARE DATA)

	DECEMBER 31, 2002		
	GROSS CARRYING AMOUNT	ACCUMULATED AMORTIZATION	NET CARRYING AMOUNT
Intangible assets that are subject to amortization:			
Customer relationships	$ 80,826	$ 600	$ 80,226
Unpatented technology	9,825	1,844	7,981
Non-compete agreements	2,000	60	1,940
Total	$ 92,651	$ 2,504	$ 90,147

	DECEMBER 31, 2001		
	GROSS CARRYING AMOUNT	ACCUMULATED AMORTIZATION	NET CARRYING AMOUNT
Intangible assets that are subject to amortization:			
Unpatented technology	$ 5,000	$ 1,167	$ 3,833

The Company recorded $1,337 and $333 of other intangible asset amortization for the years ended December 31, 2002 and 2001, respectively. Other intangible assets amortization, based on gross carrying amounts at December 31, 2002, is estimated to be $5,861 for 2003, $8,580 for 2004, $9,250 for 2005, $8,538 for 2006, and $8,197 for 2007.

6. OTHER CURRENT LIABILITIES AND OTHER LIABILITIES

The components of other current liabilities are presented in the table below.

	DECEMBER 31,	
	2002	2001
Accrued product warranty	$ 56,487	$ 15,968
Negative balances in contracts in process	36,841	--
Estimated cost in excess of billings to complete contracts in process in a loss position	12,451	17,859
Spar purchase price payable	--	43,641
Other	53,114	47,645
Total other current liabilities	$158,893	$ 125,113

(DOLLARS IN THOUSANDS, EXCEPT PER SHARE DATA)

The table below presents the changes in the Company's accrual for product warranties for the year ended December 31, 2002.

Balance January 1, 2002	$ 15,968
Acquisitions during this period	14,185
Accruals for product warranties issued during the period	34,016
Accruals related to pre-existing product warranties	2,231
Settlements made during the period	(9,913)
Balance December 31, 2002	$ 56,487

At December 31, 2002 and 2001, other liabilities include $13,303 and $18,814 for the non-current portion of estimated costs in excess of billings to complete contracts in process in a loss position.

7. PROPERTY, PLANT AND EQUIPMENT

	DECEMBER 31,	
	2002	2001
Land	$ 33,876	$ 12,947
Buildings and improvements	121,830	38,544
Machinery, equipment, furniture and fixtures	372,602	260,338
Leasehold improvements	121,814	29,232
Gross property, plant and equipment	650,122	341,061
Less: accumulated depreciation and amortization	191,483	137,687
Property, plant and equipment, net	$458,639	$ 203,374

Depreciation expense for property, plant and equipment was $66,230 for 2002, $40,362 for 2001 and $36,158 for 2000.

8. DEBT

The components of long-term debt and a reconciliation to the carrying amount of long-term debt are presented in the table below.

	DECEMBER 31,	
	2002	2001
L-3 Communications:		
Borrowings under Senior Credit Facilities	$ --	$ --
10 3/8% Senior Subordinated Notes due 2007	--	225,000
8 1/2% Senior Subordinated Notes due 2008	180,000	180,000
8% Senior Subordinated Notes due 2008	200,000	200,000
7 5/8% Senior Subordinated Notes due 2012	750,000	--
	1,130,000	605,000
L-3 Holdings:		
5 1/4% Convertible Senior Subordinated Notes due 2009	300,000	300,000
4% Senior Subordinated Convertible Contingent Debt Securities due 2011 (CODES)	420,000	420,000
Principal amount of long-term debt	1,850,000	1,325,000
Less: Unamortized discount on CODES	2,248	2,502
Fair value of interest rate swap agreements	--	7,246
Carrying amount of long-term debt	$ 1,847,752	$ 1,315,252

On February 26, 2002, the Company's lenders approved a $150,000 increase in the amount of the Senior Credit Facilities. The five-year revolving credit facility, which matures on May 15, 2006, was

increased by $100,000 to $500,000 and the 364-day revolving credit facility increased by $50,000 to $250,000. On February 25, 2003, the maturity date of the $250,000 364-day revolving credit facility was extended to February 24, 2004.

At December 31, 2002, available borrowings under the Company's Senior Credit Facilities were $661,405, after reductions for outstanding letters of credit of $88,595. There were no outstanding borrowings under the Senior Credit Facilities at December 31, 2002.

Borrowings under the Senior Credit Facilities bear interest, at L-3 Communications' option, at either: (i) a "base rate" equal to the higher of 0.50% per annum above the latest federal funds rate and the Bank of America "reference rate" (as defined) plus a spread ranging from 2.00% to 0.50% per annum depending on L-3 Communications' Debt Ratio at the time of determination or (ii) a "LIBOR rate" (as defined) plus a spread ranging from 3.00% to 1.50% per annum depending on L-3 Communications' Debt Ratio at the time of determination. The Debt Ratio is defined as the ratio of Consolidated Total Debt to Consolidated EBITDA. Consolidated Total Debt is equal to outstanding debt plus capitalized lease obligations minus the lesser of actual unrestricted cash or $50,000. Consolidated EBITDA is equal to consolidated net income (excluding extraordinary gains and losses, and gains and losses in connection with asset dispositions and discontinued operations) for the most recent four quarters, plus consolidated interest expense, income taxes, depreciation and amortization minus depreciation and amortization related to minority interest. At December 31, 2002, there were no borrowings outstanding under the Senior Credit Facilities. L-3 Communications pays commitment fees calculated on the daily amounts of the available unused commitments under the Senior Credit Facilities at a rate ranging from 0.50% to 0.30% per annum, depending on L-3 Communications' Debt Ratio in effect at the time of determination. L-3 Communications pays letter of credit fees calculated at a rate ranging from 1.50% to 0.75% per annum for performance letters of credit and 3.00% to 1.50% for all other letters of credit, in each case depending on L-3 Communications' Debt Ratio at the time of determination.

In June 2002, L-3 Communications sold $750,000 of 7 5/8% Senior Subordinated Notes due June 15, 2012 (the "June 2002 Notes") with interest payable semi-annually on June 15 and December 15 of each year commencing December 15, 2002. The net proceeds from this offering and the concurrent sale of common stock by L-3 Holdings (see Note 10) were used to (1) repay $500,000 borrowed on March 8, 2002, under the Company's senior subordinated bridge loan facility, (2) repay the indebtedness outstanding under the Company's senior credit facilities, (3) repurchase and redeem the 10 3/8% Senior Subordinated Notes due 2007 and (4) increase cash and cash equivalents. The June 2002 Notes are general unsecured obligations of L-3 Communications and are subordinated in right of payment to all existing and future senior debt of L-3 Communications. The June 2002 Notes are subject to redemption at any time, at the option of L-3 Communications, in whole or in part, on or after June 15, 2007 at redemption prices (plus accrued and unpaid interest) starting at 103.813% of the principal amount (plus accrued and unpaid interest) during the 12-month period beginning June 15, 2007 and declining annually to 100% of principal (plus accrued and unpaid interest) on June 15, 2010 and thereafter. Prior to June 15, 2005, L-3 Communications may redeem up to 35% of the June 2002 Notes with the proceeds of certain equity offerings at a redemption price of 107.625% of the principal amount (plus accrued and unpaid interest).

In the fourth quarter of 2001, L-3 Holdings sold $420,000 of 4% Senior Subordinated Convertible Contingent Debt Securities (CODES) due September 15, 2011. The net proceeds from this offering amounted to approximately $407,450 after underwriting discounts and commissions and other offering expenses. Interest is payable semi-annually on March 15 and September 15 of each year commencing March 15, 2002. The CODES are convertible into L-3 Holdings' common stock at a conversion price of $53.813 per share (7,804,878 shares) under any of the following circumstances: (1) during any Conversion Period (defined below) if the closing sales price of the common stock of L-3 Holdings is more than 120% of the conversion price ($64.58) for at least 20 trading days in the 30 consecutive trading-day period ending on the first day of the respective Conversion Period; (2) during the five business day period following any 10 consecutive trading-day period in which the average of the trading prices for the CODES was less than 105% of the conversion value; (3) if the credit ratings assigned to the CODES by either

Moody's or Standard & Poor's are below certain specified ratings, (4) if they have been called for redemption by the Company, or (5) upon the occurrence of certain specified corporate transactions. A Conversion Period is the period from and including the thirtieth trading day in a fiscal quarter to, but not including, the thirtieth trading day of the immediately following fiscal quarter. There are four Conversion Periods in each fiscal year. The CODES are subject to redemption at any time at the option of L-3 Holdings, in whole or in part, on or after October 24, 2004 at redemption prices (plus accrued and unpaid interest -- including contingent interest) starting at 102% of principal (plus accrued and unpaid interest -- including contingent interest) during the 12 month period beginning October 24, 2004 and declining annually to 100% of principal (plus accrued and unpaid interest -- including contingent interest) on September 15, 2006. The CODES are general unsecured obligations of L-3 Holdings and are subordinated in right of payment to all existing and future senior debt of L-3.

Additionally, holders of the CODES have a right to receive contingent interest payments, not to exceed a per annum rate of 0.5% of the outstanding principal amount of the CODES, which will be paid on the CODES during any six-month period following a six-month period in which the average trading price of the CODES exceeds 120% of the principal amount of the CODES. The contingent interest payment provision was triggered for the period beginning September 15, 2002 to March 14, 2003 and resulted in additional interest for that period of $840.

The contingent interest payment provision as well as the ability of the holders of the CODES to exercise the conversion features as a result of changes in the credit ratings assigned to the CODES have been accounted for as embedded derivatives. The initial aggregate fair values assigned to the embedded derivatives was $2,544, which was also recorded as a discount to the CODES. The carrying values assigned to the embedded derivatives were recorded in other liabilities and are adjusted periodically through other income (expense) for changes in their fair values.

In the fourth quarter of 2000, L-3 Holdings sold $300,000 of 5 1/4% Convertible Senior Subordinated Notes (Convertible Notes) due June 1, 2009. The net proceeds from this offering amounted to approximately $290,500 after underwriting discounts and other offering expenses. Interest is payable semi-annually on June 1 and December 1 of each year commencing June 1, 2001. The Convertible Notes may be converted at any time into L-3 Holdings common stock at a conversion price of $40.75 per share. If all the Convertible Notes were converted, an additional 7,361,964 shares of L-3 Holdings common stock would have been outstanding at December 31, 2002. The Convertible Notes are general unsecured obligations of L-3 Holdings and are subordinated in right of payment to all existing and future senior debt of L-3 Holdings and L-3 Communications. The Convertible Notes are subject to redemption at any time, at the option of L-3 Holdings, in whole or in part, on or after December 1, 2003 at redemption prices (plus accrued and unpaid interest) starting at 102.625% of principal (plus accrued and unpaid interest) during the 12-month period beginning December 1, 2003 and declining annually to 100% of principal (plus accrued and unpaid interest) on December 1, 2005 and thereafter.

In December 1998, L-3 Communications sold $200,000 of 8% Senior Subordinated Notes due August 1, 2008 (December 1998 Notes) with interest payable semi-annually on February 1 and August 1 of each year commencing February 1, 1999. The December 1998 Notes are general unsecured obligations of L-3 Communications and are subordinated in right of payment to all existing and future senior debt of L-3 Communications. The December 1998 Notes are subject to redemption at any time, at the option of L-3 Communications, in whole or in part, on or after August 1, 2003 at redemption prices (plus accrued and unpaid interest) starting at 104% of principal (plus accrued and unpaid interest) during the 12-month period beginning August 1, 2003 and declining annually to 100% of principal (plus accrued and unpaid interest) on August 1, 2006 and thereafter.

In May 1998, L-3 Communications sold $180,000 of 8 1/2% Senior Subordinated Notes due May 15, 2008 (May 1998 Notes) with interest payable semi-annually on May 15 and November 15 of each year commencing November 15, 1998. The May 1998 Notes are general unsecured obligations of L-3 Communications and are subordinated in right of payment to all existing and future senior debt of L-3

Communications. The May 1998 Notes are subject to redemption at any time, at the option of L-3 Communications, in whole or in part, on or after May 15, 2003 at redemption prices (plus accrued and unpaid interest) starting at 104.250% of principal (plus accrued and unpaid interest) during the 12-month period beginning May 15, 2003 and declining annually to 100% of principal (plus accrued and unpaid interest) on May 15, 2006 and thereafter.

In April 1997, L-3 Communications sold $225,000 of 10 3/8% Senior Subordinated Notes due May 1, 2007 (1997 Notes) with interest payable semi-annually on May 1 and November 1 of each year commencing November 1, 1997. On June 6, 2002, L-3 Communications commenced a tender offer to purchase any and all of the $225,000 aggregate principal amount of 10 3/8% Senior Subordinated Notes due 2007. The tender offer expired on July 3, 2002. On June 25, 2002, L-3 Communications sent a notice of redemption for all of its $225,000 aggregate principal amount of 10 3/8% Senior Subordinated Notes due 2007 that remained outstanding after the expiration of the tender offer. Upon sending the notice, the remaining notes became due and payable at the redemption price as of July 25, 2002. At December 31, 2002, L-3 Communications had purchased and paid cash for all of these notes plus accrued interest, and premiums, fees and other transaction costs of $12,469. For the year ended December 31, 2002, L-3 Communications recorded a loss on retirement of debt of $16,187, comprising premiums, fees and other transaction costs of $12,469 and $3,718 to write-off the remaining balance of debt issue costs relating to these notes.

Collectively the May 1998 Notes, December 1998 Notes and June 2002 Notes comprise the "Senior Subordinated Notes". The maturities on the Senior Subordinated Notes, Convertible Notes and CODES are $380,000 in 2008, $300,000 in 2009, $420,000 in 2011 and $750,000 in 2012.

In June and August of 2002, L-3 Communications terminated the interest rate swap agreements entered into in 2001 on $380,000 of its Senior Subordinated Notes due 2008 and received cash of $9,302. In connection with the termination, L-3 Communications recorded a reduction in interest expense for the year ended December 31, 2002 of $4,632, which represented interest reductions related to the period prior to the termination of these swap agreements. The remaining $4,670 was recorded as a deferred gain and will be amortized as a reduction of interest expense over the remaining terms of the $380,000 of Senior Subordinated Notes due 2008 at an amount of $191 per quarter, or $764 annually. L-3 Communications recorded an additional reduction of interest expense for the year ended December 31, 2002 of $2,504 relating to interest savings for interest periods which ended prior to the termination of these interest rate swap agreements.

In June 2002, L-3 Communications entered into interest rate swap agreements on $200,000 of its 7 5/8% Senior Subordinated Notes due 2012. These swap agreements exchanged the fixed interest rate for a variable interest rate on $200,000 of the $750,000 principal amount outstanding. On September 30, 2002, L-3 Communications terminated these interest rate swap agreements and received cash of $13,935 in October 2002. In connection with the termination, L-3 Communications recorded a reduction of interest expense for the year ended December 31, 2002 of $1,762, which represented interest reductions related to the period prior to the termination of these swap agreements. The remaining $12,173 was recorded as a deferred gain and will be amortized as a reduction of interest expense over the remaining term of the 7 5/8% Senior Subordinated Notes due 2012 at an amount of $313 per quarter, or $1,254 annually.

The Senior Credit Facilities, Senior Subordinated Notes, Convertible Notes and CODES agreements contain financial and other restrictive covenants that limit, among other things, the ability of the Company to borrow additional funds, dispose of assets, or pay cash dividends. The Company's most restrictive covenants are contained in the Senior Credit Facilities, as amended. The covenants require that (1) the Company's Debt Ratio be less than or equal to 4.25 for the quarters ended December 31, 2002 through September 30, 2003, thereafter declining to less than or equal to 3.50 for the quarters ending December 31, 2004 and thereafter, and (2) the Company's Interest Coverage Ratio be greater than or equal to 2.75 for the quarter ended December 31, 2002, and that the minimum allowable Interest Coverage Ratio thereafter increase to greater than or equal to 3.00 for the quarters ending December 31, 2003 and

thereafter. The Interest Coverage Ratio is equal to the ratio of Consolidated EBITDA to Consolidated Cash Interest Expense. Consolidated Cash Interest Expense is equal to interest expense less the amortization of deferred debt issue costs included in interest expense. For purposes of calculating the financial covenants under the Senior Credit Facilities, the Convertible Notes and CODES are considered debt of L-3 Communications. The Senior Credit Facilities also limit the payment of dividends by L-3 Communications to L-3 Holdings except for payment of franchise taxes, fees to maintain L-3 Holdings' legal existence, income taxes up to certain amounts, interest accrued on the Convertible Notes and CODES or to provide for operating costs of up to $1,000 annually. Under the covenant, L-3 Communications may also pay permitted dividends to L-3 Holdings from its excess cash flow, as defined, a cumulative amount of $5,000, provided that the Debt Ratio is no greater than 3.5 to 1 as of the most recent fiscal quarter. As a result, at December 31, 2002, $5,000 of L-3 Communications net assets were available for payment of dividends to L-3 Holdings. Through December 31, 2002, the Company was in compliance with these covenants at all times.

In connection with the Senior Credit Facilities, the Company has granted the lenders a first priority lien on the stock of L-3 Communications and substantially all of its material domestic subsidiaries. The borrowings under the Senior Credit Facilities are guaranteed by L-3 Holdings and by substantially all of the material domestic subsidiaries of L-3 Communications on a senior basis. The payment of principal and premium, if any, and interest on the Senior Subordinated Notes are unconditionally guaranteed, on an unsecured senior subordinated basis, jointly and severally, by substantially all of L-3 Communications' restricted subsidiaries other than its foreign subsidiaries. The guarantees of the Senior Subordinated Notes are junior to the guarantees of the Senior Credit Facilities and rank pari passu with each other and the guarantees of the Convertible Notes and the CODES. Additionally, the Convertible Notes and CODES are unconditionally guaranteed, on an unsecured senior subordinated basis, jointly and severally, by L-3 Communications and substantially all of its restricted subsidiaries other than its foreign subsidiaries. These guarantees rank junior to the guarantees of the Senior Credit Facilities and rank pari passu with each other and the guarantees of the Senior Subordinated Notes.

9. FINANCIAL INSTRUMENTS

Fair Value of Financial Instruments. The Company's financial instruments consist primarily of cash and cash equivalents, billed receivables, investments, trade accounts payable, customer advances, Senior Credit Facilities, Senior Subordinated Notes, Convertible Notes, CODES, foreign currency forward contracts, interest rate cap and floor contracts, interest rate swap agreements and embedded derivatives related to the issuance of the CODES. The carrying amounts of cash and cash equivalents, billed receivables, trade accounts payable, Senior Credit Facilities, and customer advances are representative of their respective fair values because of the short-term maturities or expected settlement dates of these instruments. The Company's investments are stated at fair value, which is based on quoted market prices, as available, and on historical cost for investments for which it is not practicable to estimate fair value. Adjustments to the fair value of investments, which are classified as available-for-sale, are recorded, as an increase or decrease in shareholders' equity and are included as a component of accumulated other comprehensive income. The Senior Subordinated Notes are registered, unlisted public debt which are traded in the over-the-counter market and their fair values are based on quoted trading activity. The fair values of the Convertible Notes and CODES are based on quoted prices for the same or similar issues. The fair value of foreign currency forward contracts were estimated based on exchange rates at December 31, 2002 and 2001. The fair values of the interest rate cap and floor contracts, interest rate swap agreements and the embedded derivatives were estimated by discounting expected cash flows using quoted market interest rates. The carrying amounts and estimated fair values of the Company's financial instruments are presented in the table below.

(DOLLARS IN THOUSANDS, EXCEPT PER SHARE DATA)

	DECEMBER 31,			
	2002		2001	
	CARRYING AMOUNT	ESTIMATED FAIR VALUE	CARRYING AMOUNT	ESTIMATED FAIR VALUE
Equity investments accounted for using the cost method	$ 16,140	$ 16,140	$ 13,305	$ 13,305
Equity investments accounted for using the equity method	8,481	8,481	3,027	3,027
Securities available-for-sale	100	100	100	100
Senior Subordinated Notes	1,130,000	1,170,500	597,754	630,925
Convertible Notes	300,000	385,500	300,000	387,000
CODES	417,752	469,350	417,498	432,600
Interest rate caps	--	--	--	--
Interest rate floor	--	--	(432)	(432)
Foreign currency forward contracts	(454)	(454)	258	258
Interest rate swaps	--	--	(7,246)	(7,246)
Embedded derivatives	(3,087)	(3,087)	(3,060)	(3,060)

Interest Rate Risk Management. To mitigate risks associated with changing interest rates on borrowings under the Senior Credit Facilities, the Company entered into interest rate cap and interest rate floor contracts. The interest rate caps and floors were denominated in U.S. dollars and had designated maturities which occurred every three months until the interest rate cap and floor contracts expired in March 2002. In 2001 and 2002, the Company entered into interest rate swap agreements on certain of its Senior Subordinated Notes to take advantage of the current low interest rate environment. These swap agreements exchanged the fixed interest rate for a variable interest rate on a notional amount equal to either a portion or the entire principal amount of the hedged notes, were denominated in U.S. dollars and had designated maturities which occurred on the interest payment dates of the related Senior Subordinated Notes. Collectively the interest rate cap and floor contracts and interest rate swap agreements are herein referred to as the ("interest rate agreements"). Cash payments received from or paid to the counterparties on the interest rate agreements are the difference between the amount that the reference interest rates are greater than or less than the contract rates on the designated maturity dates, multiplied by the notional amounts underlying the respective interest rate agreements. Cash payments or receipts between the Company and counterparties were recorded as a component of interest expense. The initial cost or receipt of the interest rate cap and floor contracts were deferred and amortized as a component of interest expense over the term of the interest rate cap and floor contracts. The Company manages exposure to counterparty credit risk by entering into the interest rate agreements only with major financial institutions that are expected to fully perform under the terms of such agreements. The notional amounts are used to measure the volume of these agreements and do not represent exposure to credit loss. There were no outstanding interest rate agreements at December 31, 2002.

Foreign Currency Exchange Risk Management. Some of the Company's U.S. operations have contracts with foreign customers which are denominated in foreign currencies. To mitigate the risk associated with certain of these contracts denominated in foreign currency, the Company has entered into foreign currency forward contracts. The Company's activities involving foreign currency forward contracts are designed to hedge the foreign denominated cash paid or received, primarily Euro and British Pound. The Company manages exposure to counterparty credit risk by entering into foreign currency forward contracts only with major financial institutions that are expected to fully perform under the terms of such contracts. The notional amounts are used to measure the volume of these contracts and do not represent exposure to foreign currency losses.

Information with respect to the interest rate agreements and foreign currency forward contracts is presented in the table below.

(DOLLARS IN THOUSANDS, EXCEPT PER SHARE DATA)

	DECEMBER 31,			
	2002		2001	
	NOTIONAL AMOUNT	UNREALIZED LOSSES	NOTIONAL AMOUNT	UNREALIZED GAINS (LOSSES)
Interest rate swaps	$ --	$ --	$ 380,000	$ --
Interest rate caps	--	--	100,000	(107)
Interest rate floor	--	--	50,000	(414)
Foreign currency forward contracts	6,048	(454)	7,138	258

10. L-3 HOLDINGS COMMON STOCK

On April 23, 2002, the Company announced that its Board of Directors had authorized a two-for-one stock split on all shares of L-3 Holdings common stock. The stock split entitled all shareholders of record at the close of business on May 6, 2002 to receive one additional share of L-3 Holdings common stock for every share held on that date. The additional shares were distributed to shareholders in the form of a stock dividend on May 20, 2002. Upon completion of the stock split, L-3 Holdings had approximately 80 million shares of common stock outstanding. All of L-3 Holdings' historical share and earnings per share (EPS) data have been restated to give effect to the stock split.

On April 23, 2002, the Company's shareholders approved an increase in the number of authorized shares of L-3 Holdings common stock from 100,000,000 to 300,000,000 and an increase in the number of authorized shares of L-3 Holdings preferred stock from 25,000,000 to 50,000,000.

On June 28, 2002, L-3 Holdings sold 14,000,000 shares of its common stock in a public offering for $56.60 per share. Upon closing, L-3 Holdings received net proceeds after deducting discounts, commissions and estimated expenses of $766,780. The net proceeds of this offering, which were contributed to L-3 Communications, and the concurrent sale of senior subordinated notes by L-3 Communications (see Note 8) were used to (1) repay $500,000 borrowed on March 8, 2002, under the Company's senior subordinated bridge loan facility, (2) repay the indebtedness outstanding under the Company's Senior Credit Facilities, (3) repurchase and redeem the 10 3/8% Senior Subordinated Notes due 2007 and (4) increase cash and cash equivalents.

On June 29, 2001, the Company established the L-3 Communications Corporation Employee Stock Purchase Plan (ESPP) and registered 3,000,000 shares of L-3 Holdings common stock, which may be purchased by employees of L-3 Communications Corporation and its U.S. subsidiaries through payroll deductions. In general, an eligible employee who participates in the ESPP may purchase L-3 Holdings' common stock at a fifteen percent discount. The ESPP is not subject to the Employment Retirement Income Security Act of 1974, as amended. The Company received $17,478 and $4,861 of employee contributions for the ESPP in 2002 and 2001, respectively. These contributions were recorded as a component of shareholders' equity in the consolidated balance sheet. During 2002, L-3 Holdings issued 352,054 shares of its common stock to the trustee of the ESPP relating to contributions received during the period July 1, 2001 to June 30, 2002. In January 2003, the Company issued 260,027 shares of L-3 Holdings' common stock to the trustee of the ESPP relating to contributions received during the period July 1, 2002 to December 31, 2002.

On May 2, 2001, L-3 Holdings sold 13,800,000 shares of common stock in a public offering for $40.00 per share. L-3 Holdings sold 9,150,000 shares and other selling stockholders, including affiliates of Lehman Brothers Inc., sold 4,650,000 secondary shares. Upon closing, L-3 Holdings received net proceeds after underwriting discounts and commissions and other offering expenses of $353,622. The net proceeds were contributed to L-3 Communications and were used to repay borrowings under the Senior Credit Facilities, pay for the KDI and EER acquisitions and to increase cash and cash equivalents.

As additional consideration for the ILEX acquisition, L-3 Holdings issued 588,248 shares of its common stock valued at $17,357 in April 2001 based on the financial performance of ILEX in 1999 and 2000. There is no remaining contingent consideration for the ILEX acquisition.

(DOLLARS IN THOUSANDS, EXCEPT PER SHARE DATA)

11. ACCUMULATED OTHER COMPREHENSIVE LOSS

The changes in the Company's accumulated other comprehensive balances for each of the three years ended December 31, 2002 are presented in the table below.

	FOREIGN CURRENCY TRANSLATION ADJUSTMENTS	UNREALIZED GAINS (LOSSES) ON SECURITIES	UNREALIZED LOSSES ON HEDGING INSTRUMENTS	MINIMUM PENSION LIABILITY ADJUSTMENTS	ACCUMULATED OTHER COMPREHENSIVE LOSS
Balance at January 1, 2000	$(1,362)	$ (970)	$ --	$ (71)	$ (2,403)
Period change	(1,222)	(2,728)	--	(819)	(4,769)
Balance at December 31, 2000	(2,584)	(3,698)	--	(890)	(7,172)
Period change	(268)	3,452	(163)	(19,519)	(16,498)
Balance at December 31, 2001	(2,852)	(246)	(163)	(20,409)	(23,670)
Period change	65	--	(114)	(45,580)	(45,629)
Balance at December 31, 2002	$(2,787)	$ (246)	$(277)	$(65,989)	$(69,299)

(DOLLARS IN THOUSANDS, EXCEPT PER SHARE DATA)

12. L-3 HOLDINGS EARNINGS PER SHARE

A reconciliation of basic and diluted earnings per share (EPS) is presented in the table below.

	YEAR ENDED DECEMBER 31,		
	2002	2001	2000
BASIC:			
Income before accounting change	$ 202,467	$ 115,458	$ 82,727
Accounting change, net of income taxes	(24,370)	--	--
Net income	$ 178,097	$ 115,458	$ 82,727
Weighted average common shares outstanding	86,943	74,880	66,710
Basic earnings per share before accounting change	$ 2.33	$ 1.54	$ 1.24
Basic earnings per share	$ 2.05	$ 1.54	$ 1.24
DILUTED:			
Income before accounting change	$ 202,467	$ 115,458	$ 82,727
After-tax interest expense savings on the assumed conversion of Convertible Notes	10,316	10,502	--
Income before accounting change, including assumed conversion of Convertible Notes	212,783	125,960	82,727
Accounting change, net of income taxes	(24,370)	--	--
Net income, including assumed conversion of Convertible Notes	$ 188,413	$ 125,960	$ 82,727
Common and potential common shares:			
Weighted average common shares outstanding	86,943	74,880	66,710
Assumed exercise of stock options	7,750	7,692	7,880
Assumed purchase of common shares for treasury	(4,642)	(4,496)	(4,684)
Assumed conversion of Convertible Notes	7,362	7,362	--
Common and potential common shares	97,413	85,438	69,906
Diluted earnings per share before accounting change	$ 2.18	$ 1.47	$ 1.18
Diluted earnings per share	$ 1.93	$ 1.47	$ 1.18

The 7,804,878 shares of L-3 Holdings' common stock that are issuable upon conversion of the CODES were not included in the computation of diluted EPS for the years ended December 31, 2002 and 2001 because the conditions required for the CODES to become convertible have not been met.

(DOLLARS IN THOUSANDS, EXCEPT PER SHARE DATA)

13. INCOME TAXES

The Company's income before income tax and cumulative effect of a change in accounting principle and the components of the Company's provision for income taxes are presented in the table below.

	YEAR ENDED DECEMBER 31,		
	2002	2001	2000
Income before income taxes and cumulative effect of a change in accounting principle	$ 314,023	$186,222	$134,079
Current income tax provision, primarily federal	$ 32,464	$ 18,126	$ 26,249
Deferred income tax provision:			
Federal	67,524	43,965	23,130
State and local	11,568	8,673	1,973
Subtotal	79,092	52,638	25,103
Total provision for income taxes	$ 111,556	$ 70,764	$ 51,352

A reconciliation of the statutory federal income tax rate to the effective income tax rate of the Company is presented in the table below.

	YEAR ENDED DECEMBER 31,		
	2002	2001	2000
Statutory federal income tax rate	35.0%	35.0%	35.0%
State and local income taxes, net of federal income tax benefit	3.9	5.3	4.4
Foreign sales corporation and extra territorial income benefits	(1.8)	(3.6)	(2.6)
Nondeductible goodwill amortization and other expenses	--	4.8	6.8
Research and experimentation and other tax credits	(2.5)	(5.0)	(6.1)
Other, net	0.9	1.5	0.8
Effective income tax rate	35.5%	38.0%	38.3%

The provision for income taxes excludes current tax benefits related to compensation expense deductions for income tax purposes arising from the exercise of stock options that were credited directly to shareholders' equity of $13,303 for 2002, $11,939 for 2001, and $9,108 for 2000. These tax benefits reduced current income taxes payable.

(DOLLARS IN THOUSANDS, EXCEPT PER SHARE DATA)

The significant components of the Company's net deferred tax assets and liabilities are presented in the table below.

	DECEMBER 31,	
	2002	2001
Deferred tax assets:		
Inventoried costs	$ 43,678	$ 8,520
Compensation and benefits	15,796	11,460
Pension and postretirement benefits	136,699	59,397
Property, plant and equipment	33,669	16,579
Income recognition on contracts in process	59,663	16,670
Net operating loss carryforwards	6,579	32,480
Tax credit carryforwards	38,385	31,943
Other, net	24,533	21,555
Total deferred tax assets	359,002	198,604
Deferred tax liabilities:		
Goodwill	(49,317)	(26,493)
Other, net	(18,861)	(11,263)
Total deferred tax liabilities	(68,178)	(37,756)
Net deferred tax assets	$ 290,824	$ 160,848

The following table presents the classification of the Company's net deferred tax assets.

Current deferred tax assets	$ 143,634	$ 62,965
Long-term deferred tax assets	147,190	97,883
Total net deferred tax assets	$ 290,824	$ 160,848

At December 31, 2002, the Company had $10,596 of federal net operating losses, $46,474 of state net operating losses and $38,385 of tax credit carryforwards primarily related to U.S. and state research and experimentation credits and state investment tax credits. The net operating losses, some of which are subject to limitation, expire if unused between 2011 and 2021. The tax credit carryforwards expire, if unused, primarily beginning in 2012. The Company believes that it will generate sufficient taxable income to utilize these net operating losses and tax credit carryforwards before they expire.

14. STOCK OPTIONS

In April 1999, the Company adopted the 1999 Long Term Performance Plan (1999 Plan). Awards under the 1999 Plan may be granted to any employee or to any other individual who provides services to or on behalf of the Company or any of its subsidiaries, subject to the discretion of the Compensation Committee of the Board of Directors. Awards under the 1999 Plan may be in the form of non-qualified stock options, incentive stock options, stock appreciation rights (SARs), restricted stock and other incentive awards, consistent with the 1999 Plan. In April 1997, the Company adopted the 1997 Stock Option Plan (1997 Plan). The 1997 Plan authorizes the Compensation Committee of the Board of Directors to grant incentive stock options to key employees of the Company and its subsidiaries. Awards under both plans are in the form of L-3 Holdings common stock. At December 31, 2002, the number of shares of L-3 Holdings' common stock authorized for grant under the 1999 Plan and 1997 Plan was 16,611,630, of which 2,937,099 shares were available for awards under these plans. The price at which incentive stock options may be granted shall not be less than 100% of the fair market value of L-3 Holdings' common stock on the date of grant. In general, options expire after 10 years and are exercisable ratably over a 3 year period.

At December 31, 2002, the Company has granted restricted stock awards of 282,358 shares, of which 31,838 shares have been forfeited. The Company awarded 54,960 shares on January 1, 2002, 60,928 shares on January 1, 2001 and 85,792 shares on January 1, 2000. The aggregate fair values of the restricted stock awards on their grant dates were $2,473 in 2002, $2,346 in 2001 and $1,713 in 2000. The restricted stock awards granted on January 1, 2002 and January 1, 2001 vest over three years. The restricted stock award granted on January 1, 2000 vests over five years. Compensation expense charged against earnings for these restricted stock awards was $2,134 in 2002, $1,370 in 2001 and $716 in 2000. Shareholders' Equity has been reduced by $3,302 at December 31, 2002 for unearned compensation on these restricted stock awards.

The table below presents the Company's incentive stock option activity over the past three years under the 1999 Plan and 1997 Plan.

	NUMBER OF OPTIONS	WEIGHTED AVERAGE EXERCISE PRICE
	(IN THOUSANDS)	
Outstanding at January 1, 2000	7,530	$ 8.51
Options granted	1,322	23.87
Options exercised	(1,154)	7.76
Options cancelled	(442)	19.91
Outstanding at January 1, 2001 (3,858 exercisable)	7,256	10.71
Options granted	2,214	35.81
Options exercised	(1,128)	14.57
Options cancelled	(362)	21.23
Outstanding at January 1, 2002 (4,216 exercisable)	7,980	16.68
Options granted	2,169	52.02
Options exercised	(970)	17.99
Options cancelled	(155)	35.62
Outstanding at December 31, 2002 (5,216 exercisable)	9,024	$ 24.71

The table below summarizes information about the Company's incentive stock options outstanding at December 31, 2002.

	OUTSTANDING			EXERCISABLE		
RANGE OF EXERCISE PRICES	NUMBER OF OPTIONS	WEIGHTED AVERAGE REMAINING CONTRACTUAL LIFE (YEARS)	WEIGHTED AVERAGE EXERCISE PRICE	NUMBER OF OPTIONS	WEIGHTED AVERAGE REMAINING CONTRACTUAL LIFE (YEARS)	WEIGHTED AVERAGE EXERCISE PRICE
$3.24	3,487	4.5	$ 3.24	3,487	4.5	$ 3.24
$11.00	128	5.3	$11.00	128	5.3	$11.00
$16.38 -- $19.84	521	6.7	$18.80	518	6.7	$18.80
$20.25 -- $23.13	516	6.6	$20.85	362	6.4	$20.65
$29.00	283	7.6	$29.00	151	7.6	$29.00
$32.50 -- $35.00	1,121	8.3	$33.31	293	8.3	$33.42
$39.70	837	8.9	$39.70	277	8.9	$39.70
$49.00 -- $53.75	2,131	9.4	$52.05	--	--	$ --
Total	9,024	6.9	$24.71	5,216	5.4	$10.56

The weighted average fair values of incentive stock options at their grant date during 2002, 2001 and 2000, where the exercise price equaled the market price (estimated fair value) on the grant date were $18.75, $14.87 and $10.10, respectively. In accordance with APB No. 25, no compensation expense was recognized.

(DOLLARS IN THOUSANDS, EXCEPT PER SHARE DATA)

For purposes of determining the impact of adopting SFAS No. 123, the estimated fair value of options granted was calculated using the Black-Scholes option-pricing valuation model. The weighted average assumptions used in the valuation models are presented in the table below.

	YEAR ENDED DECEMBER 31,		
	2002	2001	2000
Expected holding period (in years)	4.0	5.0	5.0
Expected volatility	39.2%	39.5%	35.8%
Expected dividend yield	--	--	--
Risk-free interest rate	4.0%	4.5%	6.4%

15. COMMITMENTS AND CONTINGENCIES

The Company leases certain facilities and equipment under agreements expiring at various dates through 2028. The following table presents future minimum payments under non-cancelable operating leases with initial or remaining terms in excess of one year at December 31, 2002.

	REAL ESTATE	EQUIPMENT	TOTAL
2003	$ 61,572	$ 9,752	$ 71,324
2004	56,871	7,759	64,630
2005	74,704	6,012	80,716
2006	41,667	5,490	47,157
2007	36,909	5,133	42,042
Thereafter	197,217	62,050	259,267
Total	$ 468,940	$ 96,196	$565,136

Real estate lease commitments have been reduced by minimum sublease rental income of $1,622 due in the future under non-cancelable subleases. Leases covering major items of real estate and equipment contain renewal and/or purchase options. Rent expense, net of sublease income was $65,277 for 2002, $41,370 for 2001 and $34,123 for 2000.

On December 31, 2002, the Company entered into two real estate lease agreements, as lessee, with an unrelated lessor which expire on December 31, 2005, and which are accounted for as operating leases. On or before the lease expiration date, the Company can exercise options under the lease agreements to either renew the leases, purchase both properties for $28,000, or sell both properties on behalf of the lessor (the "Sale Option"). If the Company elects the Sale Option, the Company must pay the lessor a residual guarantee amount of $22,673 for both properties, on or before the lease expiration date, and at the time both properties are sold, the Company must pay the lessor a supplemental rent equal to the gross sales proceeds in excess of the residual guarantee amount not to exceed $5,327.

For the real estate lease agreements discussed above, if the gross sales proceeds are less than the sum of the residual guarantee amount and the supplemental rent, the Company is required to pay a supplemental rent to the extent the reduction in the fair value of the properties are demonstrated by an independent appraisal to have been caused by the Company's failure to properly maintain the properties. Accordingly, the aggregate residual guarantee amounts of $22,673 has been included in the non-cancelable real estate operating lease payments relating to the expiration of such leases.

On December 28, 2000, the Company entered into a sale-leaseback transaction on its facility located in Hauppauge, NY. The facility was sold for $13,650. The lease agreement which is accounted for as an operating lease, has an initial term of 14 years with an annual rent that increases 2.5% annually. The Company has the option to extend the lease term for an additional 3 terms of 5 years each. The gain of $4,110 on the sale of the facility has been deferred and will be recognized ratably over the term of the lease.

The Company has a contract to provide and operate for the U.S. Air Force (USAF) a full-service training facility, including simulator systems near a USAF base. The Company acted as the construction agent on behalf of the owner-lessors for procurement and construction for the simulator systems which were completed and delivered in August 2002. On December 31, 2002, the Company, as lessee, entered into an operating lease agreement for a term of 15 years for one of the simulator systems with the owner-lessor. At the end of the lease term, the Company may elect to purchase the simulator system at fair market value, which can be no less than $2,552 and no greater than $6,422. If the Company does not elect to purchase the simulator system, then on the date of expiration, the Company shall pay to the lessor, as additional rent $2,552 and return the simulator system to the lessor. The aggregate non-cancelable rental payments under this operating lease is $32,480, including the additional rent of $2,552. On February 27, 2003, the Company, as lessee, entered into an operating lease agreement for a term of 15 years for the remaining simulation systems with the owner-lessor. At the end of the lease term, the Company may elect to purchase the simulator systems at fair market value, which can be no less than $4,146 and no greater than $14,544. If the Company does not elect to purchase the simulator systems, then on the date of expiration, the Company shall return the simulator systems to the lessor. The aggregate non-cancelable rental payments under this operating lease is $53,254.

The Company is engaged in providing products and services under contracts with the U.S. Government and to a lesser degree, under foreign government contracts, some of which are funded by the U.S. Government. All such contracts are subject to extensive legal and regulatory requirements, and, from time to time, agencies of the U.S. Government investigate whether such contracts were and are being conducted in accordance with these requirements. Under U.S. Government procurement regulations, an indictment of the Company by a federal grand jury could result in the Company being suspended for a period of time from eligibility for awards of new government contracts. A conviction could result in debarment from contracting with the federal government for a specified term. Additionally, in the event that U.S. Government expenditures for products and services of the type manufactured and provided by the Company are reduced, and not offset by greater commercial sales or other new programs or products, or acquisitions, there may be a reduction in the volume of contracts or subcontracts awarded to the Company.

In connection with the acquisition on March 8, 2002 of the Aircraft Integration Systems business from Raytheon, the Company assumed responsibility for implementing certain corrective actions, required under federal law to remediate the Greenville, Texas site location, and to pay a portion of those remediation costs. The hazardous substances requiring remediation have been substantially characterized, and the remediation system has been partially implemented. The Company has estimated that its share of the remediation cost will not exceed $2.5 million, and will be incurred over a period of 25 years. The Company has established adequate reserves for these costs in the purchase price allocation for this acquisition.

The Company has been periodically subject to litigation, claims or assessments and various contingent liabilities incidental to its business. Management continually assesses the Company's obligations with respect to applicable environmental protection laws. While it is difficult to determine the timing and ultimate cost to be incurred by the Company in order to comply with these laws, based upon available internal and external assessments, with respect to those environmental loss contingencies of which management is aware, the Company believes that even without considering potential insurance recoveries, if any, there are no environmental loss contingencies that, individually or in the aggregate, would be material to the Company's consolidated results of operations. The Company accrues for these contingencies when it is probable that a liability has been incurred and the amount of the loss can be reasonably estimated.

On August 6, 2002, ACSS was sued by Honeywell International Inc. and Honeywell Intellectual Properties, Inc. (collectively, "Honeywell") for alleged infringement of patents that relate to terrain awareness avionics. The lawsuit was filed in the United States District Court for the District of Delaware. In December 2002, Honeywell withdrew without prejudice the lawsuit against ACSS and agreed to

proceed with non-binding arbitration. If the matter is not resolved through arbitration, Honeywell may reinstitute the litigation after August 14, 2003. The Company had previously investigated the Honeywell patents and believes that ACSS has valid defenses against Honeywell's patent infringement suit. In addition, ACSS has been indemnified to a certain extent by Thales Avionics, which provided ACSS with the alleged infringing technology. Thales Avionics is the Company's joint venture partner in ACSS. In the opinion of management, the ultimate disposition of Honeywell's pending claim will not result in a material liability to the Company.

On November 18, 2002, the Company initiated a proceeding against OSI Systems, Inc. (OSI) in the United States District Court sitting in the Southern District of New York (the "New York action") seeking, among other things, a declaratory judgment that the Company had fulfilled all of its obligations under a letter of intent with OSI (the "OSI Letter of Intent"). Under the OSI Letter of Intent, the Company was to negotiate definitive agreements with OSI for the sale of certain businesses the Company acquired from PerkinElmer, Inc. on June 14, 2002. On December 23, 2002, OSI responded by filing suit against the Company in the United States District Court sitting in the Central District of California (the "California action") alleging, among other things, that the Company breached its obligations under the OSI Letter of Intent and seeking damages in excess of $100,000, not including punitive damages. On February 7, 2003, OSI filed an answer and counterclaims in the New York action that asserted substantially the same claims OSI had raised in the California action. The Company has filed a motion to have the California action dismissed in favor of the New York action. Under the OSI Letter of Intent, the Company proposed selling to OSI the conventional detection business and the ARGUS business that the Company recently acquired from PerkinElmer, Inc. Negotiations with OSI lasted for almost one year and ultimately broke down over issues regarding, among other things, intellectual property, product-line definitions, allocation of employees and due diligence. The Company believes that the claims asserted by OSI in its suit are without merit and intends to defend against the OSI claims vigorously.

With respect to those investigative actions, items of litigation, claims or assessments of which it is aware, management of the Company is of the opinion that the probability is remote that, after taking into account certain provisions that have been made with respect to these matters, the ultimate resolution of any such investigative actions, items of litigation, claims or assessments will have a material adverse effect on the consolidated financial position, results of operations or cash flows of the Company.

16. PENSIONS AND OTHER EMPLOYEE BENEFITS

The Company maintains a number of pension plans, both contributory and non-contributory, covering employees at certain locations. Eligibility for participation in these plans varies and benefits are generally based on the participant's compensation and/or years of service. The Company's funding policy is generally to contribute in accordance with cost accounting standards that affect government contractors, subject to the Internal Revenue Code and regulations thereon. Plan assets are invested primarily in U.S. Government and U.S. Government agency obligations and listed stocks and bonds.

The Company also provides postretirement medical and life insurance benefits for retired employees and dependents at certain locations. Participants are eligible for these benefits when they retire from active service and meet the eligibility requirements for the Company's pension plans. These benefits are funded primarily on a pay-as-you-go basis with the retiree generally paying a portion of the cost through contributions, deductibles and coinsurance provisions.

The following table summarizes the balance sheet impact, as well as the benefit obligations, assets, funded status and rate assumptions associated with the pension and postretirement benefit plans.

(DOLLARS IN THOUSANDS, EXCEPT PER SHARE DATA)

	PENSION PLANS		POSTRETIREMENT BENEFIT PLANS	
	2002	2001	2002	2001
CHANGE IN BENEFIT OBLIGATION:				
Benefit obligation at beginning of year	$ 533,451	$ 415,483	$ 87,143	$ 68,538
Service cost	35,825	18,516	3,777	1,709
Interest cost	43,108	31,428	7,779	4,746
Participants' contributions	260	62	720	607
Amendments	(2,554)	--	(10,032)	--
Actuarial loss	49,990	22,277	4,411	4,043
Acquisitions	77,066	63,793	41,639	12,369
Benefits paid	(23,221)	(18,108)	(6,031)	(4,869)
Benefit obligation at end of year	$ 713,925	$ 533,451	$ 129,406	$ 87,143
CHANGE IN PLAN ASSETS:				
Fair value of plan assets at beginning of year	$ 430,915	$ 391,263	$ --	$ --
Actual return on plan assets	(27,819)	(13,754)	--	--
Acquisitions	4,250	63,344	--	--
Employer contributions	47,386	8,108	5,311	4,262
Participants' contributions	260	62	720	607
Benefits paid	(23,221)	(18,108)	(6,031)	(4,869)
Fair value of plan assets at end of year	$ 431,771	$ 430,915	$ --	$ --
FUNDED STATUS OF THE PLANS	$ (282,154)	$ (102,536)	$ (129,406)	$ (87,143)
Unrecognized actuarial loss (gain)	184,894	69,697	(188)	(5,032)
Unrecognized prior service cost	560	3,426	(8,877)	(547)
Net amount recognized	$ (96,700)	$ (29,413)	$ (138,471)	$ (92,722)
AMOUNTS RECOGNIZED IN THE BALANCE SHEETS CONSIST OF:				
Accrued benefit liability	$ (205,056)	$ (62,330)	$ (138,471)	$ (92,722)
Accumulated other comprehensive income	108,356	32,917	--	--
Net amount recognized	$ (96,700)	$ (29,413)	$ (138,471)	$ (92,722)
RATE ASSUMPTIONS:				
Discount rate	6.75%	7.25%	6.75%	7.25%
Rate of return on plan assets	9.00%	9.50%	n.a.	n.a.
Salary increases	4.50%	4.50%	4.50%	4.50%

The annual increase in cost of benefits ("health care cost trend rate") is assumed to be an average of 10.00% in 2002 and is assumed to gradually decrease to a rate of 4.5% thereafter. Assumed health care cost trend rates have a significant effect on amounts reported for postretirement medical benefit plans. A one percentage point decrease in the assumed health care cost trend rates would have the effect of decreasing the aggregate service and interest cost by $711 and the postretirement medical obligations by $6,406. A one percentage point increase in the assumed health care cost trend rate would have the effect of increasing the aggregate service and interest cost by $940 and the postretirement medical obligations by $7,980.

The following table summarizes the components of net periodic pension and postretirement medical costs.

(DOLLARS IN THOUSANDS, EXCEPT PER SHARE DATA)

	PENSION PLANS			POSTRETIREMENT PENSION PLANS		
	2002	2001	2000	2002	2001	2000
COMPONENTS OF NET PERIODIC BENEFIT COST:						
Service cost	$ 35,825	$ 18,516	$ 16,343	$ 3,777	$ 1,709	$ 1,670
Interest cost	43,108	31,428	28,029	7,779	4,746	4,754
Amortization of prior service cost	312	351	351	(1,701)	(99)	(99)
Expected return on plan assets	(40,663)	(37,716)	(39,109)	--	--	--
Recognized actuarial (gain) loss	3,246	(424)	(3,981)	(530)	(887)	(865)
Recognition due to settlement	62	--	307	--	--	--
Net periodic benefit cost	$ 41,890	$ 12,155	$ 1,940	$ 9,325	$ 5,469	$ 5,460

The accumulated benefit obligation, projected benefit obligation, and fair value of plan assets for pension plans with accumulated benefit obligations in excess of plan assets were $565,904, $696,968 and $406,809, respectively, as of December 31, 2002 and $300,072, $324,840 and $247,383, respectively, as of December 31, 2001.

In connection with the Company's acquisition in 1997 of the ten business units from Lockheed Martin and the formation of the Company, the Company assumed certain defined benefit plan liabilities for present and former employees and retirees of certain businesses which we acquired from Lockheed. Lockheed Martin also has provided the Pension Benefit Guaranty Corporation ("PBGC") with commitments to assume sponsorship or other forms of financial support under certain circumstances with respect to the Company's pension plans for Communication Systems -- West and Aviation Recorders (the "Subject Plans"). Upon the occurrence of certain events, Lockheed Martin, at its option, has the right to decide whether to cause the Company to transfer sponsorship of any or all of the Subject Plans to Lockheed Martin, even if the PBGC has not sought to terminate the Subject Plans. Such a triggering event occurred in 1998, but reversed in 1999, relating to a decrease in the PBGC-mandated discount rate in 1998 that had resulted in an increase in the underlying liability. The Company notified Lockheed Martin of the 1998 triggering event, and in February 1999, Lockheed Martin informed the Company that it had no present intention to exercise its right to cause the Company to transfer sponsorship of the Subject Plans. If Lockheed Martin did assume sponsorship of these plans, it would be primarily liable for the costs associated with funding the Subject Plans or any costs associated with the termination of the Subject Plans but L-3 Communications would be required to reimburse Lockheed Martin for these costs. To date, the impact on pension expense and funding requirements resulting from this arrangement has not been significant. However, should Lockheed Martin assume sponsorship of the Subject Plans or if these plans were terminated, the impact of any increased pension expenses or funding requirements could be material to the Company. For the year ended December 31, 2002, the Company contributed $18,753 to the Subject Plans. The Company has performed its obligations under the letter agreement with Lockheed Martin and the Lockheed Martin Commitment and has not received any communications from the PBGC concerning actions which the PBGC contemplates taking in respect of the Subject Plans.

Employee Savings Plans. Under its various employee savings plans, the Company matches the contributions of participating employees up to a designated level. The extent of the match, vesting terms and the form of the matching contributions vary among the plans. Under these plans, the Company's matching contributions in L-3 Holdings common stock and cash were $36,120 for 2002, $21,462 for 2001 and $15,201 for 2000.

(DOLLARS IN THOUSANDS, EXCEPT PER SHARE DATA)

17. SUPPLEMENTAL CASH FLOW INFORMATION

	YEAR ENDED DECEMBER 31,		
	2002	2001	2000
Interest paid	$ 109,301	$ 81,552	$ 81,390
Income tax payments, net of refunds	2,127	4,904	10,052
Noncash transactions:			
Common stock issued related to acquisition	10,607	17,357	--
Contribution in common stock to savings plans	28,138	16,868	12,642

18. SEGMENT INFORMATION

The Company has four reportable segments: (1) Secure Communications & ISR, (2) Training, Simulation & Support Services, (3) Aviation Products & Aircraft Modernization and (4) Specialized Products, which are described in Note 1. The Company evaluates the performance of its operating segments and reportable segments based on their sales and operating income. All corporate expenses are allocated to the Company's divisions using an allocation methodology prescribed by U.S. Government regulations for government contractors. Accordingly, all costs and expenses are included in the Company's measure of segment profitability.

	SECURE COMMUNICATIONS & ISR	TRAINING SIMULATION & SUPPORT SERVICES	AVIATION PRODUCTS & AIRCRAFT MODERNIZATION	SPECIALIZED PRODUCTS	CORPORATE	ELIMINATION OF INTERSEGMENT SALES	CONSOLIDATED TOTAL
2002							
Sales	$ 998,843	$ 826,286	$ 733,300	$ 1,479,996	$ --	$ (27,196)	$ 4,011,229
Operating income	104,054	96,513	105,075	148,337			453,979
Total assets	1,149,016	648,554	965,038	1,940,982	538,718		5,242,308
Capital expenditures	19,350	4,957	14,035	23,542	174		62,058
Depreciation and amortization	23,692	6,857	15,513	29,798			75,860
2001							
Sales	$ 452,152	$ 597,029	$ 263,450	$ 1,040,753	$ --	$ (5,962)	$ 2,347,422
Operating income	31,975	65,715	85,602	92,038			275,330
Total assets	366,482	497,368	545,517	1,382,010	547,872		3,339,249
Capital expenditures	11,561	2,999	9,625	23,657	279		48,121
Depreciation and amortization	13,839	13,207	12,064	47,841			86,951
2000							
Sales	$ 405,379	$ 283,407	$ 209,207	$ 1,028,802	$ --	$ (16,734)	$ 1,910,061
Operating income	54,174	23,491	66,854	78,199			222,718
Total assets	293,023	295,139	360,469	1,325,108	189,805		2,463,544
Capital expenditures	6,405	2,762	2,145	21,667	601		33,580
Depreciation and amortization	13,093	6,401	10,085	44,675			74,254

Corporate assets not allocated to the reportable segments primarily include cash and cash equivalents, corporate office fixed assets, deferred income tax assets and deferred debt issuance costs.

Substantially all of the Company's operations are domestic. The Company's foreign operations are not material to the Company's results of operations, cash flows or financial position. Sales to principal customers are summarized in the table below.

(DOLLARS IN THOUSANDS, EXCEPT PER SHARE DATA)

	YEAR ENDED DECEMBER 31,		
	2002	2001	2000
U.S. Government agencies	$ 3,107,271	$ 1,614,858	$ 1,284,379
Foreign governments	395,062	200,913	144,274
Commercial export	179,948	218,971	172,101
Other (principally U.S. commercial)	328,948	312,680	309,307
Consolidated sales	$ 4,011,229	$ 2,347,422	$ 1,910,061

The Company's sales by product and services are summarized in the table below.

	YEAR ENDED DECEMBER 31,		
	2002	2001	2000
Aircraft modification and maintenance	$ 517,309	$ 15,067	$ --
Security and detection systems	431,325	18,058	13,624
Intelligence, surveillance and reconnaissance products	410,412	--	--
Telemetry and instrumentation	243,420	254,664	295,266
Military and high data rate communications	306,650	231,895	230,478
Ocean products	280,564	299,684	342,861
Avionics products	229,734	254,983	219,307
Information security systems	201,934	140,153	95,342
Training devices and motion simulators	144,310	160,549	148,394
Fuzing products	142,135	62,973	--
Navigation products	141,778	128,690	133,821
Space and commercial communications, satellite control and tactical sensor systems	106,084	88,225	85,247
Microwave components	93,365	112,896	92,767
Subtotal products	3,249,020	1,767,837	1,657,107
Simulation and support services	569,351	378,186	123,742
Training services	256,935	218,843	159,665
Subtotal services	826,286	597,029	283,407
Intercompany eliminations	(64,077)	(17,444)	(30,453)
Total	$ 4,011,229	$ 2,347,422	$ 1,910,061

(DOLLARS IN THOUSANDS, EXCEPT PER SHARE DATA)

19. UNAUDITED QUARTERLY FINANCIAL DATA

Unaudited summarized financial data by quarter for the years ended December 31, 2002 and 2001 is presented in the table below.

	MARCH 31	JUNE 30	SEPTEMBER 30	DECEMBER 31
2002				
Sales	$ 696,840	$ 955,189	$ 1,053,613	$ 1,305,587
Operating income	$ 71,307	$ 97,688	$ 127,387	$ 157,597
Income before cumulative effect of a change in accounting principle	$ 29,279	$ 31,640	$ 61,760	$ 79,788
Cumulative effect of a change in accounting principle, net of income taxes	(24,370)	--	--	--
Net income	$ 4,909	$ 31,640	$ 61,760	$ 79,788
Basic EPS:				
Income before accounting change	$ 0.37	$ 0.40	$ 0.66	$ 0.84
Cumulative effect of a change in accounting principle	(0.31)	--	--	--
Net income	$ 0.06	$ 0.40	$ 0.66	$ 0.84
Diluted EPS:				
Income before accounting change	$ 0.36	$ 0.38	$ 0.62	$ 0.79
Cumulative effect of a change in accounting principle	(0.30)	--	--	--
Net income	$ 0.06	$ 0.38	$ 0.62	$ 0.79
2001				
Sales	$ 461,901	$ 561,560	$ 618,164	$ 705,797
Operating income	46,869	60,467	75,208	92,786
Net income	14,158	23,336	33,435	44,529
Basic EPS	$ 0.21	$ 0.31	$ 0.43	$ 0.57
Diluted EPS	$ 0.20	$ 0.30	$ 0.41	$ 0.53

(DOLLARS IN THOUSANDS, EXCEPT PER SHARE DATA)

20. FINANCIAL INFORMATION OF L-3 COMMUNICATIONS AND ITS SUBSIDIARIES

The shareholders' equity of L-3 Communications equals that of L-3 Holdings but its components of the common stock and additional paid-in capital accounts are different. The table below presents information regarding the balances and changes in common stock and additional paid-in capital of L-3 Communications for each of the three years ended December 31, 2002.

	L-3 COMMUNICATIONS COMMON STOCK			
	SHARES ISSUED	PAR VALUE	ADDITIONAL PAID-IN CAPITAL	TOTAL
Balance at December 31, 1999	100	$ --	$ 483,694	$ 483,694
Contributions from L-3 Holdings			322,732	322,732
Push down of Convertible Notes			(290,500)	(290,500)
Balance at December 31, 2000	100	--	515,926	515,926
Contributions from L-3 Holdings			830,561	830,561
Push down of CODES			(407,450)	(407,450)
Balance at December 31, 2001	100	--	939,037	939,037
Contributions from L-3 Holdings			855,939	855,939
Balance at December 31, 2002	100	$ --	$ 1,794,976	$ 1,794,976

The net proceeds received by L-3 Holdings from the sale of its common stock, exercise of L-3 Holdings employee stock options and L-3 Holdings common stock contributed to the Company's savings plans are contributed to L-3 Communications. The net proceeds from the sale of the Convertible Notes and CODES by L-3 Holdings were also contributed to L-3 Communications and are reflected as indebtedness of L-3 Communications. See Notes 2 and 8.

The debt of L-3 Communications, including the Senior Subordinated Notes and borrowings under amounts drawn against the Senior Credit Facilities are guaranteed, on a joint and several, full and unconditional basis, by certain of its wholly-owned domestic subsidiaries (the "Guarantor Subsidiaries"). See Note 8. The foreign subsidiaries and certain domestic subsidiaries of L-3 Communications (the "Non-Guarantor Subsidiaries") do not guarantee the debt of L-3 Communications. None of the debt of L-3 Communications has been issued by its subsidiaries. There are no restrictions on the payment of dividends from the Guarantor Subsidiaries to L-3 Communications.

In lieu of providing separate audited financial statements for the Guarantor Subsidiaries, the Company has included the accompanying condensed combining financial statements based on Rule 3-10 of SEC Regulation S-X. The Company does not believe that separate financial statements of the Guarantor Subsidiaries are material to users of the financial statements.

(DOLLARS IN THOUSANDS, EXCEPT PER SHARE DATA)

The following condensed combining financial information present the results of operations, financial position and cash flows of (i) L-3 Holdings excluding L-3 Communications, (ii) L-3 Communications excluding its consolidated subsidiaries (the "Parent") (iii) the Guarantor Subsidiaries, (iv) the Non-Guarantor Subsidiaries and (v) the eliminations to arrive at the information for L-3 Communications on a consolidated basis.

	L-3 HOLDINGS	L-3 COMMUNICATIONS (PARENT)	GUARANTOR SUBSIDIARIES	NON-GUARANTOR SUBSIDIARIES	ELIMINATIONS	CONSOLIDATED L-3 COMMUNICATIONS
CONDENSED COMBINING BALANCE SHEETS:						
AS OF DECEMBER 31, 2002:						
Current assets:						
Cash and cash equivalents	$ --	$ 126,421	$ (7,248)	$ 15,683	$ --	$ 134,856
Contracts in process	--	524,500	630,351	163,142	--	1,317,993
Other current assets		155,387	28,319	2,819	--	186,525
Total current assets	--	806,308	651,422	181,644	--	1,639,374
Goodwill	--	753,672	1,702,384	338,492	--	2,794,548
Other assets	--	372,207	355,866	80,313	--	808,386
Investment in and amounts due from consolidated subsidiaries	2,919,954	2,688,750	398,282	53,779	(6,060,765)	--
Total assets	$2,919,954	$4,620,937	$3,107,954	$654,228	$ (6,060,765)	5,242,308
Current liabilities	--	322,747	298,646	75,246	--	696,639
Long-term debt	717,752	1,847,752	--	--	(717,752)	1,847,752
Other long-term liabilities ...	--	248,236	166,188	8,050	--	422,474
Minority interest	--	--	--	73,241	--	73,241
Shareholders' equity	2,202,202	2,202,202	2,643,120	497,691	(5,343,013)	2,202,202
Total liabilities and shareholders' equity	$2,919,954	$4,620,937	$3,107,954	$654,228	$ (6,060,765)	$5,242,308
AS OF DECEMBER 31, 2001:						
Current assets:						
Cash and cash equivalents	$ --	$ 320,210	$ (4,412)	$ 45,224	$ --	$ 361,022
Contracts in process	--	390,040	300,996	110,788	--	801,824
Other current assets		76,248	4,001	(694)	--	79,555
Total current assets	--	786,498	300,585	155,318	--	1,242,401
Goodwill	--	694,221	631,648	381,849	--	1,707,718
Other assets	--	271,345	70,239	47,546	--	389,130
Investment in and amounts due from consolidated subsidiaries	1,931,390	1,229,572	150,580	43,236	(3,354,778)	--
Total assets	$1,931,390	$2,981,636	$1,153,052	$627,949	$ (3,354,778)	$3,339,249
Current liabilities	--	278,598	136,579	109,394	--	524,571
Long-term debt	717,498	1,315,252	--	--	(717,498)	1,315,252
Other long-term liabilities ...	--	173,894	31,080	10,663	--	215,637
Minority interest	--	--	--	69,897	--	69,897
Shareholders' equity	1,213,892	1,213,892	985,393	437,995	(2,637,280)	1,213,892
Total liabilities and shareholders' equity	$1,931,390	$2,981,636	$1,153,052	$627,949	$ (3,354,778)	$3,339,249

(DOLLARS IN THOUSANDS, EXCEPT PER SHARE DATA)

	L-3 HOLDINGS	L-3 COMMUNICATIONS (PARENT)	GUARANTOR SUBSIDIARIES	NON-GUARANTOR SUBSIDIARIES	ELIMINATIONS	CONSOLIDATED L-3 COMMUNICATION
CONDENSED COMBINING STATEMENTS OF OPERATIONS:						
FOR THE YEAR ENDED DECEMBER 31, 2002:						
Sales	$ --	$ 1,875,389	$1,895,410	$ 260,799	$ (20,369)	$ 4,011,229
Costs and expenses	--	1,622,200	1,736,233	219,186	(20,369)	3,557,250
Operating income	--	253,189	159,177	41,613	--	453,979
Interest and other income (expense)		11,202	(286)	262	(6,257)	4,921
Interest expense	35,499	120,774	1,622	6,353	(41,756)	122,492
Minority interest	--	--	--	6,198	--	6,198
Loss on retirement of debt	--	16,187	--	--	--	16,187
Provision (benefit) for income taxes	(13,880)	44,942	56,145	10,469	13,880	111,556
Cumulative effect of a change in accounting principal	--	(14,749)	--	(9,621)	--	(24,370)
Equity in net income of consolidated subsidiaries	199,716	110,358	--	--	(310,074)	--
Net income	$ 178,097	$ 178,097	$ 101,124	$ 9,234	$ (288,455)	$ 178,097
FOR THE YEAR ENDED DECEMBER 31, 2001:						
Sales	$ --	$ 1,328,702	$ 854,094	$ 168,558	$ (3,932)	$ 2,347,422
Costs and expenses	--	1,109,329	823,857	142,838	(3,932)	2,072,092
Operating income	--	219,373	30,237	25,720	--	275,330
Interest and other income (expense)		8,335	(515)	(6,081)		1,739
Interest expense	20,400	86,024	51	315	(20,400)	86,390
Minority interest	--	--	--	4,457	--	4,457
Provision (benefit) for income taxes	(7,976)	53,840	11,275	5,649	7,976	70,764
Equity in net income of consolidated subsidiaries	127,882	27,614	--	--	(155,496)	--
Net income	$ 115,458	$ 115,458	$ 18,396	$ 9,218	$ (143,072)	$ 115,458
FOR THE YEAR ENDED DECEMBER 31, 2000:						
Sales	--	$ 1,313,998	$ 441,677	$ 159,735	$ (5,349)	$ 1,910,061
Costs and expenses	--	1,107,318	435,922	149,452	(5,349)	1,687,343
Operating income	--	206,680	5,755	10,283	--	222,718
Interest and other income		3,061	264	1,068		4,393
Interest expense	1,638	92,633	149	250	(1,638)	93,032
Provision (benefit) for income taxes	(640)	44,852	2,248	4,252	640	51,352
Equity in net income of consolidated subsidiaries	83,725	10,471	--	--	(94,196)	--
Net income	$ 82,727	$ 82,727	$ 3,622	$ 6,849	$ (93,198)	$ 82,727

(DOLLARS IN THOUSANDS, EXCEPT PER SHARE DATA)

	L-3 HOLDINGS	L-3 COMMUNICATIONS (PARENT)	GUARANTOR SUBSIDIARIES	NON-GUARANTOR SUBSIDIARIES	ELIMINATIONS	CONSOLIDATED L-3 COMMUNICATIONS
CONDENSED COMBINING STATEMENTS OF CASH FLOWS:						
FOR THE YEAR ENDED DECEMBER 31, 2002:						
Net cash from operating activities	$ --	$ 137,837	$ 169,221	$ 11,402	$ --	$ 318,460
INVESTING ACTIVITIES:						
Acquisition of businesses, net of cash acquired	--	(146,913)	(1,499,891)	(95,329)	--	(1,742,133)
Other investing activities	(855,939)	(1,627,853)	(27,130)	(8,632)	2,451,159	(68,395)
Net cash used in investing activities .	(855,939)	(1,774,766)	(1,527,021)	(103,961)	2,451,159	(1,810,528)
FINANCING ACTIVITIES:						
Proceeds from sale of senior subordinated notes	--	750,000	--	--	--	750,000
Redemption of senior subordinated notes	--	(237,468)	--	--	--	(237,468)
Proceeds from sale of L-3 Holdings' common stock, net	766,780	--	--	--	--	766,780
Other financing activities	89,159	930,608	1,354,964	63,018	(2,451,159)	(13,410)
Net cash from financing activities	855,939	1,443,140	1,354,964	63,018	(2,451,159)	1,265,902
Net decrease in cash	--	(193,789)	(2,836)	(29,541)	--	(226,166)
Cash and cash equivalents, beginning of period	--	320,210	(4,412)	45,224	--	361,022
Cash and cash equivalents, end of period	--	$ 126,421	$ (7,248)	$ 15,683	$ --	$ 134,856
FOR THE YEAR ENDED DECEMBER 31, 2001:						
Net cash from operating activities	--	$ 104,169	$ 30,014	$ 38,785	$ --	$ 172,968
INVESTING ACTIVITIES:						
Acquisition of businesses, net of cash acquired	--	(112,691)	(212,556)	(121,664)	--	(446,911)
Other investing activities	(830,561)	(357,400)	(14,643)	59,844	1,164,781	22,021
Net cash used in investing activities .	(830,561)	(470,091)	(227,199)	(61,820)	1,164,781	(424,890)
FINANCING ACTIVITIES:						
Repayment of borrowings under senior credit facilities	--	(190,000)	--	--	--	(190,000)
Proceeds from sale of senior subordinated notes	420,000	--	--	--	--	420,000
Proceeds from sale of L-3 Holdings' common stock, net	353,622	--	--	--	--	353,622
Other financing activities	56,939	857,424	187,862	59,198	(1,164,781)	(3,358)
Net cash from financing activities	830,561	667,424	187,862	59,198	(1,164,781)	580,264
Net increase (decrease) in cash	--	301,502	(9,323)	36,163	--	328,342
Cash and cash equivalents, beginning of period	--	18,708	4,911	9,061	--	32,680
Cash and cash equivalents, end of period	$ --	$ 320,210	$ (4,412)	$ 45,224	$ --	$ 361,022

(DOLLARS IN THOUSANDS, EXCEPT PER SHARE DATA)

	L-3 HOLDINGS	L-3 COMMUNICATIONS (PARENT)	GUARANTOR SUBSIDIARIES	NON-GUARANTOR SUBSIDIARIES	ELIMINATIONS	CONSOLIDATED L-3 COMMUNICATIONS
FOR THE YEAR ENDED DECEMBER 31, 2000:						
Net cash from (used in) operating activities	--	$ 108,726	$ (10,504)	$ 15,583	$ --	$ 113,805
	--					
INVESTING ACTIVITIES:						
Acquisition of businesses, net of cash acquired	--	(570,270)	(15,624)	(13,714)	--	(599,608)
Other investing activities	(322,732)	(37,309)	(6,195)	5,551	352,070	(8,615)
Net cash used in investing activities	(322,732)	(607,579)	(21,819)	(8,163)	352,070	(608,223)
FINANCING ACTIVITIES:						
Proceeds from sale of senior subordinated notes	--	300,000	--	--	--	300,000
Borrowings under senior credit facilities	--	190,000	--	--	--	190,000
Other financing activities	322,732	(6,476)	32,070	(1,946)	(352,070)	(5,690)
Net cash from (used in) financing activities	322,732	483,524	32,070	(1,946)	(352,070))	484,310
Net (decrease) increase in cash	--	(15,329)	(253)	5,474	--	(10,108)
Cash and cash equivalents, beginning of period	--	34,037	5,164	3,587	--	42,788
Cash and cash equivalents, end of period	--	$ 18,708	$ 4,911	$ 9,061	$ --	$ 32,680

[L-3 COMMUNICATIONS LOGO OMITTED]

OFFER TO EXCHANGE ALL OUTSTANDING 6 1/8% SENIOR SUBORDINATED NOTES DUE 2013 FOR 6 1/8% SERIES B SENIOR SUBORDINATED NOTES DUE 2013, WHICH HAVE BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933

PROSPECTUS

UNTIL , 2003 ALL DEALERS THAT EFFECT TRANSACTIONS IN THESE SECURITIES, WHETHER OR NOT PARTICIPATING IN THIS OFFERING, MAY BE REQUIRED TO DELIVER A PROSPECTUS. THIS IS IN ADDITION TO THE DEALERS' OBLIGATION TO DELIVER A PROSPECTUS WHEN ACTING AS UNDERWRITERS AND WITH RESPECT TO THEIR UNSOLD ALLOTMENTS OR SUBSCRIPTIONS.

, 2003

PART II
INFORMATION NOT REQUIRED IN PROSPECTUS

ITEM 20. INDEMNIFICATION OF DIRECTORS AND OFFICERS.

Section 145 of the Delaware General Corporation Law (the "DGCL") provides for, among other things:

a. permissive indemnification for expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by designated persons, including directors and officers of a corporation, in the event such persons are parties to litigation other than stockholder derivative actions if certain conditions are met;

b. permissive indemnification for expenses (including attorneys' fees) actually and reasonably incurred by designated persons, including directors and officers of a corporation, in the event such persons are parties to stockholder derivative actions if certain conditions are met;

c. mandatory indemnification for expenses (including attorneys' fees) actually and reasonably incurred by designated persons, including directors and officers of a corporation, in the event such persons are successful on the merits or otherwise in defense of litigation covered by a. and b. above; and

d. that the indemnification provided for by Section 145 is not deemed exclusive of any other rights which may be provided under any by-law, agreement, stockholder or disinterested director vote, or otherwise.

In addition to the indemnification provisions of the DGCL described above, the Registrant's certificate of incorporation (the "Certificate of Incorporation") authorizes indemnification of the Registrant's officers and directors, subject to a case-by-case determination that they acted in good faith and in a manner they reasonably believed to be in or not opposed to the best interests of the Company, and in the case of any criminal proceeding, they had no reasonable cause to believe their conduct was unlawful. In the event that a Change in Control (as defined in the Certificate of Incorporation) shall have occurred, the proposed indemnitee director or officer may require that the determination of whether he met the standard of conduct be made by special legal counsel selected by him. In addition, whereas the DGCL would require court-ordered indemnification, if any, in cases in which a person has been adjudged to be liable to the Registrant, the Certificate of Incorporation also permits indemnification in such cases if and to the extent that the reviewing party determines that such indemnity is fair and reasonable under the circumstances.

The Certificate of Incorporation requires the advancement of expenses to an officer or director (without a determination as to his conduct) in advance of the final disposition of a proceeding if such person furnishes a written affirmation of his good faith belief that he has met the applicable standard of conduct and furnishes a written undertaking to repay any advances if it is ultimately determined that he is not entitled to indemnification. In connection with proceedings by or in the right of the Registrant, the Certificate of Incorporation provides that indemnification shall include not only reasonable expenses, but also penalties, fines and amounts paid in settlement. Unless ordered by a court, such indemnification shall not include judgments. Under the Certificate of Incorporation, no officer or director is entitled to indemnification or advancement of expenses with respect to a proceeding brought by him against the Registrant other than a proceeding seeking or defending such officer's or director's right to indemnification or advancement of expenses. Finally, the Certificate of Incorporation provides that the Company may, subject to authorization on a case by case basis, indemnify and advance expenses to employees or agents to the same extent as a director or to a lesser extent (or greater, as permitted by law) as determined by the Board of Directors.

The Certificate of Incorporation purports to confer upon officers and directors contractual rights to indemnification and advancement of expenses as provided therein. In addition, as permitted by the DGCL, the Registrant has entered into indemnity agreements with its directors and selected officers that provide contract rights substantially identical to the rights to indemnification and advancement of expenses set forth in the Certificate of Incorporation, as described above.

The Certificate of Incorporation limits the personal liability of directors to the Registrant or its stockholders for monetary damages for breach of the duty as a director, other than liability as a director (i) for breach of duty of loyalty to the Registrant or its stockholders, (ii) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (iii) under Section 174 of the DGCL (certain illegal distributions), or (iv) for any transaction for which the director derived an improper personal benefit.

The Registrant maintains officers' and directors' insurance covering certain liabilities that may be incurred by officers and directors in the performance of their duties.

ITEM 21. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES.

The following exhibits are filed pursuant to Item 601 of Regulation S-K.

EXHIBIT NO.	DESCRIPTION OF EXHIBIT
**1.1	Purchase Agreement, dated as of May 14, 2003, among L-3 Communications Corporation, the Guarantors, Lehman Brothers Inc., Morgan Stanley & Co. Incorporated, Banc of America Securities LLC and Credit Suisse First Boston LLC.
3.1	Certificate of Incorporation of L-3 Communications Corporation (incorporated by reference to Exhibit 3.1 to the Company's Registration Statement on Form S-4 No. 333-31649).
3.2	By-Laws of L-3 Communications Corporation (incorporated by reference to Exhibit 3.2 to the Company's Registration Statement on Form S-4 No. 333- 31649).
3.3	Certificate of Incorporation of Hygienetics Environmental Services, Inc. (incorporated by reference to Exhibit 3.3 to the Company's Registration Statement on Form S-1 No. 333-46983).
3.4	By-laws of Hygienetics Environmental Services, Inc. (incorporated by reference to Exhibit 3.4 to the Company's Registration Statement on Form S-1 No. 333- 46983).
3.5	Certificate of Incorporation of L-3 Communications ILEX Systems, Inc. (incorporated by reference to Exhibit 3.5 to the Company's Registration Statement on Form S-1 (No. 333-46983).
3.6	By-laws of L-3 Communications ILEX Systems, Inc. (incorporated by reference to Exhibit 3.6 to the Company's Registration Statement on Form S-1 No. 333- 46983).
3.7	Certificate of Incorporation of Southern California Microwave, Inc. (incorporated by reference to Exhibit 3.7 to the Company's Registration Statement on Form S-1 No. 333-46983).
3.8	By-laws of Southern California Microwave, Inc. (incorporated by reference to Exhibit 3.8 to the Company's Registration Statement on Form S-1 No. 333- 46983).
3.9	Certificate of Incorporation of L-3 Communications SPD Technologies, Inc. (incorporated by reference to Exhibit 3.9 to the Company's Registration Statement on Form S-4 No. 333-70199).
3.10	By-laws of L-3 Communications SPD Technologies, Inc. (incorporated by reference to Exhibit 3.10 to the Company's Registration Statement on Form S-4 No. 333-70199).
3.11	Certificate of Incorporation of L-3 Communications ESSCO, Inc. (incorporated by reference to Exhibit 3.11 to the Company's Registration Statement on Form S-4 No. 333-70199).

EXHIBIT NO.	DESCRIPTION OF EXHIBIT
3.12	By-laws of L-3 Communications ESSCO, Inc. (incorporated by reference to Exhibit 3.12 to the Company's Registration Statement on Form S-4 No. 333-70199).
3.13	Certificate of Incorporation of L-3 Communications Storm Control Systems, Inc. (incorporated by reference to Exhibit 3.13 to the Company's Registration Statement on Form S-4 No. 333-70199).
3.14	By-laws of L-3 Communications Storm Control Systems, Inc. (incorporated by reference to Exhibit 3.14 to the Company's Registration Statement on Form S-4 No. 333-70199).
3.17	Certificate of Incorporation of SPD Electrical Systems, Inc. (incorporated by reference to Exhibit 3.17 to the Company's Registration Statement on Form S-4 No. 333-70199).
3.18	By-laws of SPD Electrical Systems, Inc. (incorporated by reference to Exhibit 3.18 to the Company's Registration Statement on Form S-4 No. 333-70199).
3.19	Certificate of Incorporation of SPD Switchgear Inc. (incorporated by reference to Exhibit 3.19 to the Company's Registration Statement on Form S-4 No. 333-70199).
3.20	By-laws of SPD Switchgear Inc. (incorporated by reference to Exhibit 3.20 to the Company's Registration Statement on Form S-4 No. 333-70199).
3.21	Certificate of Incorporation of Pac Ord Inc. (incorporated by reference to Exhibit 3.21 to the Company's Registration Statement on Form S-4 No. 333-70199).
3.22	By-laws of Pac Ord Inc. (incorporated by reference to Exhibit 3.22 to the Company's Registration Statement on Form S-4 No. 333-70199).
3.23	Certificate of Incorporation of Henschel Inc. (incorporated by reference to Exhibit 3.23 to the Company's Registration Statement on Form S-4 No. 333-70199).
3.24	By-laws of Henschel Inc. (incorporated by reference to Exhibit 3.24 to the Company's Registration Statement on Form S-4 No. 333-70199).
3.25	Certificate of Incorporation of Power Paragon, Inc. (incorporated by reference to Exhibit 3.25 to the Company's Registration Statement on Form S-4 No. 333-70199).
3.26	By-laws of Power Paragon, Inc. (incorporated by reference to Exhibit 3.26 to the Company's Registration Statement on Form S-4 No. 333-70199).
3.27	Certificate of Incorporation of SPD Holdings, Inc. (incorporated by reference to Exhibit 3.27 to the Company's Registration Statement on Form S-4 No. 333-70199).
3.28	By-laws of SPD Holdings, Inc. (incorporated by reference to Exhibit 3.28 to the Company's Registration Statement on Form S-4 No. 333-70199).
3.29	Certificate of Incorporation of AMI Instruments, Inc. (incorporated by reference to Exhibit 3.29 to the Company's Registration Statement on Form S-4 No. 333-99757).
3.30	By-laws of AMI Instruments, Inc. (incorporated by reference to Exhibit 3.30 to the Company's Registration Statement on Form S-4 No. 333-99757).
3.31	Certificate of Incorporation of Apcom, Inc. (incorporated by reference to Exhibit 3.31 to the Company's Registration Statement on Form S-4 No. 333-99757).
3.32	By-laws of Apcom, Inc. (incorporated by reference to Exhibit 3.32 to the Company's Registration Statement on Form S-4 No. 333-99757).

EXHIBIT NO.	DESCRIPTION OF EXHIBIT
3.33	Certificate of Incorporation of Celerity Systems Incorporated (incorporated by reference to Exhibit 3.33 to the Company's Registration Statement on Form S-4 No. 333-99757).
3.34	By-laws of Celerity Systems Incorporated (incorporated by reference to Exhibit 3.34 to the Company's Registration Statement on Form S-4 No. 333-99757).
3.37	Certificate of Incorporation of EER Systems, Inc. (incorporated by reference to Exhibit 3.37 to the Company's Registration Statement on Form S-4 No. 333-99757)
3.38	By-laws of EER Systems, Inc. (incorporated by reference to Exhibit 3.38 to the Company's Registration Statement on Form S-4 No. 333-99757)
3.39	Certificate of Incorporation of Electrodynamics, Inc. (incorporated by reference to Exhibit 3.39 to the Company's Registration Statement on Form S-4 No. 333-99757)
3.40	By-laws of Electrodynamics, Inc. (incorporated by reference to Exhibit 3.40 to the Company's Registration Statement on Form S-4 No. 333-99757)
3.41	Certificate of Incorporation of Interstate Electronics Corporation (incorporated by reference to Exhibit 3.41 to the Company's Registration Statement on Form S-4 No. 333-99757).
3.42	By-laws of Interstate Electronics Corporation (incorporated by reference to Exhibit 3.42 to the Company's Registration Statement on Form S-4 No. 333-99757).
3.43	Certificate of Incorporation of KDI Precision Products, Inc. (incorporated by reference to Exhibit 3.43 to the Company's Registration Statement on Form S-4 No. 333-99757)
3.44	By-laws of KDI Precision Products, Inc. (incorporated by reference to Exhibit 3.44 to the Company's Registration Statement on Form S-4 No. 333-99757)
3.45	Certificate of Incorporation of L-3 Communications AIS GP Corporation (incorporated by reference to Exhibit 3.45 to the Company's Registration Statement on Form S-4 No. 333-99757).
3.46	By-laws of L-3 Communications AIS GP Corporation (incorporated by reference to Exhibit 3.46 to the Company's Registration Statement on Form S-4 No. 333-99757).
3.47	Certificate of Incorporation of L-3 Communications Analytics Corporation (incorporated by reference to Exhibit 3.47 to the Company's Registration Statement on Form S-4 No. 333-99757).
3.48	By-laws of L-3 Communications Analytics Corporation (incorporated by reference to Exhibit 3.48 to the Company's Registration Statement on Form S-4 No. 333-99757).
3.49	Certificate of Incorporation of L-3 Communications Atlantic Science and Technology Corporation (incorporated by reference to Exhibit 3.49 to the Company's Registration Statement on Form S-4 No. 333-99757).
3.50	By-laws of L-3 Communications Atlantic Science and Technology Corporation (incorporated by reference to Exhibit 3.50 to the Company's Registration Statement on Form S-4 No. 333-99757).
3.51	Certificate of Incorporation of L-3 Communications Aydin Corporation (incorporated by reference to Exhibit 3.51 to the Company's Registration Statement on Form S-4 No. 333-99757).
3.52	By-laws of L-3 Communications Aydin Corporation (incorporated by reference to Exhibit 3.52 to the Company's Registration Statement on Form S-4 No. 333-99757).

EXHIBIT NO.	DESCRIPTION OF EXHIBIT
3.53	Certificate of Limited Partnership of L-3 Communications Integrated Systems L.P (incorporated by reference to Exhibit 3.53 to the Company's Registration Statement on Form S-4 No. 333-99757).
3.54	Limited Partnership Agreement of L-3 Communications Integrated Systems L.P. (incorporated by reference to Exhibit 3.54 to the Company's Registration Statement on Form S-4 No. 333-99757)
3.55	Certificate of Incorporation of L-3 Communications Investments, Inc. (incorporated by reference to Exhibit 3.55 to the Company's Registration Statement on Form S-4 No. 333-99757)
3.56	By-laws of L-3 Communications Investments, Inc. (incorporated by reference to Exhibit 3.56 to the Company's Registration Statement on Form S-4 No. 333-99757)
3.57	Certificate of Incorporation of Microdyne Communications Technologies Incorporated (incorporated by reference to Exhibit 3.57 to the Company's Registration Statement on Form S-4 No. 333-99757).
3.58	By-laws of Microdyne Communications Technologies Incorporated (incorporated by reference to Exhibit 3.58 to the Company's Registration Statement on Form S-4 No. 333-99757).
3.59	Certificate of Incorporation of Microdyne Corporation (incorporated by reference to Exhibit 3.59 to the Company's Registration Statement on Form S-4 No. 333-99757).
3.60	By-laws of Microdyne Corporation (incorporated by reference to Exhibit 3.60 to the Company's Registration Statement on Form S-4 No. 333-99757).
3.61	Certificate of Incorporation of Microdyne Outsourcing Incorporated (incorporated by reference to Exhibit 3.61 to the Company's Registration Statement on Form S-4 No. 333-99757).
3.62	By-laws of Microdyne Outsourcing Incorporated (incorporated by reference to Exhibit 3.62 to the Company's Registration Statement on Form S-4 No. 333-99757).
3.63	Certificate of Incorporation of MPRI, Inc. (incorporated by reference to Exhibit 3.63 to the Company's Registration Statement on Form S-4 No. 333-99757)
3.64	By-laws of MPRI, Inc. (incorporated by reference to Exhibit 3.64 to the Company's Registration Statement on Form S-4 No. 333-99757)
3.65	Certificate of Incorporation of MCTI Acquisition Corporation (incorporated by reference to Exhibit 3.65 to the Company's Registration Statement on Form S-4 No. 333-99757).
3.66	Bylaws of MCTI Acquisition Corporation (incorporated by reference to Exhibit 3.66 to the Company's Registration Statement on Form S-4 No. 333-99757).
3.67	Certificate of Incorporation of L-3 Communications Security and Detection Systems Corporation Delaware (incorporated by reference to Exhibit 3.67 to the Company's Registration Statement on Form S-4 No. 333-99757).
3.68	Bylaws of L-3 Communications Security and Detection Systems Corporation Delaware (incorporated by reference to Exhibit 3.68 to the Company's Registration Statement on Form S-4 No. 333-99757).
**3.69	Certificate of Incorporation of Broadcast Sports, Inc.
**3.70	Bylaws of Broadcast Sports, Inc.

EXHIBIT NO.	DESCRIPTION OF EXHIBIT
**3.71	Certificate of Incorporation of Goodrich Aerospace Component Overhaul & Repair, Inc.
**3.72	Bylaws of Goodrich Aerospace Component Overhaul & Repair, Inc.
**3.73	Certificate of Incorporation of Goodrich Avionics Systems, Inc.
**3.74	Bylaws of Goodrich Avionics Systems, Inc.
**3.75	Articles of Incorporation of Goodrich Flightsystems, Inc.
**3.76	Bylaws of Goodrich Flightsystems, Inc.
**3.77	Certificate of Incorporation of L-3 Communications IMC Corporation
**3.78	Bylaws of L-3 Communications IMC Corporation
**3.79	Certificate of Incorporation of L-3 Communications Security and Detection Systems Corporation California
**3.80	Bylaws of L-3 Communications Security and Detection Systems Corporation California
**3.81	Articles of Incorporation of L-3 Communications TMA Corporation
**3.82	Bylaws of L-3 Communications TMA Corporation
**3.83	Certificate of Restated and Amended Articles of Incorporation of L-3 Communications Westwood Corporation
**3.84	Bylaws of L-3 Communications Westwood Corporation
**3.85	Certificate of Incorporation of Ship Analytics, Inc.
**3.86	Bylaws of Ship Analytics, Inc.
**3.87	Certificate of Incorporation Ship Analytics International, Inc.
**3.88	Bylaws of Ship Analytics International, Inc.
**3.89	Certificate of Incorporation of Ship Analytics USA, Inc.
**3.90	Bylaws of Ship Analytics USA, Inc.
**3.91	Certificate of Incorporation of SYColeman Corporation
**3.92	Bylaws of SYColeman Corporation
**3.93	Articles of Incorporation of Telos Corporation
**3.94	Bylaws of Telos Corporation
**3.95	Certificate of Incorporation of Troll Technology Corporation
**3.96	Bylaws of Troll Technology Corporation
**3.97	Certificate of Incorporation of Wescam Air Ops Inc.
**3.98	Bylaws of Wescam Air Ops Inc.
**3.99	Certificate of Formation of Wescam Air Ops LLC
**3.100	Limited Liability Company Agreement of Wescam Air Ops LLC
**3.101	Articles of Incorporation of Wescam Incorporated
**3.102	Bylaws of Wescam Incorporated

EXHIBIT NO.	DESCRIPTION OF EXHIBIT
**3.103	Certificate of Formation of Wescam LLC
**3.104	Limited Liability Company Agreement of Wescam LLC
**3.105	Articles of Incorporation of Wescam Sonoma Inc.
**3.106	Bylaws of Wescam Sonoma Inc.
**3.107	Certificate of Incorporation of Wescam Holdings (US) Inc.
**3.108	Bylaws of Wescam Holdings (US) Inc.
**3.109	Articles of Organization of Wolf Coach, Inc.
**3.110	Bylaws of Wolf Coach, Inc.
**4.1	Indenture dated as of May 21, 2003 among L-3 Communications Corporation, the Guarantors and The Bank of New York, as Trustee.
4.2	Form of 6 1/8% Senior Subordinated Note due 2013 (attached as Exhibit A to Exhibit 4.1).
4.3	Form of 6 1/8% Series B Senior Subordinated Note due 2013 (attached as Exhibit A to Exhibit 4.1).
**4.4	Registration Rights Agreement, dated as of May 21, 2003, among L-3 Communications Corporation, the Guarantors, Lehman Brothers Inc., Morgan Stanley & Co. Incorporated, Banc of America Securities LLC and Credit Suisse First Boston LLC.
**5	Opinion of Simpson Thacher and Bartlett LLP.
10.6	Employment Agreement dated April 30, 1997 between Frank C. Lanza and L-3 Communications Holdings, Inc. (incorporated by reference to Exhibit 10.5 to the Registrant's Registration Statement on Form S-1 No. 333-46975).
10.11	1997 Stock Option Plan for Key Employees (incorporated by reference to Exhibit 10.11 to Registrant's Registration Statement on Form S-1, No. 333-70125).
10.12	Non-Qualified Stock Option Agreement dated as of April 30, 1997 by and between L-3 Communications Holdings, Inc. and Frank C. Lanza (incorporated by reference to Exhibit 10.12 to Registrant's Registration Statement on Form S-1, No. 333-70125).
10.13	Non-Qualified Stock Option Agreement dated as of April 30, 1997 by and between L-3 Communications Holdings, Inc. and Robert V. LaPenta (incorporated by reference to Exhibit 10.13 to Registrant's Registration Statement on Form S-1, No. 333-70125).
10.15	Option Plan for Non-Employee Directors of L-3 Communication's Holdings, Inc. (incorporated by reference to Exhibit 10.15 to Registrant's annual report on Form 10-K filed on March 31, 1999).
10.16	1999 Long Term Performance Plan dated as of April 27, 1999 (incorporated by reference to Exhibit 10.16 to the Registrant's annual report on Form 10-K filed on March 30, 2000).
10.20	L-3 Communications Corporation Pension Plan (incorporated by reference to Exhibit 10.10 to the Registrant's Registration Statement on Form S-1 No. 333-46975).
10.25	L-3 Communications Corporation Employee Stock Purchase Plan (incorporated by reference to Appendix A of the Registrant's Definitive Proxy Statement filed April 2, 2001).

EXHIBIT NO.	DESCRIPTION OF EXHIBIT
10.32	Indenture dated as of December 11, 1998 among L-3 Communications Corporation, the Guarantors named therein and The Bank of New York, as Trustee (incorporated by reference to Exhibit 10.32 to Registrant's Registration Statement on Form S-1, No. 333-70125).
10.33	Indenture dated as of November 21, 2000 among L-3 Communications Holdings, Inc., the Guarantors named therein and the Bank of New York, as Trustee (incorporated by reference to Exhibit 10.33 to Registrant's annual report on Form 10-K filed on March 19, 2002).
10.40	Third Amended and Restated Credit Agreement dated as of May 16, 2001 among L-3 Communications Corporation, the lenders named therein and the other parties thereto (incorporated by reference to Exhibit 10.40 of the Registrant's Annual Report on Form 10-K for the year ended December 31, 2001).
10.41	Second Amended and Restated 364-Day Credit Agreement dated as of May 16, 2001 among L-3 Communications Corporation, the lenders named therein and the other parties thereto (incorporated by reference to Exhibit 10.41 of the Registrant's Annual Report on Form 10-K for the year ended December 31, 2001).
10.42	First Amendment to Third Amended and Restated Credit Agreement dated as of October 17, 2001 among L-3 Communications Corporation, the lenders named therein and the other parties thereto (incorporated by reference to Exhibit 10.42 of the Registrant's Annual Report on Form 10-K for the year ended December 31, 2001).
10.43	First Amendment to Second Amended and Restated 364-Day Credit Agreement dated as of October 17, 2001 among L-3 Communications Corporation, the lenders named therein and the other parties thereto (incorporated by reference to Exhibit 10.43 of the Registrant's Annual Report on Form 10-K for the year ended December 31, 2001).
10.44	Second Amendment to Third Amended and Restated Credit Agreement dated as of February 25, 2002 among L-3 Communications Corporation, the lenders named therein and the other parties thereto (incorporated by reference to Exhibit 10.44 of the Registrant's Annual Report on Form 10-K for the year ended December 31, 2001).
10.45	Consent and Second Amendment to Second Amended and Restated 364-Day Credit Agreement dated as of February 25, 2002 among L-3 Communications Corporation, the lenders named herein and the other parties thereto (incorporated by reference to Exhibit 10.45 of the Registrant's Annual Report on Form 10-K for the year ended December 31, 2001).
10.46	Consent, Waiver and Omnibus Amendment Regarding Third Amended and Restated Credit Agreement dated as of February 25, 2003 among L-3 Communications Corporation, the lenders named therein and the other parties thereto (incorporated by reference to Exhibit 10.46 to the Company's Registration Statement on Form S-4 No. 333-99757).
10.47	Consent, Waiver and Omnibus Amendment Regarding Second Amended and Restated 364-Day Credit Agreement dated as of February 25, 2003 among L-3 Communications Corporation, the lenders named therein and the other parties thereto (incorporated by reference to Exhibit 10.47 to the Company's Registration Statement on Form S-4 No. 333-99757).

EXHIBIT NO.	DESCRIPTION OF EXHIBIT
10.53	Indenture dated as of October 24, 2001 ("2001 Indenture") among L-3 Communications Holdings, Inc., the guarantors named therein and Lehman Brothers Inc., Bear Stearns & Co., and Credit Suisse First Boston Corporation as initial purchasers (Incorporated by reference to Exhibit 4.f of the Registrant's Registration Statement on form S-3, No. 333-75558).
10.55	Supplemental Indenture dated as of May 5, 2003 among L-3 Communications Corporation, The Bank of New York, as trustee, and the guarantors named therein to the May 1998 Indenture (incorporated by reference to Exhibit 10.55 of the Registrant's Quarterly Report on Form 10-Q for the quarter ended March 31, 2003).
10.56	Supplemental Indenture dated as of May 5, 2003 among L-3 Communications Corporation, The Bank of New York, as trustee, and the guarantors named therein to the December 1998 Indenture (incorporated by reference to Exhibit 10.56 of the Registrant's Quarterly Report on Form 10-Q for the quarter ended March 31, 2003).
10.57	Supplemental Indenture dated as of May 5, 2003 among L-3 Communications Corporation, L-3 Holdings, Inc., The Bank of New York, as trustee, and the guarantors named therein to the 2000 Indenture (incorporated by reference to Exhibit 10.57 of the Registrant's Quarterly Report on Form 10-Q for the quarter ended March 31, 2003).
10.58	Supplemental Indenture dated as of May 5, 2003 among L-3 Communications Corporation, L-3 Holdings, Inc., The Bank of New York, as trustee, and the guarantors named therein to the 2001 Indenture (incorporated by reference to Exhibit 10.58 of the Registrant's Quarterly Report on Form 10-Q for the quarter ended March 31, 2003).
10.59	Asset Purchase Agreement dated as of January 11, 2002 among Raytheon Company, Raytheon Australia Pty Ltd. and L-3 Communications Corporation (incorporated by reference to Exhibit 10.59 of the Registrant's Annual Report on Form 10-K for the year ended December 31, 2001).
10.60	Amendment dated as of March 8, 2002 among Raytheon Company, Raytheon Australia Pty Ltd., L-3 Communications Corporation, L-3 Communications Integrated Systems L.P. and L-3 Communications Australia Pty Ltd to the Asset Purchase Agreement dated as of January 11, 2002 (incorporated by reference to Exhibit 10.60 of the Registrant's Annual Report on Form 10-K for the year ended December 31, 2001).
10.91	Asset Purchase Agreement relating to the Honeywell TCAS Business by and among Honeywell Inc., L-3 Communications Corporation and, solely in respect of the Guaranty in Article XIV, Honeywell International Inc. dated as of February 10, 2000 (incorporated by reference to Exhibit 10.91 to Registrant's annual report on Form 10-K filed on March 19, 2002).
10.92	Asset Purchase and Sale Agreement, dated January 7, 2000 by and between L-3 Communications Corporation and Raytheon Company (incorporated by reference to Exhibit 10.92 to Registrant's annual report on Form 10-K filed on March 19, 2002).
10.93	Indenture dated as of June 28, 2002, ("2002 Indenture") among L-3 Communications Corporation, the guarantors named therein and The Bank of New York, as Trustee (incorporated by reference to Exhibit 4.1 of L-3 Communications Corporation's Registration Statement on Form S-4, No. 333-99757).
10.94	Supplemental Indenture dated as of May 5, 2003 among L-3 Communications Corporation, The Bank of New York, as trustee, and the guarantors named therein to the 2002 Indenture (incorporated by reference to Exhibit 10.94 of the Registrant's Quarterly Report on Form 10-Q for the quarter ended March 31, 2003).

EXHIBIT NO.	DESCRIPTION OF EXHIBIT
*11	L-3 Communications Holdings, Inc. Computation of Basic Earnings Per Share and Diluted Earnings Per Share.
12	Ratio of Earnings to Fixed Charges (incorporated by reference to Exhibit 12.1 of the Registrant's Quarterly Report on Form 10-Q for the quarter ended March 31, 2003 and Exhibit 12 of the Registrant's Annual Report on Form 10-K for the year ended December 31, 2002).
**21	Subsidiaries of the Registrant.
**23	Consent of PricewaterhouseCoopers LLP.
24	Powers of Attorney L-3 Communications Corporation and the Additional Registrants (included on the signature pages hereto).
**25	Form T-1 Statement of Eligibility under the Trust Indenture Act of 1939 of The Bank of New York, as Trustee.
**99.1	Letter of Transmittal.
**99.2	Notice of Guaranteed Delivery.

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* The information required in this exhibit is presented on Note 12 to the Consolidated Financial Statements as of December 31, 2002 and Note 10 to the unaudited Condensed Consolidated Financial Statements as of March 31, 2003, in each case in accordance with the provisions of SFAS No. 128, Earnings Per Share.

** Filed herewith

ITEM 22. UNDERTAKINGS.

The undersigned registrants hereby undertake:

(1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:

(i) To include any prospectus required by section 10(a)(3) of the Securities Act of 1933;

(ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than a 20 percent change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement.

(iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement.

(2) That, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the registrants pursuant to the foregoing provisions, or

otherwise, the registrants have been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrants of expenses incurred or paid by the director, officer or controlling person of the registrants in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrants will, unless in the opinion of their counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

The undersigned registrants hereby undertake to respond to requests for information that is incorporated by reference into the prospectus pursuant to Item 4, 10(b), 11, or 13 of this form, within one business day of receipt of such request, and to send the incorporated documents by first class mail or other equally prompt means. This includes information contained in documents filed subsequent to the effective date of the registration statement through the date of responding to the request.

The undersigned registrants hereby undertake to supply by means of a post-effective amendment all information concerning a transaction, and the company being acquired involved therein, that was not the subject of and included in the registration statement when it became effective.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the city of New York, state of New York, on June 13, 2003.

L-3 COMMUNICATIONS CORPORATION

By: /s/ Christopher C. Cambria

Christopher C. Cambria, Senior Vice President -- General Counsel and Secretary

SIGNATURES AND POWERS OF ATTORNEY

Each person whose signature appears below authorizes Christopher C. Cambria, Michael T. Strianese, Frank C. Lanza, Robert V. LaPenta, or any of them, as his attorney in fact and agent, with full power of substitution and resubstitution, to execute, in his name and on his behalf, in any and all capacities, this Registration Statement on Form S-4 and any amendments thereto (and any additional registration statement related thereto permitted by Rule 462 (b) promulgated under the Securities Act of 1933 (and all further amendments including post-effective amendments thereto)) necessary or advisable to enable the registrant to comply with the Securities Act of 1933, and any rules, regulations and requirements of the Securities and Exchange Commission, in respect thereof, in connection with the registration of the securities which are the subject of such registration statement, which amendments may make such changes in such registration statement as such attorney may deem appropriate, and with full power and authority to perform and do any and all acts and things whatsoever which any such attorney or substitute may deem necessary or advisable to be performed or done in connection with any or all of the above-described matters, as fully as each of the undersigned could do if personally present and acting, hereby ratifying and approving all acts of any such attorney or substitute.

Pursuant to the requirements of the Securities Act of 1933, this Registration Statement has been signed by the following persons in the capacities and on the dates indicated.

SIGNATURE	TITLE	DATE
/s/ Frank C. Lanza Frank C. Lanza	Chairman, Chief Executive Officer and Director	June 13, 2003
/s/ Robert V. LaPenta Robert V. LaPenta	President, Chief Financial Officer and Director	June 13, 2003
/s/ Michael T. Strianese Michael T. Strianese	Senior Vice President -- Finance	June 13, 2003
Claude R. Canizares	Director	
/s/ Thomas A. Corcoran Thomas A. Corcoran	Director	June 13, 2003
/s/ Robert B. Millard Robert B. Millard	Director	June 13, 2003
/s/ John M. Shalikashvili John M. Shalikashvili	Director	June 13, 2003
Arthur L. Simon	Director	
/s/ Alan H. Washkowitz Alan H. Washkowitz	Director	June 13, 2003

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, each of the registrants has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the city of New York, state of New York, on June 13, 2003.

ELECTRODYNAMICS, INC.
L-3 COMMUNICATIONS STORM CONTROL
SYSTEMS, INC.
MICRODYNE CORPORATION
SOUTHERN CALIFORNIA
MICROWAVE, INC.

By: /s/ Christopher C. Cambria

Christopher C. Cambria, Vice President
and Secretary

SIGNATURES AND POWERS OF ATTORNEY

Each person whose signature appears below authorizes Christopher C. Cambria, Frank C. Lanza, Robert V. LaPenta, or any of them, as his attorney in fact and agent, with full power of substitution and resubstitution, to execute, in his name and on his behalf, in any and all capacities, this Registration Statement on Form S-4 and any amendments thereto (and any additional registration statement related thereto permitted by Rule 462 (b) promulgated under the Securities Act of 1933 (and all further amendments including post-effective amendments thereto)) necessary or advisable to enable the registrants to comply with the Securities Act of 1933, and any rules, regulations and requirements of the Securities and Exchange Commission, in respect thereof, in connection with the registration of the securities which are the subject of such registration statement, which amendments may make such changes in such registration statement as such attorney may deem appropriate, and with full power and authority to perform and do any and all acts and things whatsoever which any such attorney or substitute may deem necessary or advisable to be performed or done in connection with any or all of the above-described matters, as fully as each of the undersigned could do if personally present and acting, hereby ratifying and approving all acts of any such attorney or substitute.

Pursuant to the requirements of the Securities Act of 1933, this Registration Statement has been signed by the following persons in the capacities and on the dates indicated.

SIGNATURE	TITLE	DATE
/s/ Frank C. Lanza Frank C. Lanza	Chief Executive Officer and Director	June 13, 2003
/s/ Robert V. LaPenta Robert V. LaPenta	Chief Financial Officer and Director	June 13, 2003
/s/ Christopher C. Cambria Christopher C. Cambria	Vice President, Secretary and Director	June 13, 2003

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, each of the registrants certifies has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the city of New York, state of New York, on June 13, 2003.

AMI INSTRUMENTS, INC.
APCOM, INC.
BROADCAST SPORTS, INC.
CELERITY SYSTEMS INCORPORATED
EER SYSTEMS, INC.
GOODRICH FLIGHTSYSTEMS, INC.
HENSCHEL INC.
HYGIENETICS ENVIRONMENTAL SERVICES, INC.
INTERSTATE ELECTRONICS CORPORATION
KDI PRECISION PRODUCTS, INC.
GOODRICH AEROSPACE COMPONENT OVERHAUL & REPAIR, INC.
GOODRICH AVIONICS SYSTEMS, INC.
L-3 COMMUNICATIONS AIS GP CORPORATION
L-3 COMMUNICATIONS ANALYTICS CORPORATION
L-3 COMMUNICATIONS ATLANTIC SCIENCE
AND TECHNOLOGY CORPORATION
L-3 COMMUNICATIONS AYDIN CORPORATION
L-3 COMMUNICATIONS ESSCO, INC.
L-3 COMMUNICATIONS ILEX SYSTEMS, INC.
L-3 COMMUNICATIONS IMC CORPORATION
L-3 COMMUNICATIONS INVESTMENTS, INC.
L-3 COMMUNICATIONS SECURITY AND DETECTION SYSTEMS
CORPORATION DELAWARE
L-3 COMMUNICATIONS SPD TECHNOLOGIES, INC.
L-3 COMMUNICATIONS TMA CORPORATION
L-3 COMMUNICATIONS WESTWOOD CORPORATION
MCTI ACQUISITION CORPORATION
MICRODYNE COMMUNICATIONS TECHNOLOGIES INCORPORATED
MICRODYNE OUTSOURCING INCORPORATED
MPRI, INC.
PAC ORD INC.
POWER PARAGON, INC.
SHIP ANALYTICS, INC.
SHIP ANALYTICS INTERNATIONAL, INC.
SHIP ANALYTICS USA, INC.
SPD ELECTRICAL SYSTEMS, INC.
SPD HOLDINGS, INC.
SPD SWITCHGEAR INC.
SYCOLEMAN CORPORATION
TELOS CORPORATION
TROLL TECHNOLOGY CORPORATION
WESCAM AIR OPS INC.
WESCAM INCORPORATED
WESCAM HOLDINGS (US) INC.

By: /s/ Christopher C. Cambria

Christopher C. Cambria, Vice President
and Secretary

SIGNATURES AND POWERS OF ATTORNEY

Each person whose signature appears below authorizes Christopher C. Cambria, Frank C. Lanza, Robert V. LaPenta, or any of them, as his attorney in fact and agent, with full power of substitution and resubstitution, to execute, in his name and on his behalf, in any and all capacities, this Registration Statement on Form S-4 and any amendments thereto (and any additional registration statement related thereto permitted by Rule 462 (b) promulgated under the Securities Act of 1933 (and all further amendments including post-effective amendments thereto)) necessary or advisable to enable the registrants to comply with the Securities Act of 1933, and any rules, regulations and requirements of the Securities and Exchange Commission, in respect thereof, in connection with the registration of the securities which are the subject of such registration statement, which amendments may make such changes in such registration statement as such attorney may deem appropriate, and with full power and authority to perform and do any and all acts and things whatsoever which any such attorney or substitute may deem necessary or advisable to be performed or done in connection with any or all of the above-described matters, as fully as each of the undersigned could do if personally present and acting, hereby ratifying and approving all acts of any such attorney or substitute.

Pursuant to the requirements of the Securities Act of 1933, this Registration Statement has been signed by the following persons in the capacities and on the dates indicated.

SIGNATURE	TITLE	DATE
/s/ Frank C. Lanza Frank C. Lanza	Chief Executive Officer	June 13, 2003
/s/ Robert V. LaPenta Robert V. LaPenta	Chief Financial Officer	June 13, 2003
/s/ Christopher C. Cambria Christopher C. Cambria	Vice President and Director	June 13, 2003

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, each of the registrants has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the city of New York, state of New York, on June 13, 2003.

L-3 COMMUNICATIONS INTEGRATED SYSTEMS L.P.

By: L-3 COMMUNICATIONS AIS GP CORPORATION,
as General Partner

By: /s/ Christopher C. Cambria
Name: Christopher C. Cambria
Title: Vice President and Secretary

SIGNATURES AND POWERS OF ATTORNEY

Each person whose signature appears below authorizes Christopher C. Cambria, Frank C. Lanza, Robert V. LaPenta, or any of them, as his attorney in fact and agent, with full power of substitution and resubstitution, to execute, in his name and on his behalf, in any and all capacities, this Registration Statement on Form S-4 and any amendments thereto (and any additional registration statement related thereto permitted by Rule 462 (b) promulgated under the Securities Act of 1933 (and all further amendments including post-effective amendments thereto)) necessary or advisable to enable the registrants to comply with the Securities Act of 1933, and any rules, regulations and requirements of the Securities and Exchange Commission, in respect thereof, in connection with the registration of the securities which are the subject of such registration statement, which amendments may make such changes in such registration statement as such attorney may deem appropriate, and with full power and authority to perform and do any and all acts and things whatsoever which any such attorney or substitute may deem necessary or advisable to be performed or done in connection with any or all of the above-described matters, as fully as each of the undersigned could do if personally present and acting, hereby ratifying and approving all acts of any such attorney or substitute.

Pursuant to the requirements of the Securities Act of 1933, this Registration Statement has been signed by the following persons in the capacities and on the dates indicated.

SIGNATURE	TITLE	DATE
/s/ Frank C. Lanza Frank C. Lanza	Chief Executive Officer	June 13, 2003
/s/ Robert V. LaPenta Robert V. LaPenta	Chief Financial Officer	June 13, 2003
/s/ Christopher C. Cambria Christopher C. Cambria	Vice President, Secretary and Director of L-3 Communications AIS GP Corporation	June 13, 2003

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, each of the registrants has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the city of New York, state of New York, on June 13, 2003.

WOLF COACH, INC.

By: /s/ Christopher C. Cambria

Name: Christopher C. Cambria
Title: Vice President and Secretary

SIGNATURES AND POWERS OF ATTORNEY

Each person whose signature appears below authorizes Christopher C. Cambria, Frank C. Lanza, Robert V. LaPenta, or any of them, as his attorney in fact and agent, with full power of substitution and resubstitution, to execute, in his name and on his behalf, in any and all capacities, this Registration Statement on Form S-4 and any amendments thereto (and any additional registration statement related thereto permitted by Rule 462 (b) promulgated under the Securities Act of 1933 (and all further amendments including post-effective amendments thereto)) necessary or advisable to enable the registrants to comply with the Securities Act of 1933, and any rules, regulations and requirements of the Securities and Exchange Commission, in respect thereof, in connection with the registration of the securities which are the subject of such registration statement, which amendments may make such changes in such registration statement as such attorney may deem appropriate, and with full power and authority to perform and do any and all acts and things whatsoever which any such attorney or substitute may deem necessary or advisable to be performed or done in connection with any or all of the above-described matters, as fully as each of the undersigned could do if personally present and acting, hereby ratifying and approving all acts of any such attorney or substitute.

Pursuant to the requirements of the Securities Act of 1933, this Registration Statement has been signed by the following persons in the capacities and on the dates indicated.

SIGNATURE	TITLE	DATE
/s/ Frank C. Lanza Frank C. Lanza	Chief Executive Officer	June 13, 2003
/s/ Robert V. LaPenta Robert V. LaPenta	Chief Financial Officer	June 13, 2003
/s/ Christopher C. Cambria Christopher C. Cambria	Vice President, Secretary and Director	June 13, 2003
/s/ David M. Reilly David M. Reilly	Director	June 13, 2003
/s/ Michael T. Strianese Michael T. Strianese	Director	June 13, 2003

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, each of the registrants has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the city of New York, state of New York, on June 13, 2003.

WESCAM SONOMA, INC.

By: /s/ Christopher C. Cambria

Christopher C. Cambria, Vice President and Secretary

SIGNATURES AND POWERS OF ATTORNEY

Each person whose signature appears below authorizes Christopher C. Cambria, Frank C. Lanza, Robert V. LaPenta, or any of them, as his attorney in fact and agent, with full power of substitution and resubstitution, to execute, in his name and on his behalf, in any and all capacities, this Registration Statement on Form S-4 and any amendments thereto (and any additional registration statement related thereto permitted by Rule 462 (b) promulgated under the Securities Act of 1933 (and all further amendments including post-effective amendments thereto)) necessary or advisable to enable the registrants to comply with the Securities Act of 1933, and any rules, regulations and requirements of the Securities and Exchange Commission, in respect thereof, in connection with the registration of the securities which are the subject of such registration statement, which amendments may make such changes in such registration statement as such attorney may deem appropriate, and with full power and authority to perform and do any and all acts and things whatsoever which any such attorney or substitute may deem necessary or advisable to be performed or done in connection with any or all of the above-described matters, as fully as each of the undersigned could do if personally present and acting, hereby ratifying and approving all acts of any such attorney or substitute.

Pursuant to the requirements of the Securities Act of 1933, this Registration Statement has been signed by the following persons in the capacities and on the dates indicated.

SIGNATURE	TITLE	DATE
/s/ Frank C. Lanza Frank C. Lanza	Chief Executive Officer	June 13, 2003
/s/ Robert V. LaPenta Robert V. LaPenta	Chief Financial Officer	June 13, 2003
/s/ Mark Chamberlain Mark Chamberlain	Director	June 13, 2003
/s/ Steve Mazzo Steve Mazzo	Director	June 13, 2003
/s/ Gary Findlay Gary Findlay	Director	June 13, 2003
/s/ Bruce Latimer Bruce Latimer	Director	June 13, 2003
/s/ George Worthington George Worthington	Director	June 13, 2003

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, each of the registrants has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the city of New York, state of New York, on June 13, 2003.

WESCAM AIR OPS LLC

By: WESCAM INCORPORATED,
as Sole Member

By: /s/ Christopher C. Cambria
Name: Christopher C. Cambria
Title: Vice President and Secretary

SIGNATURES AND POWERS OF ATTORNEY

Each person whose signature appears below authorizes Christopher C. Cambria, Frank C. Lanza, Robert V. LaPenta, or any of them, as his attorney in fact and agent, with full power of substitution and resubstitution, to execute, in his name and on his behalf, in any and all capacities, this Registration Statement on Form S-4 and any amendments thereto (and any additional registration statement related thereto permitted by Rule 462 (b) promulgated under the Securities Act of 1933 (and all further amendments including post-effective amendments thereto)) necessary or advisable to enable the registrants to comply with the Securities Act of 1933, and any rules, regulations and requirements of the Securities and Exchange Commission, in respect thereof, in connection with the registration of the securities which are the subject of such registration statement, which amendments may make such changes in such registration statement as such attorney may deem appropriate, and with full power and authority to perform and do any and all acts and things whatsoever which any such attorney or substitute may deem necessary or advisable to be performed or done in connection with any or all of the above-described matters, as fully as each of the undersigned could do if personally present and acting, hereby ratifying and approving all acts of any such attorney or substitute.

Pursuant to the requirements of the Securities Act of 1933, this Registration Statement has been signed by the following persons in the capacities and on the dates indicated.

SIGNATURE	TITLE	DATE
/s/ Frank C. Lanza Frank C. Lanza	Chief Executive Officer	June 13, 2003
/s/ Robert V. LaPenta Robert V. LaPenta	Chief Financial Officer	June 13, 2003
/s/ Christopher C. Cambria Christopher C. Cambria	Vice President, Secretary and Director of Wescam Incorporated	June 13, 2003

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, each of the registrants has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the city of New York, state of New York, on June 13, 2003.

WESCAM LLC

By: L-3 COMMUNICATIONS CORPORATION,
as Sole Member

By: /s/ Christopher C. Cambria
Name: Christopher C. Cambria
Title: Vice President and Secretary

SIGNATURES AND POWERS OF ATTORNEY

Each person whose signature appears below authorizes Christopher C. Cambria, Frank C. Lanza, Robert V. LaPenta, or any of them, as his attorney in fact and agent, with full power of substitution and resubstitution, to execute, in his name and on his behalf, in any and all capacities, this Registration Statement on Form S-4 and any amendments thereto (and any additional registration statement related thereto permitted by Rule 462 (b) promulgated under the Securities Act of 1933 (and all further amendments including post-effective amendments thereto)) necessary or advisable to enable the registrants to comply with the Securities Act of 1933, and any rules, regulations and requirements of the Securities and Exchange Commission, in respect thereof, in connection with the registration of the securities which are the subject of such registration statement, which amendments may make such changes in such registration statement as such attorney may deem appropriate, and with full power and authority to perform and do any and all acts and things whatsoever which any such attorney or substitute may deem necessary or advisable to be performed or done in connection with any or all of the above-described matters, as fully as each of the undersigned could do if personally present and acting, hereby ratifying and approving all acts of any such attorney or substitute.

Pursuant to the requirements of the Securities Act of 1933, this Registration Statement has been signed by the following persons in the capacities and on the dates indicated.

SIGNATURE	TITLE	DATE
/s/ Frank C. Lanza Frank C. Lanza	Chief Executive Officer and Director of L-3 Communications Corporation	June 13, 2003
/s/ Robert V. LaPenta Robert V. LaPenta	Chief Financial Officer and Director of L-3 Communications Corporation	June 13, 2003
Claude R. Canizares	Director of L-3 Communications Corporation	
/s/ Thomas A. Corcoran Thomas A. Corcoran	Director of L-3 Communications Corporation	June 13, 2003
/s/ Robert B. Millard Robert B. Millard	Director of L-3 Communications Corporation	June 13, 2003
/s/ John M. Shalikashvili John M. Shalikashvili	Director of L-3 Communications Corporation	June 13, 2003
Arthur L. Simon	Director of L-3 Communications Corporation	
/s/ Alan H. Washkowitz Alan H. Washkowitz	Director of L-3 Communications Corporation	June 13, 2003

EXHIBIT INDEX

Exhibits identified in parentheses below are on file with the SEC and are incorporated herein by reference to such previous filings.

EXHIBIT NO.	DESCRIPTION OF EXHIBIT
**1.1	Purchase Agreement, dated as of May 14, 2003, among L-3 Communications Corporation, the Guarantors, Lehman Brothers Inc., Morgan Stanley & Co. Incorporated, Banc of America Securities LLC and Credit Suisse First Boston LLC.
3.1	Certificate of Incorporation of L-3 Communications Corporation (incorporated by reference to Exhibit 3.1 to the Company's Registration Statement on Form S-4 No. 333-31649).
3.2	By-Laws of L-3 Communications Corporation (incorporated by reference to Exhibit 3.2 to the Company's Registration Statement on Form S-4 No. 333- 31649).
3.3	Certificate of Incorporation of Hygienetics Environmental Services, Inc. (incorporated by reference to Exhibit 3.3 to the Company's Registration Statement on Form S-1 No. 333-46983).
3.4	By-laws of Hygienetics Environmental Services, Inc. (incorporated by reference to Exhibit 3.4 to the Company's Registration Statement on Form S-1 No. 333- 46983).
3.5	Certificate of Incorporation of L-3 Communications ILEX Systems, Inc. (incorporated by reference to Exhibit 3.5 to the Company's Registration Statement on Form S-1 (No. 333-46983).
3.6	By-laws of L-3 Communications ILEX Systems, Inc. (incorporated by reference to Exhibit 3.6 to the Company's Registration Statement on Form S-1 No. 333- 46983).
3.7	Certificate of Incorporation of Southern California Microwave, Inc. (incorporated by reference to Exhibit 3.7 to the Company's Registration Statement on Form S-1 No. 333-46983).
3.8	By-laws of Southern California Microwave, Inc. (incorporated by reference to Exhibit 3.8 to the Company's Registration Statement on Form S-1 No. 333- 46983).
3.9	Certificate of Incorporation of L-3 Communications SPD Technologies, Inc. (incorporated by reference to Exhibit 3.9 to the Company's Registration Statement on Form S-4 No. 333-70199).
3.10	By-laws of L-3 Communications SPD Technologies, Inc. (incorporated by reference to Exhibit 3.10 to the Company's Registration Statement on Form S-4 No. 333-70199).
3.11	Certificate of Incorporation of L-3 Communications ESSCO, Inc. (incorporated by reference to Exhibit 3.11 to the Company's Registration Statement on Form S-4 No. 333-70199).
3.12	By-laws of L-3 Communications ESSCO, Inc. (incorporated by reference to Exhibit 3.12 to the Company's Registration Statement on Form S-4 No. 333-70199).
3.13	Certificate of Incorporation of L-3 Communications Storm Control Systems, Inc. (incorporated by reference to Exhibit 3.13 to the Company's Registration Statement on Form S-4 No. 333-70199).
3.14	By-laws of L-3 Communications Storm Control Systems, Inc. (incorporated by reference to Exhibit 3.14 to the Company's Registration Statement on Form S-4 No. 333-70199).

EXHIBIT NO.	DESCRIPTION OF EXHIBIT
3.17	Certificate of Incorporation of SPD Electrical Systems, Inc. (incorporated by reference to Exhibit 3.17 to the Company's Registration Statement on Form S-4 No. 333-70199).
3.18	By-laws of SPD Electrical Systems, Inc. (incorporated by reference to Exhibit 3.18 to the Company's Registration Statement on Form S-4 No. 333-70199).
3.19	Certificate of Incorporation of SPD Switchgear Inc. (incorporated by reference to Exhibit 3.19 to the Company's Registration Statement on Form S-4 No. 333-70199).
3.20	By-laws of SPD Switchgear Inc. (incorporated by reference to Exhibit 3.20 to the Company's Registration Statement on Form S-4 No. 333-70199).
3.21	Certificate of Incorporation of Pac Ord Inc. (incorporated by reference to Exhibit 3.21 to the Company's Registration Statement on Form S-4 No. 333-70199).
3.22	By-laws of Pac Ord Inc. (incorporated by reference to Exhibit 3.22 to the Company's Registration Statement on Form S-4 No. 333-70199).
3.23	Certificate of Incorporation of Henschel Inc. (incorporated by reference to Exhibit 3.23 to the Company's Registration Statement on Form S-4 No. 333-70199).
3.24	By-laws of Henschel Inc. (incorporated by reference to Exhibit 3.24 to the Company's Registration Statement on Form S-4 No. 333-70199).
3.25	Certificate of Incorporation of Power Paragon, Inc. (incorporated by reference to Exhibit 3.25 to the Company's Registration Statement on Form S-4 No. 333-70199).
3.26	By-laws of Power Paragon, Inc. (incorporated by reference to Exhibit 3.26 to the Company's Registration Statement on Form S-4 No. 333-70199).
3.27	Certificate of Incorporation of SPD Holdings, Inc. (incorporated by reference to Exhibit 3.27 to the Company's Registration Statement on Form S-4 No. 333-70199).
3.28	By-laws of SPD Holdings, Inc. (incorporated by reference to Exhibit 3.28 to the Company's Registration Statement on Form S-4 No. 333-70199).
3.29	Certificate of Incorporation of AMI Instruments, Inc. (incorporated by reference to Exhibit 3.29 to the Company's Registration Statement on Form S-4 No. 333-99757).
3.30	By-laws of AMI Instruments, Inc. (incorporated by reference to Exhibit 3.30 to the Company's Registration Statement on Form S-4 No. 333-99757).
3.31	Certificate of Incorporation of Apcom, Inc. (incorporated by reference to Exhibit 3.31 to the Company's Registration Statement on Form S-4 No. 333-99757).
3.32	By-laws of Apcom, Inc. (incorporated by reference to Exhibit 3.32 to the Company's Registration Statement on Form S-4 No. 333-99757).
3.33	Certificate of Incorporation of Celerity Systems Incorporated (incorporated by reference to Exhibit 3.33 to the Company's Registration Statement on Form S-4 No. 333-99757).
3.34	By-laws of Celerity Systems Incorporated (incorporated by reference to Exhibit 3.34 to the Company's Registration Statement on Form S-4 No. 333-99757).
3.37	Certificate of Incorporation of EER Systems, Inc. (incorporated by reference to Exhibit 3.37 to the Company's Registration Statement on Form S-4 No. 333-99757)
3.38	By-laws of EER Systems, Inc. (incorporated by reference to Exhibit 3.38 to the Company's Registration Statement on Form S-4 No. 333-99757)

EXHIBIT NO.	DESCRIPTION OF EXHIBIT
3.39	Certificate of Incorporation of Electrodynamics, Inc. (incorporated by reference to Exhibit 3.39 to the Company's Registration Statement on Form S-4 No. 333-99757)
3.40	By-laws of Electrodynamics, Inc. (incorporated by reference to Exhibit 3.40 to the Company's Registration Statement on Form S-4 No. 333-99757)
3.41	Certificate of Incorporation of Interstate Electronics Corporation (incorporated by reference to Exhibit 3.41 to the Company's Registration Statement on Form S-4 No. 333-99757).
3.42	By-laws of Interstate Electronics Corporation (incorporated by reference to Exhibit 3.42 to the Company's Registration Statement on Form S-4 No. 333-99757).
3.43	Certificate of Incorporation of KDI Precision Products, Inc. (incorporated by reference to Exhibit 3.43 to the Company's Registration Statement on Form S-4 No. 333-99757)
3.44	By-laws of KDI Precision Products, Inc. (incorporated by reference to Exhibit 3.44 to the Company's Registration Statement on Form S-4 No. 333-99757)
3.45	Certificate of Incorporation of L-3 Communications AIS GP Corporation (incorporated by reference to Exhibit 3.45 to the Company's Registration Statement on Form S-4 No. 333-99757).
3.46	By-laws of L-3 Communications AIS GP Corporation (incorporated by reference to Exhibit 3.46 to the Company's Registration Statement on Form S-4 No. 333-99757).
3.47	Certificate of Incorporation of L-3 Communications Analytics Corporation (incorporated by reference to Exhibit 3.47 to the Company's Registration Statement on Form S-4 No. 333-99757).
3.48	By-laws of L-3 Communications Analytics Corporation (incorporated by reference to Exhibit 3.48 to the Company's Registration Statement on Form S-4 No. 333-99757).
3.49	Certificate of Incorporation of L-3 Communications Atlantic Science and Technology Corporation (incorporated by reference to Exhibit 3.49 to the Company's Registration Statement on Form S-4 No. 333-99757).
3.50	By-laws of L-3 Communications Atlantic Science and Technology Corporation (incorporated by reference to Exhibit 3.50 to the Company's Registration Statement on Form S-4 No. 333-99757).
3.51	Certificate of Incorporation of L-3 Communications Aydin Corporation (incorporated by reference to Exhibit 3.51 to the Company's Registration Statement on Form S-4 No. 333-99757).
3.52	By-laws of L-3 Communications Aydin Corporation (incorporated by reference to Exhibit 3.52 to the Company's Registration Statement on Form S-4 No. 333-99757).
3.53	Certificate of Limited Partnership of L-3 Communications Integrated Systems L.P (incorporated by reference to Exhibit 3.53 to the Company's Registration Statement on Form S-4 No. 333-99757).
3.54	Limited Partnership Agreement of L-3 Communications Integrated Systems L.P. (incorporated by reference to Exhibit 3.54 to the Company's Registration Statement on Form S-4 No. 333-99757)

EXHIBIT NO.	DESCRIPTION OF EXHIBIT
3.55	Certificate of Incorporation of L-3 Communications Investments, Inc. (incorporated by reference to Exhibit 3.55 to the Company's Registration Statement on Form S-4 No. 333-99757)
3.56	By-laws of L-3 Communications Investments, Inc. (incorporated by reference to Exhibit 3.56 to the Company's Registration Statement on Form S-4 No. 333-99757)
3.57	Certificate of Incorporation of Microdyne Communications Technologies Incorporated (incorporated by reference to Exhibit 3.57 to the Company's Registration Statement on Form S-4 No. 333-99757).
3.58	By-laws of Microdyne Communications Technologies Incorporated (incorporated by reference to Exhibit 3.58 to the Company's Registration Statement on Form S-4 No. 333-99757).
3.59	Certificate of Incorporation of Microdyne Corporation (incorporated by reference to Exhibit 3.59 to the Company's Registration Statement on Form S-4 No. 333-99757).
3.60	By-laws of Microdyne Corporation (incorporated by reference to Exhibit 3.60 to the Company's Registration Statement on Form S-4 No. 333-99757).
3.61	Certificate of Incorporation of Microdyne Outsourcing Incorporated (incorporated by reference to Exhibit 3.61 to the Company's Registration Statement on Form S-4 No. 333-99757).
3.62	By-laws of Microdyne Outsourcing Incorporated (incorporated by reference to Exhibit 3.62 to the Company's Registration Statement on Form S-4 No. 333-99757).
3.63	Certificate of Incorporation of MPRI, Inc. (incorporated by reference to Exhibit 3.63 to the Company's Registration Statement on Form S-4 No. 333-99757)
3.64	By-laws of MPRI, Inc. (incorporated by reference to Exhibit 3.64 to the Company's Registration Statement on Form S-4 No. 333-99757)
3.65	Certificate of Incorporation of MCTI Acquisition Corporation (incorporated by reference to Exhibit 3.65 to the Company's Registration Statement on Form S-4 No. 333-99757).
3.66	Bylaws of MCTI Acquisition Corporation (incorporated by reference to Exhibit 3.66 to the Company's Registration Statement on Form S-4 No. 333-99757).
3.67	Certificate of Incorporation of L-3 Communications Security and Detection Systems Corporation Delaware (incorporated by reference to Exhibit 3.67 to the Company's Registration Statement on Form S-4 No. 333-99757).
3.68	Bylaws of L-3 Communications Security and Detection Systems Corporation Delaware (incorporated by reference to Exhibit 3.68 to the Company's Registration Statement on Form S-4 No. 333-99757).
**3.69	Certificate of Incorporation of Broadcast Sports, Inc.
**3.70	Bylaws of Broadcast Sports, Inc.
**3.71	Certificate of Incorporation of Goodrich Aerospace Component Overhaul & Repair, Inc.
**3.72	Bylaws of Goodrich Aerospace Component Overhaul & Repair, Inc.
**3.73	Certificate of Incorporation of Goodrich Avionics Systems, Inc.
**3.74	Bylaws of Goodrich Avionics Systems, Inc.

EXHIBIT NO.	DESCRIPTION OF EXHIBIT
**3.75	Articles of Incorporation of Goodrich Flightsystems, Inc.
**3.76	Bylaws of Goodrich Flightsystems, Inc.
**3.77	Certificate of Incorporation of L-3 Communications IMC Corporation
**3.78	Bylaws of L-3 Communications IMC Corporation
**3.79	Certificate of Incorporation of L-3 Communications Security and Detection Systems Corporation California
**3.80	Bylaws of L-3 Communications Security and Detection Systems Corporation California
**3.81	Articles of Incorporation of L-3 Communications TMA Corporation
**3.82	Bylaws of L-3 Communications TMA Corporation
**3.83	Certificate of Restated and Amended Articles of Incorporation of L-3 Communications Westwood Corporation
**3.84	Bylaws of L-3 Communications Westwood Corporation
**3.85	Certificate of Incorporation of Ship Analytics, Inc.
**3.86	Bylaws of Ship Analytics, Inc.
**3.87	Certificate of Incorporation Ship Analytics International, Inc.
**3.88	Bylaws of Ship Analytics International, Inc.
**3.89	Certificate of Incorporation of Ship Analytics USA, Inc.
**3.90	Bylaws of Ship Analytics USA, Inc.
**3.91	Certificate of Incorporation of SYColeman Corporation
**3.92	Bylaws of SYColeman Corporation
**3.93	Articles of Incorporation of Telos Corporation
**3.94	Bylaws of Telos Corporation
**3.95	Certificate of Incorporation of Troll Technology Corporation
**3.96	Bylaws of Troll Technology Corporation
**3.97	Certificate of Incorporation of Wescam Air Ops Inc.
**3.98	Bylaws of Wescam Air Ops Inc.
**3.99	Certificate of Formation of Wescam Air Ops LLC
**3.100	Limited Liability Company Agreement of Wescam Air Ops LLC
**3.101	Articles of Incorporation of Wescam Incorporated
**3.102	Bylaws of Wescam Incorporated
**3.103	Certificate of Formation of Wescam LLC
**3.104	Limited Liability Company Agreement of Wescam LLC
**3.105	Articles of Incorporation of Wescam Sonoma Inc.
**3.106	Bylaws of Wescam Sonoma Inc.

EXHIBIT NO.	DESCRIPTION OF EXHIBIT
**3.107	Certificate of Incorporation of Wescam Holdings (US) Inc.
**3.108	Bylaws of Wescam Holdings (US) Inc.
**3.109	Articles of Organization of Wolf Coach, Inc.
**3.110	Bylaws of Wolf Coach, Inc.
**4.1	Indenture dated as of May 21, 2003 among L-3 Communications Corporation, the Guarantors and The Bank of New York, as Trustee.
4.2	Form of 6 1/8% Senior Subordinated Note due 2013 (attached as Exhibit A to Exhibit 4.1).
4.3	Form of 6 1/8% Series B Senior Subordinated Note due 2013 (attached as Exhibit A to Exhibit 4.1).
**4.4	Registration Rights Agreement, dated as of May 21, 2003, among L-3 Communications Corporation, the Guarantors, Lehman Brothers Inc., Morgan Stanley & Co. Incorporated, Banc of America Securities LLC and Credit Suisse First Boston LLC.
**5	Opinion of Simpson Thacher and Bartlett LLP.
10.6	Employment Agreement dated April 30, 1997 between Frank C. Lanza and L-3 Communications Holdings, Inc. (incorporated by reference to Exhibit 10.5 to the Registrant's Registration Statement on Form S-1 No. 333-46975).
10.11	1997 Stock Option Plan for Key Employees (incorporated by reference to Exhibit 10.11 z to Registrant's Registration Statement on Form S-1, No. 333-70125).
10.12	Non-Qualified Stock Option Agreement dated as of April 30, 1997 by and between L-3 Communications Holdings, Inc. and Frank C. Lanza (incorporated by reference to Exhibit 10.12 to Registrant's Registration Statement on Form S-1, No. 333-70125).
10.13	Non-Qualified Stock Option Agreement dated as of April 30, 1997 by and between L-3 Communications Holdings, Inc. and Robert V. LaPenta (incorporated by reference to Exhibit 10.13 to Registrant's Registration Statement on Form S-1, No. 333-70125).
10.15	Option Plan for Non-Employee Directors of L-3 Communication's Holdings, Inc. (incorporated by reference to Exhibit 10.15 to Registrant's annual report on Form 10-K filed on March 31, 1999).
10.16	1999 Long Term Performance Plan dated as of April 27, 1999 (incorporated by reference to Exhibit 10.16 to the Registrant's annual report on Form 10-K filed on March 30, 2000).
10.20	L-3 Communications Corporation Pension Plan (incorporated by reference to Exhibit 10.10 to the Registrant's Registration Statement on Form S-1 No. 333-46975).
10.25	L-3 Communications Corporation Employee Stock Purchase Plan (incorporated by reference to Appendix A of the Registrant's Definitive Proxy Statement filed April 2, 2001).
10.32	Indenture dated as of December 11, 1998 among L-3 Communications Corporation, the Guarantors named therein and The Bank of New York, as Trustee (incorporated by reference to Exhibit 10.32 to Registrant's Registration Statement on Form S-1, No. 333-70125).

EXHIBIT NO.	DESCRIPTION OF EXHIBIT
10.33	Indenture dated as of November 21, 2000 among L-3 Communications Holdings, Inc., the Guarantors named therein and the Bank of New York, as Trustee (incorporated by reference to Exhibit 10.33 to Registrant's annual report on Form 10-K filed on March 19, 2002).
10.40	Third Amended and Restated Credit Agreement dated as of May 16, 2001 among L-3 Communications Corporation, the lenders named therein and the other parties thereto (incorporated by reference to Exhibit 10.40 of the Registrant's Annual Report on Form 10-K for the year ended December 31, 2001).
10.41	Second Amended and Restated 364-Day Credit Agreement dated as of May 16, 2001 among L-3 Communications Corporation, the lenders named therein and the other parties thereto (incorporated by reference to Exhibit 10.41 of the Registrant's Annual Report on Form 10-K for the year ended December 31, 2001).
10.42	First Amendment to Third Amended and Restated Credit Agreement dated as of October 17, 2001 among L-3 Communications Corporation, the lenders named therein and the other parties thereto (incorporated by reference to Exhibit 10.42 of the Registrant's Annual Report on Form 10-K for the year ended December 31, 2001).
10.43	First Amendment to Second Amended and Restated 364-Day Credit Agreement dated as of October 17, 2001 among L-3 Communications Corporation, the lenders named therein and the other parties thereto (incorporated by reference to Exhibit 10.43 of the Registrant's Annual Report on Form 10-K for the year ended December 31, 2001).
10.44	Second Amendment to Third Amended and Restated Credit Agreement dated as of February 25, 2002 among L-3 Communications Corporation, the lenders named therein and the other parties thereto (incorporated by reference to Exhibit 10.44 of the Registrant's Annual Report on Form 10-K for the year ended December 31, 2001).
10.45	Consent and Second Amendment to Second Amended and Restated 364-Day Credit Agreement dated as of February 25, 2002 among L-3 Communications Corporation, the lenders named herein and the other parties thereto (incorporated by reference to Exhibit 10.45 of the Registrant's Annual Report on Form 10-K for the year ended December 31, 2001).
10.46	Consent, Waiver and Omnibus Amendment Regarding Third Amended and Restated Credit Agreement dated as of February 25, 2003 among L-3 Communications Corporation, the lenders named therein and the other parties thereto (incorporated by reference to Exhibit 10.46 to the Company's Registration Statement on Form S-4 No. 333-99757).
10.47	Consent, Waiver and Omnibus Amendment Regarding Second Amended and Restated 364-Day Credit Agreement dated as of February 25, 2003 among L-3 Communications Corporation, the lenders named therein and the other parties thereto (incorporated by reference to Exhibit 10.47 to the Company's Registration Statement on Form S-4 No. 333-99757).
10.53	Indenture dated as of October 24, 2001 ("2001 Indenture") among L-3 Communications Holdings, Inc., the guarantors named therein and Lehman Brothers Inc., Bear Stearns & Co., and Credit Suisse First Boston Corporation as initial purchasers (Incorporated by reference to Exhibit 4.f of the Registrant's Registration Statement on form S-3, No. 333-75558).

EXHIBIT NO.	DESCRIPTION OF EXHIBIT
10.55	Supplemental Indenture dated as of May 5, 2003 among L-3 Communications Corporation, The Bank of New York, as trustee, and the guarantors named therein to the May 1998 Indenture (incorporated by reference to Exhibit 10.55 of the Registrant's Quarterly Report on Form 10-Q for the quarter ended March 31, 2003).
10.56	Supplemental Indenture dated as of May 5, 2003 among L-3 Communications Corporation, The Bank of New York, as trustee, and the guarantors named therein to the December 1998 Indenture (incorporated by reference to Exhibit 10.56 of the Registrant's Quarterly Report on Form 10-Q for the quarter ended March 31, 2003).
10.57	Supplemental Indenture dated as of May 5, 2003 among L-3 Communications Corporation, L-3 Holdings, Inc., The Bank of New York, as trustee, and the guarantors named therein to the 2000 Indenture (incorporated by reference to Exhibit 10.57 of the Registrant's Quarterly Report on Form 10-Q for the quarter ended March 31, 2003).
10.58	Supplemental Indenture dated as of May 5, 2003 among L-3 Communications Corporation, L-3 Holdings, Inc., The Bank of New York, as trustee, and the guarantors named therein to the 2001 Indenture (incorporated by reference to Exhibit 10.58 of the Registrant's Quarterly Report on Form 10-Q for the quarter ended March 31, 2003).
10.59	Asset Purchase Agreement dated as of January 11, 2002 among Raytheon Company, Raytheon Australia Pty Ltd. and L-3 Communications Corporation (incorporated by reference to Exhibit 10.59 of the Registrant's Annual Report on Form 10-K for the year ended December 31, 2001).
10.60	Amendment dated as of March 8, 2002 among Raytheon Company, Raytheon Australia Pty Ltd., L-3 Communications Corporation, L-3 Communications Integrated Systems L.P. and L-3 Communications Australia Pty Ltd to the Asset Purchase Agreement dated as of January 11, 2002 (incorporated by reference to Exhibit 10.60 of the Registrant's Annual Report on Form 10-K for the year ended December 31, 2001).
10.91	Asset Purchase Agreement relating to the Honeywell TCAS Business by and among Honeywell Inc., L-3 Communications Corporation and, solely in respect of the Guaranty in Article XIV, Honeywell International Inc. dated as of February 10, 2000 (incorporated by reference to Exhibit 10.91 to Registrant's annual report on Form 10-K filed on March 19, 2002).
10.92	Asset Purchase and Sale Agreement, dated January 7, 2000 by and between L-3 Communications Corporation and Raytheon Company (incorporated by reference to Exhibit 10.92 to Registrant's annual report on Form 10-K filed on March 19, 2002).
10.93	Indenture dated as of June 28, 2002, ("2002 Indenture") among L-3 Communications Corporation, the guarantors named therein and The Bank of New York, as Trustee (incorporated by reference to Exhibit 4.1 of L-3 Communications Corporation's Registration Statement on Form S-4, No. 333-99757).
10.94	Supplemental Indenture dated as of May 5, 2003 among L-3 Communications Corporation, The Bank of New York, as trustee, and the guarantors named therein to the 2002 Indenture (incorporated by reference to Exhibit 10.94 of the Registrant's Quarterly Report on Form 10-Q for the quarter ended March 31, 2003).
*11	L-3 Communications Holdings, Inc. Computation of Basic Earnings Per Share and Diluted Earnings Per Share.

EXHIBIT NO.	DESCRIPTION OF EXHIBIT
12	Ratio of Earnings to Fixed Charges (incorporated by reference to Exhibit 12.1 of the Registrant's Quarterly Report on Form 10-Q for the quarter ended March 31, 2003 and Exhibit 12 of the Registrant's Annual Report on Form 10-K for the year ended December 31, 2002).
**21	Subsidiaries of the Registrant.
**23	Consent of PricewaterhouseCoopers LLP.
24	Powers of Attorney L-3 Communications Corporation and the Additional Registrants (included on the signature pages hereto).
**25	Form T-1 Statement of Eligibility under the Trust Indenture Act of 1939 of The Bank of New York, as Trustee.
**99.1	Letter of Transmittal.
**99.2	Notice of Guaranteed Delivery.

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* The information required in this exhibit is presented on Note 12 to the Consolidated Financial Statements as of December 31, 2002 and Note 10 to the unaudited Condensed Consolidated Financial Statements as of March 31, 2003, in each case in accordance with the provisions of SFAS No. 128, Earnings Per Share.

** Filed herewith

EXHIBIT 1.1
EXECUTION COPY

L-3 COMMUNICATIONS CORPORATION

6-1/8 % SENIOR SUBORDINATED NOTES DUE 2013

PURCHASE AGREEMENT

May 14, 2003

LEHMAN BROTHERS INC.
MORGAN STANLEY & CO. INCORPORATED
BANC OF AMERICA SECURITIES LLC
CREDIT SUISSE FIRST BOSTON LLC
c/o Lehman Brothers Inc.
745 Seventh Avenue
New York, New York 10019

Dear Sirs:

L-3 Communications Corporation, a Delaware corporation (the "Company"), proposes to issue and sell to you (the "Initial Purchasers") $400 million in aggregate principal amount of its 6-1/8% Senior Subordinated Notes due 2013 (the "Series A Notes") guaranteed (the "Series A Guarantees;" and, together with the Series A Notes, the "Series A Notes and Guarantees") by Broadcast Sports Inc., a Delaware corporation, Goodrich Aerospace Component Overhaul & Repair, Inc., a Delaware corporation, Goodrich Avionics Systems, Inc., a Delaware corporation, Henschel Inc., a Delaware corporation, Hygienetics Environmental Services, Inc., a Delaware corporation, KDI Precision Products, Inc., a Delaware corporation, L-3 Communications AIS GP Corporation, a Delaware corporation, L-3 Communications Aydin Corporation, a Delaware corporation, L-3 Communications ESSCO, Inc., a Delaware corporation, L-3 Communications ILEX Systems, Inc., a Delaware corporation, L-3 Communications Integrated Systems L.P., a Delaware limited partnership, L-3 Communications Investments, Inc., a Delaware corporation, L-3 Communications Security and Detection Systems Corporation Delaware, a Delaware corporation, L-3 Communications SPD Technologies, Inc., a Delaware corporation, MPRI, Inc., a Delaware corporation, Pac Ord Inc., a Delaware corporation, Power Paragon, Inc., a Delaware corporation, Ship Analytics International, Inc., a Delaware corporation, SPD Electrical Systems, Inc., a Delaware corporation, SPD Holdings, Inc., a Delaware corporation, SPD Switchgear Inc., a Delaware corporation, Wescam Air Ops Inc., a Delaware corporation, Wescam Air Ops LLC, a Delaware limited liability company, Wescam Holdings (US) Inc., a Delaware corporation, and Wescam LLC, a Delaware limited liability company (individually a "Delaware Guarantor" and collectively, the "Delaware Guarantors") and AMI Instruments, Inc., an Oklahoma corporation, Apcom, Inc., a Maryland corporation, Celerity Systems Incorporated, a California corporation, EER Systems, Inc., a

Virginia corporation, Electrodynamics, Inc., an Arizona corporation, Goodrich FlightSystems, Inc., an Ohio corporation, Interstate Electronics Corporation, a California corporation, L-3 Communications Analytics Corporation, a California corporation, L-3 Communications Atlantic Science and Technology Corporation, a New Jersey corporation, L-3 Communications IMC Corporation, a Connecticut corporation, L-3 Communications Security and Detection Systems Corporation California, a California corporation, L-3 Communications Storm Control Systems, Inc., a California corporation, L-3 Communications TMA Corporation, a Virginia corporation, L-3 Communications Westwood Corporation, a Nevada corporation, MCTI Acquisition Corporation, a Maryland corporation, Microdyne Communications Technologies Incorporated, a Maryland corporation, Microdyne Corporation, a Maryland corporation, Microdyne Outsourcing Incorporated, a Maryland corporation, Ship Analytics, Inc., a Connecticut corporation, Ship Analytics USA, Inc., a Connecticut corporation, Southern California Microwave, Inc., a California corporation, SYColeman Corporation, a Florida corporation, Telos Corporation, a California corporation, Troll Technology Corporation, a California corporation, Wescam Incorporated, a Florida corporation, Wescam Sonoma Inc., a California corporation and Wolf Coach, Inc., a Massachusetts corporation (individually a "Non-Delaware Guarantor," collectively the "Non-Delaware Guarantors" and, together with the Delaware Guarantors, the "Guarantors"), pursuant to the terms of an Indenture (the "Indenture") among the Company, the Guarantors and The Bank of New York, as trustee (the "Trustee"), relating to the Series A Notes. Capitalized terms used but not defined herein shall have the meanings given to such terms in the Indenture.

The Series A Notes will be offered and sold to you pursuant to an exemption from the registration requirements under the Securities Act of 1933, as amended (the "Act"). The Company has prepared a final offering memorandum (the "Offering Memorandum"), dated May 14, 2003, relating to the Company, the Series A Notes and the Series A Guarantees. As described in the Offering Memorandum, the Company will use the net proceeds from the offering of the Series A Notes to redeem $180 million aggregate principal amount of its 8-1/2% Senior Subordinated Notes due 2008 and for general corporate purposes, including potential acquisitions.

Upon original issuance thereof, and until such time as the same is no longer required under the applicable requirements of the Securities Act, the Series A Notes (and all securities issued in exchange therefor or in substitution thereof) shall bear the following legend:

> "THE SECURITY (OR ITS PREDECESSOR) EVIDENCED HEREBY WAS ORIGINALLY ISSUED IN A TRANSACTION EXEMPT FROM REGISTRATION UNDER SECTION 5 OF THE UNITED STATES SECURITIES ACT OF 1933, AS AMENDED (THE "SECURITIES ACT"), AND THE SECURITY EVIDENCED HEREBY MAY NOT BE OFFERED, SOLD OR OTHERWISE TRANSFERRED IN THE ABSENCE OF SUCH REGISTRATION OR AN APPLICABLE EXEMPTION THEREFROM. EACH PURCHASER OF THE SECURITY EVIDENCED HEREBY IS HEREBY NOTIFIED THAT THE SELLER MAY BE RELYING ON THE EXEMPTION FROM THE PROVISIONS OF SECTION 5 OF THE SECURITIES ACT PROVIDED BY RULE 144A THEREUNDER. THE HOLDER OF THE SECURITY EVIDENCED HEREBY AGREES FOR THE BENEFIT OF

L-3 COMMUNICATIONS CORPORATION THAT (A) SUCH SECURITY MAY BE RESOLD, PLEDGED OR OTHERWISE TRANSFERRED, ONLY (1) (a) TO A PERSON WHO THE SELLER REASONABLY BELIEVES IS A QUALIFIED INSTITUTIONAL BUYER (AS DEFINED IN RULE 144A UNDER THE SECURITIES ACT) IN A TRANSACTION MEETING THE REQUIREMENTS OF RULE 144A, (b) IN A TRANSACTION MEETING THE REQUIREMENTS OF RULE 144 UNDER THE SECURITIES ACT, (c) OUTSIDE THE UNITED STATES TO A FOREIGN PERSON IN A TRANSACTION MEETING THE REQUIREMENTS OF RULE 904 UNDER THE SECURITIES ACT OR (d) IN ACCORDANCE WITH ANOTHER EXEMPTION FROM THE REGISTRATION REQUIREMENTS OF THE SECURITIES ACT (AND BASED UPON AN OPINION OF COUNSEL IF L-3 COMMUNICATIONS CORPORATION SO REQUESTS), (2) TO L-3 COMMUNICATIONS CORPORATION OR (3) PURSUANT TO AN EFFECTIVE REGISTRATION STATEMENT AND, IN EACH CASE, IN ACCORDANCE WITH ANY APPLICABLE SECURITIES LAWS OF ANY STATE OF THE UNITED STATES OR ANY OTHER APPLICABLE JURISDICTION AND (B) THE HOLDER WILL, AND EACH SUBSEQUENT HOLDER IS REQUIRED TO, NOTIFY ANY PURCHASER FROM IT OF THE SECURITY EVIDENCED HEREBY OF THE RESALE RESTRICTIONS SET FORTH IN (A) ABOVE."

You have advised the Company that you will make offers (the "Exempt Resales") of the Series A Notes purchased by you hereunder on the terms set forth in the Offering Memorandum, as amended or supplemented, solely to (i) persons whom you reasonably believe to be "qualified institutional buyers" as defined in Rule 144A under the Securities Act ("QIBs"), (ii) Frank C. Lanza, who shall have represented to the Company and the Initial Purchasers that he is an "Accredited Investor" referred to in Rule 501(a)(4), (5) or (6) under the Act (the "Accredited Investor"), that he is purchasing the Series A Notes for investment purposes only and with no present intention to resell the Series A Notes and executed and returned to the Initial Purchasers a certificate in the form of Exhibit C hereto and (iii) outside the United States to persons other than U.S. Persons in offshore transactions meeting the requirements of Rule 904 of Regulation S ("Regulations S") under the Securities Act (such persons specified in clauses (i), (ii) and (iii) being referred to herein as the "Eligible Purchasers"). As used herein, the terms "offshore transaction," "United States" and "U.S. person" have the respective meanings given to them in Regulation S. You will offer the Series A Notes to Eligible Purchasers initially at a price equal to 100.0% of the principal amount thereof. Such price may be changed at any time without notice.

Holders (including subsequent transferees) of the Series A Notes will have the registration rights set forth in the registration rights agreement (the "Registration Rights Agreement"), to be dated May 21, 2003 (the "Closing Date"), in the form of Exhibit D hereto, for so long as such Series A Notes constitute "Transfer Restricted Securities" (as defined in the Registration Rights Agreement). Pursuant to the Registration Rights Agreement, the Company and the Guarantors will agree to file with the Securities and Exchange Commission (the "Commission") under the circumstances set forth therein, (i) a registration statement under the Securities Act (the "Exchange Offer Registration Statement") relating to the Company's 6-1/8%

Senior Subordinated Notes due 2013 (the "Series B Notes" and, together with the Series A Notes, the "Notes") and the guarantees thereof (the "Series B Guarantees" and, together with the Series A Guarantees, the "Guarantees") to be offered in exchange for the Series A Notes and Guarantees, (such offer to exchange being referred to collectively as the "Registered Exchange Offer") and (ii) a shelf registration statement pursuant to Rule 415 under the Securities Act (the "Shelf Registration Statement") relating to the resale by certain holders of the Series A Notes, and to use all commercially reasonable efforts to cause such Registration Statements to be declared effective. This Agreement, the Notes, the Guarantees (as defined herein), the Indenture and the Registration Rights Agreement are hereinafter referred to collectively as the "Operative Documents." This is to confirm the agreements concerning the purchase of the Series A Notes from the Company by you.

1. Representations, Warranties and Agreements of the Company and the Guarantors. The Company and the Guarantors, jointly and severally represent, warrant and agree that:

(a) The Offering Memorandum with respect to the Series A Notes has been prepared by the Company for use by the Initial Purchasers in connection with the Exempt Resales. No order or decree preventing the use of the Offering Memorandum, or any order asserting that the transactions contemplated by this Agreement are subject to the registration requirements of the Securities Act has been issued and no proceeding for that purpose has commenced or is pending or, to the knowledge of the Company and the Guarantors, is contemplated.

(b) The Offering Memorandum as of its date and as of the Closing Date, did not and will not contain an untrue statement of a material fact or omit to state a material fact necessary, in order to make the statements, in light of the circumstances under which they were made, not misleading, except that this representation and warranty does not apply to statements in or omissions from the Offering Memorandum made in reliance upon and in conformity with information relating to the Initial Purchasers furnished to the Company in writing by or on behalf of the Initial Purchasers expressly for use therein.

(c) The market-related and customer-related data and estimates included or incorporated by reference in the Offering Memorandum are based on or derived from sources which the Company believes to be reliable and accurate.

(d) The Company and each of its subsidiaries (as defined in Section 14 hereof) have been duly organized and are validly existing as corporations, limited partnerships or limited liability companies, as applicable, in good standing under the laws of their respective jurisdictions of organization, are duly qualified to do business and are in good standing as foreign corporations in each jurisdiction in which their respective ownership or lease of property or the conduct of their respective businesses requires such qualification, except for such qualification and good standing the failure of which, individually or in the aggregate, would not result in a material adverse effect on the condition (financial or other), business, prospects, properties, stockholders' equity or results of operations of the Company and its subsidiaries taken as a whole (a "Material Adverse Effect"), and have all power and authority necessary to own or hold their respective properties and to conduct the businesses in which they are engaged.

(e) All of the issued shares of capital stock of the Company have been duly and validly authorized and issued, are fully paid and non-assessable, and (i) approximately 70% of the membership interests in Aviation Communications & Surveillance Systems, LLC, (ii) approximately 90% of the capital stock of Electronic Space Systems (UK) Limited, (iii) 99.99% of the capital stock of ESSCO Collins Limited, (iv) approximately 50% of the membership interests in Arbeitmedizinische Betreungsgesellschaft Kieler Bertriebe mbH, (v) approximately 98% of the membership interests in PMM Costruzioni Electtroniche Centro Misure Radioelettriche S.r.l., (vi) approximately 50% of the membership interests in ITel Solutions, LLC, (vii) approximately 55% of the capital stock of LogiMetrics, Inc., (viii) approximately 55% of the capital stock of Logimetrics FSC, Inc., (ix) approximately 55% of the capital stock of mmTECH, Inc., (x) approximately 50% of the capital stock of Wescam Asia Pte Ltd. and (xi) 100% of the issued shares of capital stock or membership interests of each other subsidiary of the Company have been duly and validly authorized and issued and are fully paid and non-assessable and (except for directors' qualifying shares) are owned directly or indirectly by the Company or a subsidiary of the Company, free and clear of all liens, encumbrances, equities or claims, other than (A) liens, encumbrances, equities or claims described in the Offering Memorandum or in documents incorporated therein by reference, (B) a pledge of such shares or membership interests to secure the Senior Credit Facilities and (C) such other liens, encumbrances, equities or claims as do not have a Material Adverse Effect.

(f) The Company has all requisite power and authority to execute, deliver and perform its obligations under this Agreement, the Indenture, the Notes, the Guarantees and the Registration Rights Agreement.

(g) This Agreement has been duly authorized, executed and delivered by the Company and the Guarantors.

(h) The Registration Rights Agreement has been duly authorized by the Company and each of the Guarantors, and when duly executed by the proper officers of the Company and the Guarantors (assuming due execution and delivery by the Initial Purchasers) and delivered by the Company and each Guarantor, will constitute a valid and binding agreement of the Company and each Guarantor, enforceable against the Company and each Guarantor in accordance with its terms, subject to the effects of bankruptcy, insolvency, fraudulent conveyance, reorganization, moratorium and other similar laws relating to or affecting creditors' rights generally, general equitable principles (whether considered in a proceeding in equity or at law) or an implied covenant of good faith and fair dealing and except as rights to indemnity and contribution thereunder may be limited by Federal or state securities laws or principles of public policy.

(i) The Indenture has been duly and validly authorized by the Company and each of the Guarantors, and when duly executed by the proper officers of the Company and each of the Guarantors (assuming due execution and delivery by the Trustee) and delivered by the Company and each of the Guarantors, will constitute a valid and binding agreement of the Company and each of the Guarantors enforceable against the Company and each of the Guarantors in accordance with its terms, subject to the effects of bankruptcy, insolvency, fraudulent conveyance, reorganization, moratorium and other similar laws relating to or affecting creditors' rights generally, general equitable principles (whether considered in a proceeding in equity or at law) or an implied covenant of good faith and fair dealing; no qualification of the Indenture under the Trust Indenture Act of 1939, as amended (the "1939 Act") is required in connection with the Exempt Resales.

(j) The Series A Notes have been duly and validly authorized by the Company and when duly executed by the Company in accordance with the terms of the Indenture and, assuming due authentication of the Series A Notes by the Trustee, upon delivery to the Initial Purchasers against payment therefor in accordance with the terms hereof will constitute valid and binding obligations of the Company entitled to the benefits of the Indenture and enforceable against the Company in accordance with their terms, subject to the effects of bankruptcy, insolvency, fraudulent conveyance, reorganization, moratorium and other similar laws relating to or affecting creditors' rights generally, general equitable principles (whether considered in a proceeding in equity or at law) or an implied covenant of good faith and fair dealing; and the Series A Notes, when issued and delivered, will conform to the description thereof contained in the Offering Memorandum in all material respects.

(k) The Series A Guarantees have been duly and validly authorized by the Guarantors and when duly endorsed on the Series A Notes in accordance with the terms of the Indenture and, assuming due authentication of the Series A Notes by the Trustee, upon delivery to the Initial Purchasers against payment therefor in accordance with the terms hereof will constitute valid and binding obligations of each of the Guarantors entitled to the benefits of the Indenture and enforceable against in accordance with their terms, subject to the effects of bankruptcy, insolvency, fraudulent conveyance, reorganization, moratorium and other similar laws relating to or affecting creditors' rights generally, general equitable principles (whether considered in a proceeding in equity or at law) or an implied covenant of good faith and fair dealing; and the Series A Guarantees, when issued and delivered, will conform to the description thereof contained in the Offering Memorandum in all material respects.

(l) The Series B Notes have been duly and validly authorized by the Company and if and when duly issued and authenticated in accordance with the terms of the Indenture and delivered in accordance with the Registered Exchange Offer provided for in the Registration Rights Agreement, will constitute valid and binding obligations of the Company entitled to the benefits of the Indenture, enforceable against the Company in accordance with their terms, subject to the effects of bankruptcy, insolvency, fraudulent conveyance, reorganization, moratorium and other similar laws relating to or affecting creditors' rights generally, general equitable principles (whether considered in a proceeding in equity or at law) or an implied covenant of good faith and fair dealing.

(m) The guarantees of the Series B Notes (the "Series B Guarantees" and, together with the Series A Guarantees, the "Guarantees") have been duly and validly authorized by the Guarantors and if and when duly endorsed on the Series A Notes in accordance with the terms of the Indenture and delivered in accordance with the Registered Exchange Offer provided for in the Registration Rights Agreement, will constitute valid and binding obligations of each of the Guarantors entitled to the benefits of the Indenture and enforceable against each of the Guarantors in accordance with their terms, subject to the effects of bankruptcy, insolvency, fraudulent conveyance, reorganization, moratorium and other similar laws relating to or affecting creditors' rights generally, general equitable principles (whether considered in a proceeding in equity or at law) or an implied covenant of good faith and fair dealing.

(n) The execution, delivery and performance of this Agreement and the other Operative Documents by the Company and the Guarantors and the consummation of the transactions contemplated hereby or thereby will not conflict with or constitute a breach or violation

of any of the terms or provisions of, or constitute a default under, any indenture, mortgage, deed of trust, loan agreement or other agreement or instrument to which the Company or any of its subsidiaries is a party or by which the Company or any of its subsidiaries is bound or to which any of the properties or assets of the Company or any of its subsidiaries is subject that is material to the financial condition or prospects of the Company and its subsidiaries, taken as a whole (collectively, the "Material Agreements"), except for such breach, violation or default which, individually, or in the aggregate, would not result in a Material Adverse Effect, nor will such actions result in any violation of the provisions of the charter, by-laws or other organizational documents of the Company or any of its subsidiaries or any material law, statute or any order, rule or regulation of any court or governmental agency or body having jurisdiction over the Company or any of its subsidiaries or any of their properties or assets, provided, that the provisions for indemnification and contribution hereunder and thereunder may be limited by equitable principles and public policy considerations; and except as may be required in connection with the registration under the Securities Act of the Series B Notes and Series B Guarantees in accordance with the Registration Rights Agreement, qualification of the Indenture under the 1939 Act and compliance with the securities or Blue Sky laws of various jurisdictions, no consent, approval, authorization or order of, or filing or registration with, any such court or governmental agency or body is required for the execution, delivery and performance of this Agreement or any of the Operative Documents by the Company and the Guarantors, as applicable, and the consummation of the transactions contemplated hereby and thereby.

(o) Except as described in the Offering Memorandum or in the documents incorporated therein by reference and except as provided by the Registration Rights Agreement and except for agreements that are not inconsistent with the terms of the Registration Rights Agreement and do not require the Company to include any security with the securities registered pursuant to the Exchange Offer Registration Statement or the Shelf Registration Statement, there are no contracts, agreements or understandings between the Company and any person granting such person the right (other than rights which have been waived or satisfied or rights not exercisable in connection with the Offering Memorandum) to require the Company to file a registration statement under the Securities Act with respect to any securities of the Company owned or to be owned by such person or to require the Company to include such securities in the securities registered pursuant to the Exchange Offer Registration Statement or the Shelf Registration Statement; and all such rights to include such securities in the securities being registered pursuant to the Exchange Offer Registration Statement or the Shelf Registration Statement have been waived in a manner consistent with the terms under which they were granted.

(p) Except as described in the Offering Memorandum or in the documents incorporated therein by reference, the Company and the Guarantors have not sold or issued any securities with terms that are substantially similar to the Notes and the Guarantees during the six-month period preceding the date of the Offering Memorandum, including any sales pursuant to Rule 144A under, or Regulations D or S of, the Securities Act.

(q) Neither the Company nor any of its subsidiaries has incurred, since the date of the latest audited financial statements included or incorporated by reference in the Offering Memorandum, any liability or obligation, direct or contingent, or entered into any transaction, in each case not in the ordinary course of business, that would result in a Material Adverse Effect, otherwise than as set forth or contemplated in the Offering Memorandum or in the documents

incorporated therein by reference; and, since such date, there has not been any material change in the capital stock or material increase in the short-term or long-term debt of the Company or any of its subsidiaries or any material adverse change, or any development involving or which would reasonably be expected to involve a Material Adverse Effect, otherwise than as described or contemplated in the Offering Memorandum or in the documents incorporated therein by reference.

(r) The historical financial statements, together with related notes, set forth or incorporated by reference in the Offering Memorandum comply as to form in all material respects with the requirements of Regulation S-X under the Securities Act applicable to registration statements on Form S-3 under the Securities Act. The historical consolidated financial statements of the Company fairly present the financial position and the results of operations and cash flows of the entities purported to be shown thereby, at the dates and for the periods indicated, in accordance with generally accepted accounting principles consistently applied throughout such periods. The other financial and statistical information and data included or incorporated by reference in the Offering Memorandum have been derived from the financial records of the Company (or its predecessors) and, in all material respects, have been prepared on a basis consistent with such books and records of the Company (or its predecessor), except as disclosed therein.

(s) PricewaterhouseCoopers LLP, who have certified certain financial statements of the Company, whose report appears in the Offering Memorandum or is incorporated by reference therein and who have delivered the initial letter referred to in Section 7(f) hereof, are independent certified public accountants as required by the Securities Act and the Exchange Act and the rules and regulations promulgated thereunder during the periods covered by the financial statements on which they reported contained or incorporated by reference in the Offering Memorandum.

(t) The Company and each of its subsidiaries have good and marketable title to all property (real and personal) described in the Offering Memorandum as being owned by them, free and clear of all liens, claims, security interests or other encumbrances except such as are described in the Offering Memorandum (or in the documents incorporated therein by reference) or, to the extent that any such liens, claims, security interests or other encumbrances would not have a Material Adverse Effect (individually or in the aggregate) and all the material property described in the Offering Memorandum as being held under lease by the Company and its subsidiaries is held by them under valid, subsisting and enforceable leases, with only such exceptions as would not have a Material Adverse Effect (individually or in the aggregate).

(u) The Company and each of its subsidiaries own or possess adequate rights to use all material patents, trademarks, service marks, trade names, copyrights, licenses, inventions, trade secrets and other rights, and all registrations or applications relating thereto, described in the Offering Memorandum as being owned by them or necessary for the conduct of their business, except as such would not have a Material Adverse Effect (individually or in the aggregate), and the Company is not aware of any pending or threatened claim to the contrary or any pending or threatened challenge by any other person to the rights of the Company and its subsidiaries with respect to the foregoing which, if determined adversely to the Company and its subsidiaries, would have a Material Adverse Effect (individually or in the aggregate).

(v) Except as described in the Offering Memorandum (or in the documents incorporated therein by reference), there are no legal or governmental proceedings pending or, to the knowledge of the Company, threatened, against the Company or any of its subsidiaries or to which the Company or any of its subsidiaries is a party or of which any property or assets of the Company or any of its subsidiaries is the subject which, if determined adversely to the Company or any of its subsidiaries, are reasonably likely to cause a Material Adverse Effect.

(w) There are no contracts or other documents which would be required to be described in a prospectus contained in a registration statement on Form S-3 by the Securities Act or by the rules and regulations thereunder which have not been described in the Offering Memorandum or incorporated therein by reference.

(x) No material relationship, direct or indirect, exists between or among the Company on the one hand, and the directors, officers, stockholders, customers or suppliers of the Company on the other hand, except as described in the Offering Memorandum or in the documents incorporated therein by reference.

(y) The Company is not involved in any strike, job action or labor dispute with any group of employees that would have a Material Adverse Effect, and, to the Company's knowledge, no such action or dispute is threatened.

(z) Except as disclosed in the Offering Memorandum or in the documents incorporated therein by reference, the Company is in compliance in all material respects with all presently applicable provisions of the Employee Retirement Income Security Act of 1974, as amended, including the regulations and published interpretations thereunder ("ERISA"); no "reportable event" (as defined in ERISA) has occurred with respect to any "pension plan" (as defined in ERISA) subject to Title IV of ERISA for which the Company would have any material liability; the Company has not incurred and does not expect to incur any material liability under (i) Title IV of ERISA with respect to termination of, or withdrawal from, any such "pension plan" or (ii) Sections 412 or 4971 of the Internal Revenue Code of 1986, as amended, including the regulations and published interpretations thereunder (the "Code") (other than contributions in the normal course which are not in default); and each "pension plan" for which the Company would have any liability that is intended to be qualified under Section 401(a) of the Code is so qualified in all material respects and nothing has occurred, whether by action or by failure to act, which would reasonably be expected to cause the loss of such qualification.

(aa) The Company and its subsidiaries have filed all federal, state and local income and franchise tax returns required to be filed through the date hereof and have paid all taxes due thereon, and no tax deficiency has been determined adversely to the Company or any of its subsidiaries nor does the Company have any knowledge of any tax deficiency which, if determined adversely to the Company and its subsidiaries, might have a Material Adverse Effect.

(bb) Neither the Company nor any of its subsidiaries (i) is in violation of its charter or by-laws or other organizational documents, (ii) is in default in any material respect, and no event has occurred which, with notice or lapse of time or both, would constitute such a default, in the due performance or observance of any term, covenant or condition contained in any Material Agreement or (iii) is in violation in any material respect of any law, ordinance, governmental rule,

regulation or court decree to which it or its property or assets may be subject or has failed to obtain any material license, permit, certificate, franchise or other governmental authorization or permit necessary to the ownership of its property or to the conduct of its business, except as would not, individually or in the aggregate, have a Material Adverse Effect.

(cc) To the best of the Company's knowledge, neither the Company nor any of its subsidiaries, nor any director, officer, agent, employee or other person associated with or acting on behalf of the Company or any of its subsidiaries, has used any corporate funds for any unlawful contribution, gift, entertainment or other unlawful expense relating to political activity; made any direct or indirect unlawful payment to any foreign or domestic government official or employee from corporate funds or violated or is in violation of any provision of the Foreign Corrupt Practices Act of 1977; except as such that would not have a Material Adverse Effect.

(dd) Except as disclosed in the Offering Memorandum or in the documents incorporated therein by reference, there has been no storage, disposal, generation, manufacture, refinement, transportation, handling or treatment of toxic wastes, medical wastes, hazardous wastes or hazardous substances by the Company or any of its subsidiaries (or, to the knowledge of the Company, any of their predecessors in interest) at, upon or from any of the property now or previously owned or leased by the Company or its subsidiaries in violation of any applicable law, ordinance, rule, regulation, order, judgment, decree or permit or which would require remedial action under any applicable law, ordinance, rule, regulation, order, judgment, decree or permit, except for any violation or remedial action which would not have, or would not be reasonably likely to have, singularly or in the aggregate with all such violations and remedial actions, a Material Adverse Effect; there has been no material spill, discharge, leak, emission, injection, escape, dumping or release of any kind onto such property or into the environment surrounding such property of any toxic wastes, medical wastes, solid wastes, hazardous wastes or hazardous substances due to or caused by the Company or any of its subsidiaries or with respect to which the Company has knowledge, except for any such spill, discharge, leak, emission, injection, escape, dumping or release which would not have or would not be reasonably likely to have, singularly or in the aggregate with all such spills, discharges, leaks, emissions, injections, escapes, dumpings and releases, a Material Adverse Effect; and the terms "hazardous wastes," "toxic wastes," "hazardous substances" and "medical wastes" shall have the meanings specified in any applicable local, state, federal and foreign laws or regulations with respect to environmental protection.

(ee) Neither the Company nor any subsidiary is, and upon the sale of the Series A Notes to be issued and sold thereby in accordance herewith and the application of the net proceeds to the Company of such sale as described in the Offering Memorandum under the caption "Use of Proceeds," will not be, an "investment company" within the meaning of such term under the United States Investment Company Act of 1940 and the rules and regulations of the Commission thereunder.

(ff) Neither the Company nor any affiliate (as defined in Rule 501(b) of Regulation D ("Regulation D") under the Securities Act) of the Company has directly, or through any agent (provided that no representation is made as to the Initial Purchasers or any person acting on its behalf), (i) sold, offered for sale, solicited offers to buy or otherwise negotiated in respect of, any security (as defined in the Securities Act) which is or could be integrated with the offering and sale of the Notes in a manner that would require the registration of the Series A Notes under the

Securities Act or (ii) engaged in any form of general solicitation or general advertising (within the meaning of Regulation D, including, but not limited to, advertisements, articles, notices or other communications published in any newspaper, magazine, or similar medium or broadcast over television or radio, or any seminar or meeting whose attendees have been invited by any general solicitation or general advertising) in connection with the offering of the Series A Notes.

(gg) Except as permitted by the Securities Act, the Company has not distributed and, prior to the later to occur of the Closing Date and completion of the distribution of the Series A Notes, will not distribute any offering material in connection with the offering and sale of the Series A Notes other than the Offering Memorandum.

(hh) When the Series A Notes are issued and delivered pursuant to this Agreement, such Series A Notes will not be of the same class (within the meaning of Rule 144A under the Securities Act) as securities of the Company that are listed on a national securities exchange registered under Section 6 of the Securities Exchange Act of 1934, as amended (the "Exchange Act") or that are quoted in a U.S. automated inter-dealer quotation system.

(ii) Assuming (i) that your representations and warranties in Section 2 are true, (ii) compliance by you with your covenants set forth in Section 2 and (iii) that each of the Eligible Purchasers is a QIB or a person who is not a "U.S. person" who acquires the Series A Notes outside the United States in an "offshore transaction" (within the meaning of Rule 904 of Regulation S), the purchase of the Series A Notes by you pursuant hereto and the resale of the Series A Notes pursuant hereto pursuant to the Exempt Resales is exempt from the registration requirements of the Securities Act.

(jj) None of the Company or any of its affiliates or any person acting on its or their behalf has engaged or will engage in any directed selling efforts within the meaning of Regulation S with respect to the Notes, and the Company and its affiliates and all persons acting on its of their behalf have complied with and will comply with the offering restrictions requirements of Regulation S in connection with the offering of the Notes outside of the United States. The sales of the Series A Notes pursuant to Regulation S are "offshore transactions" and are not part of a plan or scheme to evade the registration provision of the Securities Act. The Company makes no representation in this paragraph (jj) with respect to the Initial Purchasers.

(kk) The Company is a "reporting issuer" as defined in Rule 902 under the Securities Act.

(ll) The Company has established and maintains disclosure controls and procedures (as such term is defined in Rule 13a-14 under the Exchange Act), which (i) are designed to ensure that material information relating to the Company, including its consolidated subsidiaries, is made known to the Company's principal executive officer and its principal financial officer by others within those entities, particularly during the periods in which the periodic reports required under the Exchange Act are being prepared; (ii) have been evaluated for effectiveness as of a date within 90 days prior to the filing of the Company's most recent annual or quarterly report filed with the Commission; and (iii) are effective in all material respects to perform the functions for which they were established.

(mm) Based on the evaluation of its disclosure controls and procedures, the Company is not aware of (i) any significant deficiency in the design or operation of internal controls which could adversely affect the Company's ability to record, process, summarize and report financial data or any material weaknesses in internal controls or (ii) any fraud, whether or not material, that involves management or other employees who have a significant role in the Company's internal controls.

(nn) Since the date of the most recent evaluation of such disclosure controls and procedures, there have been no significant changes in internal controls or in other factors that could significantly affect internal controls, including any corrective actions with regard to significant deficiencies and material weaknesses.

2. Representations, Warranties and Agreements of the Initial Purchasers. Each Initial Purchaser represents and warrants with respect to itself that:

(a) Such Initial Purchaser is a QIB under the Securities Act (each, an "Accredited Institution"), in either case with such knowledge and experience in financial and business matters as are necessary in order to evaluate the merits and risks of an investment in the Series A Notes.

(b) Such Initial Purchaser (i) is not acquiring the Series A Notes with a view to any distribution thereof or with any present intention of offering or selling any of the Series A Notes, in each case in a transaction that would violate the Securities Act or the securities laws of any State of the United States or any other applicable jurisdiction; (ii) in connection with the Exempt Resales, will solicit offers to buy the Series A Notes only from, and will offer to sell the Series A Notes only to, the Eligible Purchasers in accordance with this Agreement and on the terms contemplated by the Offering Memorandum; and (iii) will not offer or sell the Series A Notes, nor has it offered or sold the Series A Notes by, or otherwise engaged in, any form of general solicitation or general advertising (within the meaning of Regulation D; including, but not limited to, advertisements, articles, notices or other communications published in any newspaper, magazine, or similar medium or broadcast over television or radio, or any seminar or meeting whose attendees have been invited by any general solicitation or general advertising) in connection with the offering of the Series A Notes.

(c) The Series A Notes have not been and will not be registered under the Securities Act and may not be offered or sold within the United States or to, or for the account or benefit of, U.S. persons except in accordance with Regulation S under the Securities Act or pursuant to an exemption from the registration requirements of the Securities Act. The Initial Purchasers represent that they have not offered, sold or delivered the Series A Notes, and will not offer, sell or deliver the Series A Notes (i) as part of its distribution at any time or (ii) otherwise until 40 days after the later of the commencement of the offering of the Series A Notes and the Closing Date (such period, the "Restricted Period"), within the United States or to, or for the account or benefit of U.S. persons, except in accordance with Rule 144A under the Securities Act or in transactions that are exempt from the registration requirements of the Securities Act. Accordingly, each Initial Purchaser represents and agrees that neither it, nor any of its affiliates nor any persons acting on its or their behalf has engaged or will engage in any directed selling efforts within the meaning of Rule 901(b) of Regulation S with respect to the Series A Notes, and it, its affiliates and all persons acting

on its behalf have complied and will comply with the offering restrictions requirements of Regulation S.

(d) Such Initial Purchaser agrees that, at or prior to confirmation of a sale of Series A Notes (other than a sale pursuant to Rule 144A in transactions that are exempt from the registration requirements of the Securities Act), it will have sent to each distributor, dealer or person receiving a selling concession, fee or other remuneration that purchases Series A Notes from it during the Restricted Period a confirmation or notice substantially to the following effect:

> "The Notes covered hereby have not been registered under the U.S. Securities Act of 1933 (the "Securities Act") and may not be offered and sold within the United States or to, or for the account or benefit of, U.S. persons (i) as part of their distribution at any time or (ii) otherwise until 40 days after the later of the commencement of the offering or the closing date, except in either case in accordance with Regulation S (or Rule 144A if available) under the Securities Act. Terms used above have the meanings assigned to them in Regulation S."

Such Initial Purchaser further agrees that it has not entered and will not enter into any contractual arrangement with respect to the distribution or delivery of the Series A Notes, except with its affiliates or with the prior written consent of the Company.

(e) Each Initial Purchaser hereby represents and warrants to, and agrees with, the company that (i) it and each of its affiliates have not offered or sold and will not offer or sell any Notes to persons in the United Kingdom prior to the expiration of the period of six months from the Closing Date, except to persons whose ordinary activities involve them in acquiring, holding, managing or disposing of investments (as principal or agent) for purposes of their businesses or otherwise in circumstances which have not resulted and will not result in an offer to the public in the United Kingdom within the meaning of the Public Offers of Securities Regulations 1995; (ii) it and each of its affiliates have only communicated or caused to be communicated and will only communicate or cause to be communicated any invitation or inducement to engage in investment activity (within the meaning of Section 21 of the Financial Services and Markets Act 2000 (the "FSMA") received by it in connection with the issue or sale of any Notes in circumstances in which Section 21(1) of the FSMA does not apply to the Company; and (iii) it and each of its affiliates have complied and will comply with all applicable provisions of the FSMA with respect to anything done by it in relation to the Notes in, from or otherwise involving the United Kingdom.

(f) Such Initial Purchaser agrees not to cause any advertisement of the Series A Notes to be published in any newspaper or periodical or posted in any public place and not to issue any circular relating to the Series A Notes, except such advertisements as include the statements required by Regulation S.

(g) The sales of the Series A Notes pursuant to Regulation S are "offshore transactions" and are not part of a plan or scheme to evade the registration provisions of the Securities Act.

(h) Such Initial Purchaser understands that the Company and, for purposes of the opinions to be delivered to you pursuant to Section 7 hereof, counsel to the Company, General

Counsel to the Company and counsel to the Initial Purchasers, will rely upon the accuracy and truth of the foregoing representations and you hereby consent to such reliance.

The terms used in this Section 2 that have meanings assigned to them in Regulation S are used herein as so defined.

Each Initial Purchaser further agrees that, in connection with the Exempt Resales, it will solicit offers to buy the Series A Notes only from, and will offer to sell the Series A Notes only to, the Eligible Purchasers in Exempt Resales.

3. Purchase of the Notes and the Guarantees by the Initial Purchasers. On the basis of the representations and warranties contained in, and subject to the terms and conditions of, this Agreement, the Company agrees to sell the Series A Notes (and cause the Guarantors to issue the Series A Guarantees) to the several Initial Purchasers and each of the Initial Purchasers, severally and not jointly, agrees to purchase the aggregate principal amount of Series A Notes set opposite that Initial Purchaser's name in Schedule 1 hereto. Each Initial Purchaser will purchase such aggregate principal amount of Series A Notes at an aggregate purchase price equal to 98.00% of the principal amount thereof (the "Purchase Price").

The Company shall not be obligated to deliver any of the Series A Notes and the Series A Guarantees to be delivered on the Closing Date (as defined herein), except upon payment for all the Series A Notes to be purchased on the Closing Date as provided herein.

4. Delivery of and Payment for the Notes and the Guarantees.

(a) Delivery of and payment for the Series A Notes and the Series A Guarantees shall be made at the office of Latham & Watkins LLP, 885 Third Avenue New York, New York 10022 at 10:00 A.M., New York City time, on the Closing Date. The place of closing for the Series A Notes and the Closing Date may be varied by agreement between the Initial Purchasers and the Company.

(b) On the Closing Date, one or more Series A Notes in definitive form, registered in the name of Cede & Co., as nominee of The Depository Trust Company ("DTC"), or such other names as the Initial Purchasers may request upon at least one business days' notice to the Company, having an aggregate principal amount corresponding to the aggregate principal amount of Series A Note sold pursuant to Eligible Resales (collectively, the "Global Note"), shall be delivered by the Company to the Initial Purchasers against payment by the Initial Purchasers of the purchase price thereof by wire transfer of immediately available funds as the Company may direct by written notice delivered to you two business days prior to the Closing Date. The Global Note in definitive form shall be made available to you for inspection not later than 2:00 p.m. on the business day prior to the Closing Date.

(c) Time shall be of the essence, and delivery at the time and place specified pursuant to this Agreement is a further condition of the obligation of each Initial Purchaser hereunder.

5. Further Agreements of the Company. The Company agrees:

(a) To advise you promptly and, if requested by you, to confirm such advice in writing, of (i) the issuance by any state securities commission of any stop order suspending the qualification or exemption from qualification of any Series A Notes or Series A Guarantees for offering or sale in any jurisdiction, or the initiation or threatening of any proceeding for such purpose by the Commission or any state securities commission or other regulatory authority, and (ii) the happening of any event that makes any statement of a material fact made in the Offering Memorandum untrue or which requires the making of any additions to or changes in the Offering Memorandum in order to make the statements therein, in light of the circumstances under which they were made, not misleading. The Company shall use all commercially reasonable efforts to prevent the issuance of any stop order or order suspending the qualification or exemption of the Series A Notes or Series A Guarantees under any state securities or Blue Sky laws and, if at any time any state securities commission shall issue any stop order suspending the qualification or exemption of the Series A Notes or Series A Guarantees under any state securities or Blue Sky laws, the Company shall use every reasonable effort to obtain the withdrawal or lifting of such order at the earliest possible time.

(b) To furnish to you, as many copies of the Offering Memorandum, and any amendments or supplements thereto, as you may reasonably request. Such copies shall be furnished without charge for use in connection with the Exempt Resales for the nine-month period immediately following the Closing Date. The Company consents to the use of the Offering Memorandum, and any amendments and supplements thereto required pursuant to this Agreement, by you in connection with the Exempt Resales that are in compliance with this Agreement.

(c) Not to amend or supplement the Offering Memorandum prior to the Closing Date or during the period referred to in (d) below unless you shall previously have been advised of, and shall not have reasonably objected to, such amendment or supplement within a reasonable time, but in any event not longer than five days after being furnished a copy of such amendment or supplement. The Company shall promptly prepare, upon any reasonable request by you, any amendment or supplement to the Offering Memorandum that may be necessary or advisable in connection with Exempt Resales.

(d) If, in connection with any Exempt Resales or market making transactions after the date of this Agreement and prior to the consummation of the Registered Exchange Offer, any event shall occur that, in the judgment of the Company or in the reasonable judgment of counsel to you, makes any statement of a material fact in the Offering Memorandum untrue or that requires the making of any additions to or changes in the Offering Memorandum in order to make the statements in the Offering Memorandum, in light of the circumstances under which they were made at the time that the Offering Memorandum is delivered to prospective Eligible Purchasers, not misleading, or if it is necessary to amend or supplement the Offering Memorandum to comply with applicable law, the Company shall promptly notify you of such event and prepare an appropriate amendment or supplement to the Offering Memorandum so that (i) the statements in the Offering Memorandum as amended or supplemented will, in light of the circumstances under which they were made at the time that the Offering Memorandum is delivered to prospective Eligible Purchasers, not be misleading and (ii) the Offering Memorandum will comply with applicable law.

(e) Promptly from time to time to take such action as the Initial Purchasers may reasonably request to qualify the Series A Notes and the Series A Guarantees for offering and sale

under the securities laws of such jurisdictions as the Initial Purchasers may request (provided, however, that the Company shall not be obligated to qualify as a foreign corporation in any jurisdiction in which it is not now so qualified or to take any action that would subject it to taxation or to general consent to service of process in any jurisdiction in which it is not now so subject) and to comply with such laws so as to permit the continuance of sales and dealings therein in such jurisdictions for as long as may be necessary to complete the distribution of the Series A Notes and the Series A Guarantees.

(f) Prior to the Closing Date, to furnish to you, as soon as they have been prepared, a copy of any internal consolidated financial statements of the Company for any period subsequent to the period covered by the financial statements appearing in the Offering Memorandum.

(g) To use all commercially reasonable efforts to do and perform all things required to be done and performed under this Agreement by it prior to or after the Closing Date and to satisfy all conditions precedent on its part to the delivery of the Series A Notes and the Series A Guarantees.

(h) Not to sell, offer for sale or solicit offers to buy or otherwise negotiate in respect of any security (as defined in the Securities Act) that would be integrated with the sale of the Series A Notes in a manner that would require the registration under the Securities Act of the sale to you or the Eligible Purchasers of Series A Notes.

(i) During any period in which the Company is not subject to Section 13 or 15(d) of the Exchange Act within the two-year period following the Closing Date, to make available to any registered holder or beneficial owner of Series A Notes in connection with any sale thereof and any prospective purchaser of such Series A Notes from such registered holder or beneficial owner, the information required by Rule 144A(d)(4) under the Securities Act.

(j) To use all commercially reasonable efforts to effect the inclusion of the Notes in the National Association of Securities Dealers, Inc. Automated Quotation System - PORTAL ("PORTAL").

(k) To apply the net proceeds from the sale of the Series A Notes being sold by the Company as set forth in the Offering Memorandum under the caption "Use of Proceeds."

(l) To take such steps as shall be necessary to ensure that neither the Company nor any subsidiary shall become an "investment company" within the meaning of such term under the United States Investment Company Act of 1940 and the rules and regulations of the Commission thereunder.

(m) To take such steps as shall be necessary to ensure that all the subsidiaries of the Company that are not designated as "unrestricted subsidiaries" or "foreign subsidiaries" in accordance with the Indenture will be guarantors of the Notes.

(n) For a period of 90 days from the date of the Offering Memorandum, not to, directly or indirectly, sell, offer to sell, contract to sell, grant any option to purchase, issue any instrument convertible into or exchangeable for, or otherwise transfer or dispose of (or enter into

any transaction or device which is designed to, or could be expected to, result in the disposition in the future of), any debt securities of the Company or any of its subsidiaries, except (i) for the Series B Notes in connection with the Registered Exchange Offer or (ii) with the prior consent of Lehman Brothers Inc.

6. Expenses. The Company agrees to pay: (a) the costs incident to the authorization, issuance, sale and delivery of the Notes and the Guarantees and any taxes payable in that connection; (b) the costs incident to the preparation, printing and filing of the Offering Memorandum and any amendments and supplements thereto; (c) the costs of distributing the Offering Memorandum and any amendment or supplement to the Offering Memorandum, all as provided in this Agreement; (d) the fees, disbursements and expenses of the Company's counsel and accountants; (e) all expenses and listing fees in connection with the application for quotation of the Series A Notes in PORTAL; (f) all fees and expenses (including fees and expenses of counsel) of the Company in connection with approval of the Notes by DTC for "book-entry" transfer; (g) the fees and expenses of qualifying the Notes and Guarantees under the securities laws of the several jurisdictions as provided in Section 5(e) and of preparing, printing and distributing a Blue Sky Memorandum (including related fees and expenses of counsel to the Initial Purchasers); (h) any fees charged by securities rating services for rating the Notes and Guarantees; (i) all costs and expenses incident to the performance of the Company's obligations under Section 9; and (j) all other costs and expenses incident to the performance of the obligations of the Company and the Guarantors.

7. Conditions of Initial Purchasers' Obligations. The respective obligations of the Initial Purchasers hereunder are subject to the accuracy, when made and on the Closing Date, of the representations and warranties of the Company and the Guarantors contained herein, to the performance by the Company and the Guarantors of their obligations hereunder, and to each of the following additional terms and conditions:

(a) No Initial Purchaser shall have discovered and disclosed to the Company on or prior to the Closing Date that the Offering Memorandum or any amendment or supplement thereto contains an untrue statement of a fact which, in the opinion of Latham & Watkins LLP, counsel for the Initial Purchasers, is material or omits to state a fact which, in the opinion of such counsel, is material and is necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading.

(b) All corporate proceedings and other legal matters incident to the authorization, form and validity of this Agreement, the other Operative Documents, the Offering Memorandum, and all other legal matters relating to this Agreement and the transactions contemplated hereby shall be reasonably satisfactory in all material respects to counsel for the Initial Purchasers, and the Company shall have furnished to such counsel all documents and information that they may reasonably request to enable them to pass upon such matters.

(c) Simpson Thacher & Bartlett shall have furnished to the Initial Purchasers, its written opinion, as counsel to the Company, addressed to the Initial Purchasers and dated the Closing Date, in the form attached hereto as Exhibit A.

(d) Christopher C. Cambria, General Counsel of the Company, shall have furnished to the Initial Purchasers his written opinion, as General Counsel to the Company, addressed to the Initial Purchasers and dated the Closing Date, in the form attached hereto as Exhibit B.

(e) The Initial Purchasers shall have received from Latham & Watkins LLP, counsel for the Initial Purchasers, such opinion or opinions, dated the Closing Date, with respect to the issuance and sale of the Series A Notes, the Series A Guarantees, the Offering Memorandum and other related matters as the Initial Purchasers may reasonably require, and the Company shall have furnished to such counsel such documents as they reasonably request for the purpose of enabling them to pass upon such matters.

(f) At the time of execution of this Agreement, the Initial Purchasers shall have received from PricewaterhouseCoopers LLP, a letter, in accordance with professional standards established by the AICPA and in form and substance satisfactory to the Initial Purchasers, addressed to the Initial Purchasers (i) confirming that they are independent public accountants under Rule 101 of the AICPA's Code of Professional Conduct, and its interpretation and rulings and (ii) stating, as of the date hereof (or, with respect to matters involving changes or developments since the respective dates as of which specified financial information is given in the Offering Memorandum, as of a date not more than five days prior to the date hereof), the conclusions and findings of such firm with respect to the financial information and other matters ordinarily covered by accountants' "comfort letters" to Initial Purchasers in connection with registered public offerings.

(g) With respect to the letter of PricewaterhouseCoopers LLP referred to in the preceding paragraph and delivered to the Initial Purchasers concurrently with the execution of this Agreement (the "initial letter"), the Company shall have furnished to the Initial Purchasers a letter (the "bring-down letter") of such accountants in accordance with professional standards established by the AICPA, addressed to the Initial Purchasers and dated the Closing Date (i) confirming that they are independent public accountants under Rule 101 of the AICPA's Code of Professional Conduct, and its interpretation and rulings and (ii) stating, as of the date of the bring-down letter (or, with respect to matters involving changes or developments since the respective dates as of which specified financial information is given in the Offering Memorandum, as of a date not more than five days prior to the date of the bring-down letter), the conclusions and findings of such firm with respect to the financial information and other matters covered by the initial letter and (iii) confirming in all material respects the conclusions and findings set forth in the initial letter.

(h) The Company and the Guarantors shall have furnished to the Initial Purchasers a certificate, dated the Closing Date, of their respective Chairman of the Board, their respective President or a Vice President and their respective chief financial officer stating that:

(i) The representations and warranties of the Company and the Guarantors in Section 1 are true and correct as of the Closing Date; the Company and the Guarantors have complied with all their agreements contained herein; and the conditions set forth in Sections 7(i) and 7(j) have been fulfilled; and

(ii) They have carefully examined the Offering Memorandum and, in their opinion (A) the Offering Memorandum as of its date and as of the Closing Date,

did not include any untrue statement of a material fact and did not omit to state a material fact required to be stated therein or necessary to make the statements therein not misleading, and (B) since the date of the Offering Memorandum, no event has occurred which should have been set forth in a supplement or amendment to the Offering Memorandum.

(i) (i) Neither the Company nor any of its subsidiaries shall have sustained since the date of the latest audited financial statements incorporated by reference in the Offering Memorandum any material loss or interference with its business from fire, explosion, flood or other calamity, whether or not covered by insurance, or from any labor dispute or court or governmental action, order or decree, otherwise than as set forth or contemplated in the Offering Memorandum (or in the documents incorporated therein by reference) or (ii) since such date there shall not have been any change in the capital stock or long-term debt of the Company or any of its subsidiaries or any change, or any development involving a prospective change, in or affecting the business, management, financial position, stockholders' equity or results of operations of the Company and its subsidiaries taken as a whole, otherwise than as set forth or contemplated in the Offering Memorandum (or in the documents incorporated therein by reference), the effect of which, in any such case described in clause (i) or (ii), is, in the judgment of the Initial Purchasers, so material and adverse as to make it impracticable or inadvisable to proceed with the public offering or the delivery of the Notes and the Guarantees being delivered on the Closing Date on the terms and in the manner contemplated in the Offering Memorandum.

(j) Subsequent to the execution and delivery of this Agreement (i) no downgrading shall have occurred in the rating accorded the Company's debt securities by any "nationally recognized statistical rating organization," as that term is defined by the Commission for purposes of Rule 436(g)(2) under the Securities Act and (ii) no such organization shall have publicly announced that it has under surveillance or review, with possible negative implications, its rating of any of the Company's debt securities.

(k) Subsequent to the execution and delivery of this Agreement there shall not have occurred any of the following: (i) trading in securities generally on the New York Stock Exchange, the American Stock Exchange, the NASDAQ National Market or the over-the-counter market, or trading in any securities of the Company on any exchange or in the over-the-counter market shall have been suspended or the settlement of such trading generally shall have been materially disrupted or minimum prices shall have been established on any such exchange or such market by the Commission, by such exchange or by any other regulatory body or governmental authority having jurisdiction, (ii) a banking moratorium shall have been declared by Federal or state authorities, (iii) the United States shall have become engaged in hostilities, there shall have been an escalation in hostilities involving the United States or there shall have been a declaration of a national emergency or war by the United States or there shall have occurred any other calamity or crisis (including, without limitation, as a result of terrorist activities) or (iv) there shall have occurred such a material adverse change in general economic, political or financial conditions, including without limitation as a result of terrorist activities after the date hereof, or the effect of international conditions on the financial markets in the United States shall be such, as to make it in the case of (iii) or (iv), in the sole judgment of a majority in interest of the several Initial Purchasers, impracticable or inadvisable to proceed with the public offering or delivery of the

Notes being delivered on the Closing Date on the terms and in the manner contemplated in the Offering Memorandum.

(l) On or prior to the Closing Date, The Depository Trust Company shall have accepted the Series A Notes for clearance.

All opinions, letters, evidence and certificates mentioned above or elsewhere in this Agreement shall be deemed to be in compliance with the provisions hereof only if they are in form and substance reasonably satisfactory to counsel for the Initial Purchasers.

8. Indemnification and Contribution.

(a) The Company and the Guarantors shall jointly and severally indemnify and hold harmless each Initial Purchaser, its officers and employees and each person, if any, who controls any Initial Purchaser within the meaning of the Securities Act, from and against any loss, claim, damage or liability, joint or several, or any action in respect thereof (including, but not limited to, any loss, claim, damage, liability or action relating to purchases and sales of Notes and Guarantees), to which that Initial Purchaser, officer, employee or controlling person may become subject, under the Securities Act or otherwise, insofar as such loss, claim, damage, liability or action arises out of, or is based upon, (i) any untrue statement or alleged untrue statement of a material fact contained (A) in the Offering Memorandum or in any amendment or supplement thereto or (B) in any blue sky application or other document prepared or executed by the Company (or based upon any written information furnished by the Company) specifically for the purpose of qualifying any or all of the Series A Notes under the securities laws of any state or other jurisdiction (any such application, document or information being hereinafter called a "Blue Sky Application"), (ii) the omission or alleged omission to state in the Offering Memorandum, or in any amendment or supplement thereto, or in any Blue Sky Application any material fact required to be stated therein or necessary to make the statements therein not misleading or (iii) any act or failure to act or any alleged act or failure to act by any Initial Purchaser in connection with, or relating in any manner to, the Notes or the offering contemplated hereby, and which is included as part of or referred to in any loss, claim, damage, liability or action arising out of or based upon matters covered by clause (i) or (ii) above (provided that the Company and the Guarantors shall not be liable under this clause (iii) to the extent that it is determined in a final judgment by a court of competent jurisdiction that such loss, claim, damage, liability or action resulted directly from any such acts or failures to act undertaken or omitted to be taken by such Initial Purchaser through its gross negligence or willful misconduct), and shall reimburse each Initial Purchaser and each such officer, employee or controlling person promptly upon demand for any legal or other expenses reasonably incurred by that Initial Purchaser, officer, employee or controlling person in connection with investigating or defending or preparing to defend against any such loss, claim, damage, liability or action as such expenses are incurred; provided, however, that the Company and the Guarantors shall not be liable in any such case to the extent that any such loss, claim, damage, liability or action arises out of, or is based upon, any untrue statement or alleged untrue statement or omission or alleged omission made in the Offering Memorandum, or in any such amendment or supplement, or in any Blue Sky Application, in reliance upon and in conformity with written information concerning such Initial Purchaser furnished to the Company by or on behalf of any Initial Purchaser specifically for inclusion therein. The foregoing indemnity agreement is in addition to any liability which the

Company and the Guarantors may otherwise have to any Initial Purchaser or to any officer, employee or controlling person of that Initial Purchaser.

(b) Each Initial Purchaser, severally and not jointly, shall indemnify and hold harmless the Company, the Guarantors, their officers and employees, each of their directors, and each person, if any, who controls the Company and the Guarantors within the meaning of the Securities Act, from and against any loss, claim, damage or liability, joint or several, or any action in respect thereof, to which the Company, the Guarantors or any such director, officer or controlling person may become subject, under the Securities Act or otherwise, insofar as such loss, claim, damage, liability or action arises out of, or is based upon, (i) any untrue statement or alleged untrue statement of a material fact contained (A) in the Offering Memorandum or in any amendment or supplement thereto, or (B) in any Blue Sky Application or (ii) the omission or alleged omission to state in the Offering Memorandum, or in any amendment or supplement thereto, or in any Blue Sky Application any material fact required to be stated therein or necessary to make the statements therein not misleading, but in each case only to the extent that the untrue statement or alleged untrue statement or omission or alleged omission was made in reliance upon and in conformity with written information concerning such Initial Purchaser furnished to the Company by or on behalf of that Initial Purchaser specifically for inclusion therein, and shall reimburse the Company, the Guarantors and any such director, officer or controlling person for any legal or other expenses reasonably incurred by the Company, such Guarantor or any such director, officer or controlling person in connection with investigating or defending or preparing to defend against any such loss, claim, damage, liability or action as such expenses are incurred. The foregoing indemnity agreement is in addition to any liability which any Initial Purchaser may otherwise have to the Company, the Guarantors or any such director, officer, employee or controlling person.

(c) Promptly after receipt by an indemnified party under this Section 8 of notice of any claim or the commencement of any action, the indemnified party shall, if a claim in respect thereof is to be made against the indemnifying party under this Section 8, notify the indemnifying party in writing of the claim or the commencement of that action; provided, however, that the failure to notify the indemnifying party shall not relieve it from any liability which it may have under this Section 8 except to the extent it has been materially prejudiced by such failure and, provided further, that the failure to notify the indemnifying party shall not relieve it from any liability which it may have to an indemnified party otherwise than under this Section 8. If any such claim or action shall be brought against an indemnified party, and it shall notify the indemnifying party thereof, the indemnifying party shall be entitled to participate therein and, to the extent that it wishes, jointly with any other similarly notified indemnifying party, to assume the defense thereof with counsel reasonably satisfactory to the indemnified party. After notice from the indemnifying party to the indemnified party of its election to assume the defense of such claim or action, the indemnifying party shall not be liable to the indemnified party under this Section 8 for any legal or other expenses subsequently incurred by the indemnified party in connection with the defense thereof other than reasonable costs of investigation; provided, however, any indemnified party shall have the right to employ separate counsel in any such action and to participate in the defense thereof but the fees and expenses of such counsel shall be at the expense of the indemnified party unless (i) the employment thereof has been specifically authorized by the indemnifying party in writing, (ii) such indemnified party shall have been advised by such counsel that there may be one or more legal defenses available to it which are different from or additional to those available to the indemnifying party and in the reasonable judgment of such counsel it is advisable for such indemnified party to employ

separate counsel or (iii) the indemnifying party has failed to assume the defense of such action and employ counsel reasonably satisfactory to the indemnified party, in which case, if such indemnified party notifies the indemnifying party in writing that it elects to employ separate counsel at the expense of the indemnifying party, the indemnifying party shall not have the right to assume the defense of such action on behalf of such indemnified party, it being understood, however, that the indemnifying party shall not, in connection with any one such action or separate but substantially similar or related actions in the same jurisdiction arising out of the same general allegations or circumstances, be liable for the reasonable fees and expenses of more than one separate firm of attorneys (in addition to one local counsel) at any time for all such indemnified parties, which firm shall be designated in writing by Lehman Brothers Inc., if the indemnified parties under this Section 8 consist of any Initial Purchaser or any of their respective officers, employees or controlling persons, or by the Company, if the indemnified parties under this Section consist of the Company, the Guarantors or any of the Company's or the Guarantors' directors, officers, employees or controlling persons. No indemnifying party shall (i) without the prior written consent of the indemnified parties (which consent shall not be unreasonably withheld), settle or compromise or consent to the entry of any judgment with respect to any pending or threatened claim, action, suit or proceeding in respect of which indemnification or contribution may be sought hereunder (whether or not the indemnified parties are actual or potential parties to such claim or action) unless such settlement, compromise or consent includes an unconditional release of each indemnified party from all liability arising out of such claim, action, suit or proceeding, or (ii) be liable for any settlement of any such action effected without its written consent (which consent shall not be unreasonably withheld), but if settled with the consent of the indemnifying party or if there be a final judgment of the plaintiff in any such action, the indemnifying party agrees to indemnify and hold harmless any indemnified party from and against any loss or liability by reason of such settlement or judgment.

(d) If the indemnification provided for in this Section 8 shall for any reason be unavailable to or insufficient to hold harmless an indemnified party under Section 8(a) or 8(b) in respect of any loss, claim, damage or liability, or any action in respect thereof, referred to therein, then each indemnifying party shall, in lieu of indemnifying such indemnified party, contribute to the amount paid or payable by such indemnified party as a result of such loss, claim, damage or liability, or action in respect thereof, (i) in such proportion as shall be appropriate to reflect the relative benefits received by the Company and the Guarantors on the one hand and the Initial Purchasers on the other from the offering of the Series A Notes and the Series A Guarantees or (ii) if the allocation provided by clause (i) above is not permitted by applicable law, in such proportion as is appropriate to reflect not only the relative benefits referred to in clause (i) above but also the relative fault of the Company and the Guarantors on the one hand and the Initial Purchasers on the other with respect to the statements or omissions which resulted in such loss, claim, damage or liability, or action in respect thereof, as well as any other relevant equitable considerations. The relative benefits received by the Company and the Guarantors on the one hand and the Initial Purchasers on the other with respect to such offering shall be deemed to be in the same proportion as the total net proceeds from the offering of the Series A Notes purchased under this Agreement (before deducting expenses) received by the Company and the Guarantors, on the one hand, and the total discounts and commissions received by the Initial Purchasers with respect to the Series A Notes and the Series A Guarantees purchased under this Agreement, on the other hand, bear to the total gross proceeds from the offering of the Series A Notes under this Agreement. The relative fault shall be determined by reference to whether the untrue or alleged untrue statement of a

material fact or omission or alleged omission to state a material fact relates to information supplied by the Company, the Guarantors or the Initial Purchasers, the intent of the parties and their relative knowledge, access to information and opportunity to correct or prevent such statement or omission. The Company, the Guarantors and the Initial Purchasers agree that it would not be just and equitable if contributions pursuant to this Section 8(d) were to be determined by pro rata allocation (even if the Initial Purchasers were treated as one entity for such purpose) or by any other method of allocation which does not take into account the equitable considerations referred to herein. The amount paid or payable by an indemnified party as a result of the loss, claim, damage or liability, or action in respect thereof, referred to above in this Section shall be deemed to include, for purposes of this Section 8(d), any legal or other expenses reasonably incurred by such indemnified party in connection with investigating or defending any such action or claim. Notwithstanding the provisions of this Section 8(d), no Initial Purchaser shall be required to contribute any amount in excess of the amount by which the total price at which the Series A Notes purchased by it was resold to Eligible Purchasers exceeds the amount of any damages which such Initial Purchaser has otherwise paid or become liable to pay by reason of any untrue or alleged untrue statement or omission or alleged omission. No person guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the Securities Act) shall be entitled to contribution from any person who was not guilty of such fraudulent misrepresentation. The Initial Purchasers' obligations to contribute as provided in this Section 8(d) are several in proportion to their respective underwriting obligations and not joint.

(e) The Initial Purchasers severally confirm and the Company and the Guarantors acknowledge that the first sentence of the last paragraph on the cover page, the last paragraph on page ii and the last paragraph, the first sentence of the third to last paragraph and the fifth to last paragraph under the caption "Plan of Distribution" constitute the only information concerning such Initial Purchasers furnished in writing to the Company by or on behalf of the Initial Purchasers specifically for inclusion in the Offering Memorandum.

9. Termination. The obligations of the Initial Purchasers hereunder may be terminated by Lehman Brothers Inc. by notice given to and received by the Company prior to delivery of and payment for the Series A Notes and the Series A Guarantees if, prior to that time, any of the events described in Sections 7(i), 7(j) or 7(k), shall have occurred or if the Initial Purchasers shall decline to purchase the Series A Notes for any reason permitted under this Agreement.

10. Reimbursement of Initial Purchasers' Expenses. If the Company and the Guarantors shall fail to tender the Series A Notes and the Series A Guarantees for delivery to the Initial Purchasers by reason of any failure, refusal or inability on the part of the Company and the Guarantors to perform any agreement on its part to be performed, or because any other condition of the Initial Purchasers' obligations hereunder required to be fulfilled by the Company and the Guarantors is not fulfilled, the Company and the Guarantors will reimburse the Initial Purchasers for all reasonable out-of-pocket expenses (including fees and disbursements of counsel) incurred by the Initial Purchasers in connection with this Agreement and the proposed purchase of the Series A Notes and the Series A Guarantees, and upon demand the Company and the Guarantors shall pay the full amount thereof to the Initial Purchasers.

11. Notices, etc. All statements, requests, notices and agreements hereunder shall be in writing, and:

(a) if to the Initial Purchasers, shall be delivered or sent by mail, telex or facsimile transmission to (i) Lehman Brothers Inc., 790 Seventh Avenue, New York, New York 10019, Attention: Syndicate Department (Fax: 212-526-6588), (ii) Morgan Stanley & Co. Incorporated, 1585 Broadway, New York, New York 10036, Attention: Syndicate Department (iii) Banc of America Securities LLC, 9 West 57th Street, New York, New York 10019, Attention: Bruce Thompson (Fax 212-583-8324) and (iv) Credit Suisse First Boston LLC, 11 Madison Avenue, New York, New York 10010, Attention: Transaction Advisory Group with a copy to Latham & Watkins LLP, 885 Third Avenue, New York, New York 10022, Attention: Robert Zuccaro (Fax: 212-751-4864) and, in the case of any notice pursuant to Section 8, to the Director of Litigation, Office of the General Counsel, Lehman Brothers Inc., 790 Seventh Avenue, New York, NY 10019; and

(b) if to the Company and the Guarantors, shall be delivered or sent by mail, telex or facsimile transmission to L-3 Communications Corporation, 600 Third Avenue, 34th Floor, New York, New York 10016, Attention: Christopher C. Cambria (Fax: 212-805-5494), with a copy to Simpson Thacher & Bartlett, 425 Lexington Avenue, New York, New York 10017, Attention: Vincent Pagano, Jr. (Fax: (212) 455-2502).

Any such statements, requests, notices or agreements shall take effect at the time of receipt thereof. The Company shall be entitled to act and rely upon any request, consent, notice or agreement given or made on behalf of the Initial Purchasers by Lehman Brothers Inc.

12. Persons Entitled to Benefit of Agreement. This Agreement shall inure to the benefit of and be binding upon the Initial Purchasers, the Company, the Guarantors and their respective successors. This Agreement and the terms and provisions hereof are for the sole benefit of only those persons, except that (A) the representations, warranties, indemnities and agreements of the Company and the Guarantors contained in this Agreement shall also be deemed to be for the benefit of the person or persons, if any, who control any Initial Purchaser within the meaning of Section 15 of the Securities Act and (B) the indemnity agreement of the Initial Purchasers contained in Section 8(b) of this Agreement shall be deemed to be for the benefit of directors of the Company and the Guarantors and any person controlling the Company and the Guarantors within the meaning of Section 15 of the Securities Act. Nothing in this Agreement is intended or shall be construed to give any person, other than the persons referred to in this Section 12, any legal or equitable right, remedy or claim under or in respect of this Agreement or any provision contained herein.

13. Survival. The respective indemnities, representations, warranties and agreements of the Company, the Guarantors and the Initial Purchasers contained in this Agreement or made by or on behalf on them, respectively, pursuant to this Agreement, shall survive the delivery of and payment for the Notes and the Guarantees and shall remain in full force and effect, regardless of any investigation made by or on behalf of any of them or any person controlling any of them.

14. Definition of the Terms "Business Day" and "Subsidiary." For purposes of this Agreement, (a) "business day" means each Monday, Tuesday, Wednesday, Thursday or Friday which is not a day on which banking institutions in New York are generally authorized or obligated by law or executive order to close and (b) "subsidiary" has the meaning set forth in Rule 405 of the rules and regulations of the Commission under the Securities Act.

15. Governing Law. THIS AGREEMENT SHALL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF NEW YORK.

16. Counterparts. This Agreement may be executed in one or more counterparts and, if executed in more than one counterpart, the executed counterparts shall each be deemed to be an original but all such counterparts shall together constitute one and the same instrument.

17. Headings. The headings herein are inserted for convenience of reference only and are not intended to be part of, or to affect the meaning or interpretation of, this Agreement.

[Signature pages follow]

If the foregoing correctly sets forth the agreement among the Company, the Guarantors and the Initial Purchasers, please indicate your acceptance in the space provided for that purpose below.

Very truly yours,

L-3 COMMUNICATIONS CORPORATION,
as the Company

By:

Name: Christopher C. Cambria
Title: Senior Vice President,
Secretary and General Counsel

AMI INSTRUMENTS, INC.
APCOM, INC.
BROADCAST SPORTS INC.
CELERITY SYSTEMS INCORPORATED
EER SYSTEMS, INC.
ELECTRODYNAMICS, INC.
GOODRICH AEROSPACE COMPONENT OVERHAUL & REPAIR, INC.
GOODRICH AVIONICS SYSTEMS, INC.
GOODRICH FLIGHTSYSTEMS, INC.
HENSCHEL, INC.
HYGIENETICS ENVIRONMENTAL SERVICES, INC.
INTERSTATE ELECTRONICS CORPORATION
KDI PRECISION PRODUCTS, INC.
L-3 COMMUNICATIONS AIS GP CORPORATION
L-3 COMMUNICATIONS ANALYTICS CORPORATION
L-3 COMMUNICATIONS ATLANTIC SCIENCE & TECHNOLOGY CORPORATION
L-3 COMMUNICATIONS AYDIN CORPORATION
L-3 COMMUNICATIONS ESSCO, INC.
L-3 COMMUNICATIONS ILEX SYSTEMS, INC.
L-3 COMMUNICATIONS IMC CORPORATION
L-3 COMMUNICATIONS INTEGRATED SYSTEMS L.P.
L-3 COMMUNICATIONS INVESTMENTS, INC.
L-3 COMMUNICATIONS SECURITY AND DETECTION SYSTEMS CORPORATION DELAWARE
L-3 COMMUNICATIONS SECURITY AND DETECTION SYSTEMS CORPORATION CALIFORNIA

L-3 COMMUNICATIONS SPD TECHNOLOGIES, INC.
L-3 COMMUNICATIONS STORM CONTROL SYSTEMS, INC.
L-3 COMMUNICATIONS TMA CORPORATION
L-3 COMMUNICATIONS WESTWOOD CORPORATION
MCTI ACQUISITION CORPORATION
MICRODYNE COMMUNICATIONS TECHNOLOGY INCORPORATED
MICRODYNE CORPORATION
MICRODYNE OUTSOURCING INCORPORATED
MPRI, INC.
PAC ORD, INC.
POWER PARAGON, INC.
SHIP ANALYTICS, INC.
SHIP ANALYTICS INTERNATIONAL, INC.
SHIP ANALYTICS USA, INC.
SOUTHERN CALIFORNIA MICROWAVE, INC.
SPD ELECTRICAL SYSTEMS, INC.
SPD HOLDINGS, INC.
SPD SWITCHGEAR, INC.
SYCOLEMAN CORPORATION
TELOS CORPORATION
TROLL TECHNOLOGY CORPORATION
WESCAM AIR OPS INC.
WESCAM AIR OPS LLC
WESCAM HOLDINGS (US) INC.
WESCAM INCORPORATED
WESCAM LLC
WESCAM SONOMA INC.
WOLF COACH, INC.
as Guarantors

By:

    Name: Christopher C. Cambria
    Title: Vice President and Secretary

L-3 COMMUNICATIONS INTEGRATED SYSTEMS L.P.

By: L-3 COMMUNICATIONS AIS GP CORPORATION,
    as general partner

    By:

    Name:
    Title: Authorized Person

Accepted:

LEHMAN BROTHERS INC.
MORGAN STANLEY & CO. INCORPORATED
BANC OF AMERICA SECURITIES LLC
CREDIT SUISSE FIRST BOSTON LLC

For themselves and as Representatives
of the several Initial Purchasers named
in Schedule 1 hereto

By: LEHMAN BROTHERS INC.

By:

Authorized Representative

SCHEDULE 1

Initial Purchaser:	Principal Amount of Notes
Lehman Brothers Inc.	$125,629,000
Morgan Stanley & Co. Incorporated	$125,629,000
Banc of America Securities LLC	$ 50,251,000
Credit Suisse First Boston LLC	$ 40,201,000
SG Cowen Securities Corporation	$ 11,658,000
Wachovia Securities, Inc.	$ 11,658,000
Banc One Capital Markets, Inc.	$ 5,829,000
Barclays Capital Inc.	$ 5,829,000
BNY Capital Markets, Inc.	$ 5,829,000
Credit Lyonnais Securities (USA) Inc.	$ 5,829,000
Fleet Securities, Inc.	$ 5,829,000
Scotia Capital (USA) Inc.	$ 5,829,000
Total	$400,000,000

EXHIBIT A

OPINION OF SIMPSON THACHER & BARTLETT

May 21, 2003

LEHMAN BROTHERS INC.
MORGAN STANLEY & CO. INCORPORATED
BANC OF AMERICA SECURITIES LLC
CREDIT SUISSE FIRST BOSTON LLC
c/o Lehman Brothers Inc.
745 Seventh Avenue
New York, New York 10019

Ladies and Gentlemen:

We have acted as counsel to L-3 Communications Corporation, a Delaware corporation (the "Company"), in connection with the purchase by you of $400,000,000 aggregate principal amount of its 6-1/8% Senior Subordinated Notes due 2013 (the "Notes") of the Company and the related guarantees (the "Guarantees") by the Delaware subsidiaries of the Company named on Schedule I attached hereto (each, a "Delaware Guarantor" and collectively, the "Delaware Guarantors") and the non-Delaware subsidiaries of the Company named on Schedule II attached hereto (each, a "Non-Delaware Guarantor" and collectively, the "Non-Delaware Guarantors," taken together with the Delaware Guarantors, the "Subsidiary Guarantors"), pursuant to the Purchase Agreement dated May 14, 2003 (the "Purchase Agreement"), among Lehman Brothers Inc., Morgan Stanley & Co. Incorporated, Banc of America Securities LLC and Credit Suisse First Boston LLC, as initial purchasers (the "Initial Purchasers"), the Company and the Subsidiary Guarantors.

We have examined the Offering Memorandum dated May 14, 2003, relating to the sale of the Notes (the "Offering Memorandum"), which incorporates or is deemed to incorporate by reference the Annual Report on Form 10-K of L-3 Communications Holdings, Inc. ("Holdings") and the Company for the fiscal year ended December 31, 2002 and the Quarterly Report on Form 10-Q of Holdings and the Company for the fiscal quarter ended March 31, 2003 (the "Exchange Act Documents"), each as filed under the Securities Exchange Act of 1934; the Indenture dated as of May 21, 2003 (the "Indenture") among the Company, the Subsidiary Guarantors and The Bank of New York, as trustee (the "Trustee"); the Notes; the guarantees indorsed on or annexed to the Notes (the "Guarantees"); the Purchase Agreement; and the Registration Rights Agreement dated as of May 21, 2003 (the "Registration Rights Agreement") among the Company, the Subsidiary Guarantors and the Initial Purchasers pursuant to which the Company's Series B 6-1/8% Senior Subordinated Notes due 2013 (the "Series B Notes") will be registered under the Securities Act of 1933, as amended (the "Securities Act"). The Series B Notes will be guaranteed by each of the Subsidiary Guarantors (the "Series B Guarantees"). In addition, we have examined, and have relied as to matters of fact upon, the documents delivered to you at the closing and upon originals or duplicates or certified or conformed copies, of such corporate records, agreements, documents and other instruments and such certificates or comparable documents of public officials and of officers and representatives of the Company and the Subsidiary Guarantors, and have made such other investigations, as we have deemed relevant and necessary in connection with the opinions hereinafter set forth.

In such examination, we have assumed the genuineness of all signatures, the legal capacity of natural persons, the authenticity of all documents submitted to us as originals, the conformity to original documents of all documents submitted to us as duplicates or certified or conformed copies, and the authenticity of the originals of such latter documents.

Based upon the foregoing, and subject to the qualifications and limitations stated herein, we are of the opinion that:

1. Each of the Company and the Delaware Guarantors (other than Wescam Air Ops LLC and Wescam LLC (the "LLCs") and L-3 Communications Integrated Systems LP (the "LP")) has been duly incorporated and is validly existing as a corporation in good standing under the laws of Delaware, and has all corporate power and authority necessary to conduct its respective businesses as described in the Offering Memorandum.

2. Each of the LLCs has been duly formed and is validly existing as a limited liability company in good standing under the laws of Delaware, and has all limited liability company power and authority necessary to conduct its business as described in the Offering Memorandum.

3. The LP has been duly formed and is validly existing as a limited partnership in good standing under the laws of Delaware, and has all limited partnership power and authority necessary to conduct its business as described in the Offering Memorandum.

4. All of the outstanding shares of Common Stock of the Company have been duly authorized and have been validly issued, fully paid and non-assessable; and all of the issued shares of capital stock of each of the Delaware Guarantors (other than the LP and the LLCs) have been duly and validly authorized and issued, are fully paid and non-assessable and, based solely on an examination of each such subsidiary's stock ledger and minute book, all such shares are held of record by the Company or one of its subsidiaries.

5. Based solely on an examination of (i) the Limited Liability Agreement of Wescam LLC, dated as of October 26, 1999, and (ii) the Limited Liability Agreement of Wescam Air Ops LLC, dated as of January 25, 2001, all of the membership interests of each LLC are held of record by the Company or one of its subsidiaries.

6. The Indenture has been duly authorized, executed and delivered by the Company and the Delaware Guarantors and, assuming that the Indenture is the valid and legally binding obligation of the Trustee, constitutes a valid and legally binding obligation of the Company and the Delaware Guarantors enforceable against the Company and the Delaware Guarantors in accordance with its terms.

7. Assuming that the Indenture has been duly authorized, executed and delivered by the Non-Delaware Guarantors and assuming that the Indenture is the valid and legally binding obligation of the Trustee, the Indenture constitutes a valid and legally binding obligation of the Non-Delaware Guarantors enforceable against the Non-Delaware Guarantors in accordance with its terms.

8. The Notes have been duly authorized, executed and issued by the Company and, assuming due authentication thereof by the Trustee and upon payment and delivery in accordance with the terms of the Purchase Agreement, will constitute valid and legally binding obligations of the Company enforceable against the Company in accordance with their terms and entitled to the benefits of the Indenture.

9. The Guarantees have been duly authorized, executed and issued by each of the Delaware Guarantors and, assuming due authentication of the Notes by the Trustee, upon payment and delivery of the Notes in accordance with the terms of the Purchase Agreement, will constitute valid and legally binding obligations of the Delaware Guarantors enforceable against the Delaware Guarantors in accordance with their terms.

10. Assuming that the Guarantees have been duly authorized, executed and issued by each of the Non-Delaware Guarantors and, assuming due authentication of the Notes by the Trustee, upon payment and delivery of the Notes in accordance with the terms of the Purchase Agreement, the Guarantees will constitute valid and legally binding obligations of the Non-Delaware Guarantors enforceable against the Non-Delaware Guarantors in accordance with their terms.

11. The Series B Notes have been duly authorized by the Company, and the Series B Guarantees have been duly authorized by the Delaware Guarantors.

12. The statements contained in the Offering Memorandum under the captions "Business--Pension Plans," "Description of Other Indebtedness," and "Description of the Notes," insofar as they describe charter documents, contracts, statutes, rules and regulations and other legal matters, constitute an accurate summary thereof in all material respects.

13. The statements made in the Offering Memorandum under the caption "Certain United States Federal Income Tax Considerations to Non-U.S. Holders," insofar as they purport to constitute summaries of matters of United States federal tax law and regulations or legal conclusions with respect thereto, constitute accurate summaries of the matters described therein in all material respects.

14. To our knowledge, there are no contracts or documents of a character required by the Securities Act or the rules and regulations thereunder to be described in a prospectus included in a registration statement on Form S-3 which are not described in the Offering Memorandum or in documents incorporated therein by reference.

15. The Purchase Agreement has been duly authorized, executed and delivered by the Company and the Delaware Guarantors.

16. The Registration Rights Agreement has been duly authorized, executed and delivered by the Company and the Delaware Guarantors and, assuming that the Registration Rights Agreement is the valid and legally binding obligation of the Initial Purchasers, constitutes a valid and legally binding obligation of the Company and the Delaware Guarantors, enforceable against the Company and the Delaware Guarantors in accordance with its terms.

17. Assuming that the Registration Rights Agreement has been duly authorized, executed and delivered by the Non-Delaware Guarantors and, assuming that the Registration Rights Agreement is the valid and legally binding obligation of the Initial Purchasers, the Registration Rights Agreement constitutes a valid and legally binding obligation of the Non-Delaware Guarantors enforceable against the Non-Delaware Guarantors in accordance with its terms.

18. The issue and sale of the Notes by the Company and the Guarantees by the Subsidiary Guarantors and the compliance by the Company or the Subsidiary Guarantors, as applicable, with all of the provisions of the Purchase Agreement, the Indenture, the Notes, the Guarantees and the Registration Rights Agreement will not breach or result in a default under, any indenture, mortgage, deed of trust, loan agreement or other agreement or instrument filed as an exhibit to the Company's Registration Statement on Form S-3 (Registration No. 333-84826), nor will such actions violate the Certificate of Incorporation or By-Laws of the Company or the Delaware Guarantors (or, in the case of the LP, the Limited Partnership Agreement, dated February 22, 2002,

between L-3 Communications Investments Inc. and L-3 Communications AIS GP Corporation or, in the case of the LLCs, the Limited Liability Agreements referenced in paragraph 5 above) or any federal or New York statute or the Delaware General Corporation Law, the Delaware Revised Uniform Limited Partnership Act or the Delaware Limited Liability Company Act or any rule or regulation that has been issued pursuant to any federal or New York statute or the Delaware General Corporation Law, the Delaware Revised Uniform Limited Partnership Act or the Delaware Limited Liability Company Act or any order known to us issued pursuant to any federal or New York statute or the Delaware General Corporation Law, the Delaware Revised Uniform Limited Partnership Act or the Delaware Limited Liability Company Act by any court or governmental agency or body or court having jurisdiction over the Company or any of its subsidiaries or any of their respective properties or assets; and no consent, approval, authorization, order, registration or qualification of or with any federal or New York governmental agency or body or any Delaware governmental agency or body acting pursuant to the Delaware General Corporation Law, the Delaware Revised Uniform Limited Partnership Act or the Delaware Limited Liability Company Act or, to our knowledge, any federal or New York court or any Delaware court acting pursuant to the Delaware General Corporation Law, the Delaware Revised Uniform Limited Partnership Act or the Delaware Limited Liability Company Act is required for the issuance and sale of the Notes by the Company or the issuance of the Guarantees by the Subsidiary Guarantors, except for the registration under the Securities Act of the Series B Notes and the Series B Guarantees, in accordance with the Registration Rights Agreement, and the qualification of the Indenture under the Trust Indenture Act of 1939, as amended (the "Trust Indenture Act"), and such consents, approvals, authorizations, registrations or qualifications as may be required under state securities or Blue Sky laws in connection with the purchase and distribution of the Notes and the Guarantees by the Initial Purchasers. The opinions set forth in this paragraph are based upon our consideration of only those statutes, rules and regulations which, in our experience, are normally applicable to securities underwriting transactions.

19. No registration of the Notes and the Guarantees under the Securities Act and no qualification of the Indenture under the Trust Indenture Act is required for the offer and sale of the Notes by the Company and the Guarantees by the Subsidiary Guarantors to the Initial Purchasers or the reoffer and resale of the Notes by the Initial Purchasers to the initial purchasers therefrom solely in the manner contemplated by the Offering Memorandum, the Purchase Agreement and the Indenture.

Our opinions set forth in paragraphs 6, 7, 8, 9, 10, 16 and 17 above are subject to the effects of bankruptcy, insolvency, fraudulent conveyance, reorganization, moratorium and other similar laws relating to or affecting creditors' rights generally, general equitable principles (whether considered in a proceeding in equity or at law) and an implied covenant of good faith and fair dealing. Our opinions set forth in paragraphs 16 and 17 are further limited by considerations of public policy.

We express no opinion as to the validity, legally binding effect or enforceability of any provision of the Registration Rights Agreement or any related provisions of the Indenture

that requires or relates to payment of any interest at a rate or in an amount which a court would determine in the circumstances under applicable law to be commercially unreasonable or a penalty or a forfeiture. In addition, we express no opinion as to the validity, legally binding effect or enforceability of the waiver of rights and defenses contained in Section [11.07] of the Indenture.

We have not independently verified the accuracy, completeness or fairness of the statements made or included in the Offering Memorandum or the Exchange Act Documents and take no responsibility therefor, except as and to the extent set forth in paragraphs 12 and 13 above. In the course of the preparation by the Company of the Offering Memorandum (excluding the Exchange Act Documents), we participated in conferences with certain officers and employees of the Company, with representatives of PricewaterhouseCoopers L.L.P. and with counsel to the Initial Purchasers. We did not prepare the Exchange Act Documents. Based upon our examination of the Offering Memorandum and the Exchange Act Documents, our investigations made in connection with the preparation of the Offering Memorandum (excluding the Exchange Act Documents) and our participation in the conferences referred to above, we have no reason to believe that the Offering Memorandum (including the Exchange Act Documents) as of its date contained or as of the date hereof contains any untrue statement of a material fact or omits or omitted to state any material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading, except that in each case we express no belief with respect to the financial statements or other financial data contained in the Offering Memorandum or the Exchange Act Documents.

We are members of the Bar of the State of New York and we do not express any opinion herein concerning any law other than the law of the State of New York, the federal law of the United States, the Delaware General Corporation Law, the Delaware Revised Uniform Limited Partnership Act and the Delaware Limited Liability Company Act.

This opinion letter is rendered to you in connection with the above described transactions. This opinion letter may not be relied upon by you for any other purpose, or relied upon by, or furnished to, any other person, firm or corporation without our prior written consent.

Very truly yours,

SIMPSON THACHER & BARTLETT

SCHEDULE I

DELAWARE GUARANTORS
- ------------------

BROADCAST SPORTS INC., a Delaware corporation
GOODRICH AEROSPACE COMPONENT OVERHAUL & REPAIR, INC., a Delaware corporation
GOODRICH AVIONICS SYSTEMS, INC., a Delaware corporation
HENSCHEL INC., a Delaware corporation
HYGIENETICS ENVIRONMENTAL SERVICES, INC., a Delaware corporation
KDI PRECISION PRODUCTS, INC., a Delaware corporation
L-3 COMMUNICATIONS AIS GP CORPORATION, a Delaware corporation
L-3 COMMUNICATIONS AYDIN CORPORATION, a Delaware corporation
L-3 COMMUNICATIONS ESSCO, INC., a Delaware corporation
L-3 COMMUNICATIONS ILEX SYSTEMS, INC., a Delaware corporation
L-3 COMMUNICATIONS INTEGRATED SYSTEMS L.P., a Delaware limited partnership
L-3 COMMUNICATIONS INVESTMENTS, INC., a Delaware corporation
L-3 COMMUNICATIONS SECURITY AND DETECTION SYSTEMS CORPORATION DELAWARE,
a Delaware corporation
L-3 COMMUNICATIONS SPD TECHNOLOGIES, INC., a Delaware corporation
MPRI, INC., a Delaware corporation
PAC ORD INC., a Delaware corporation
POWER PARAGON, INC., a Delaware corporation
SHIP ANALYTICS INTERNATIONAL, INC., a Delaware corporation
SPD ELECTRICAL SYSTEMS, INC., a Delaware corporation
SPD HOLDINGS, INC., a Delaware corporation
SPD SWITCHGEAR INC., a Delaware corporation
WESCAM AIR OPS INC., a Delaware corporation
WESCAM AIR OPS LLC, a Delaware limited liability company
WESCAM HOLDINGS (US) INC., a Delaware corporation
WESCAM LLC, a Delaware limited liability company

SCHEDULE II

NON-DELAWARE GUARANTORS
- ----------------------

AMI INSTRUMENTS, INC., an Oklahoma corporation
APCOM, INC., a Maryland corporation
CELERITY SYSTEMS INCORPORATED, a California corporation
EER SYSTEMS, INC., a Virginia corporation
ELECTRODYNAMICS, INC., an Arizona corporation
GOODRICH FLIGHTSYSTEMS, INC., an Ohio corporation
INTERSTATE ELECTRONICS CORPORATION, a California corporation
L-3 COMMUNICATIONS ANALYTICS CORPORATION, a California corporation
L-3 COMMUNICATIONS ATLANTIC SCIENCE AND TECHNOLOGY CORPORATION,
a New Jersey corporation
L-3 COMMUNICATIONS IMC CORPORATION, a Connecticut corporation
L-3 COMMUNICATIONS SECURITY AND DETECTION SYSTEMS CORPORATION CALIFORNIA,
a California corporation
L-3 COMMUNICATIONS STORM CONTROL SYSTEMS, INC., a California corporation
L-3 COMMUNICATIONS TMA CORPORATION, a Virginia corporation
L-3 COMMUNICATIONS WESTWOOD CORPORATION, a Nevada corporation
MCTI ACQUISITION CORPORATION, a Maryland corporation
MICRODYNE COMMUNICATIONS TECHNOLOGIES INCORPORATED, a Maryland corporation
MICRODYNE CORPORATION, a Maryland corporation
MICRODYNE OUTSOURCING INCORPORATED, a Maryland corporation
SHIP ANALYTICS, INC., a Connecticut corporation
SHIP ANALYTICS USA, INC., a Connecticut corporation
SOUTHERN CALIFORNIA MICROWAVE, INC., a California corporation
SYCOLEMAN CORPORATION, a Florida corporation
TELOS CORPORATION, a California corporation
TROLL TECHNOLOGY CORPORATION, a California corporation
WESCAM INCORPORATED, a Florida corporation
WESCAM SONOMA INC., a California corporation
WOLF COACH, INC., a Massachusetts corporation

EXHIBIT B

OPINION OF CHRISTOPHER C. CAMBRIA

1. To my knowledge, the Company and each of its subsidiaries have good and marketable title to all property (real and personal) described in the Offering Memorandum as being owned by them, free and clear of all liens, claims, security interests or other encumbrances except such as are described in the Offering Memorandum (or in documents incorporated therein by reference) or, to the extent that any such liens, claims, security interests or other encumbrances would not have a Material Adverse Effect (individually or in the aggregate) and all the material property described in the Offering Memorandum as being held under lease by the Company and its subsidiaries is held by them under valid, subsisting and enforceable leases, with only such exceptions as would not have a Material Adverse Effect (individually or in the aggregate).

2. To my knowledge and except as otherwise disclosed in the Offering Memorandum (or in documents incorporated therein by reference), there are no legal or governmental proceedings pending or threatened, against the Company or any of its subsidiaries or to which the Company or any of its subsidiaries is a party or of which any property or assets of the Company or any of its subsidiaries is the subject which, if determined adversely to the Company or any of its subsidiaries, are reasonably likely to cause a Material Adverse Effect.

3. To my knowledge and except (i) as otherwise disclosed in the Offering Memorandum (or in documents incorporated therein by reference) and (ii) as provided in the Registration Rights Agreement, there are no contracts, agreements or understandings between the Company and any person granting such person the right to require the Company to include such person's securities in the securities registered pursuant to the Exchange Offer Registration Statement or the Shelf Registration Statement.

4. None of the issue and sale of the Notes by the Company and the Guarantees by the Guarantors and the compliance by the Company and the Guarantors, as applicable, with all of the provisions of this Agreement and the consummation of the transactions contemplated hereby and thereby requires any consent, approval, authorization or other order of, or registration or filing with, any federal court, federal regulatory body, federal administrative agency or other federal governmental official having authority over government procurement matters (provided, that the opinion contained in this paragraph (4) may be delivered by other counsel reasonably satisfactory to the Initial Purchasers).

Whenever a statement herein is qualified by "to my knowledge" or a similar phrase, it is intended that I do not have current, actual knowledge of the inaccuracy of such statement; however, except as expressly indicated, I have not undertaken any independent investigation to determine the accuracy of such statement and no inference should be drawn that I have any such knowledge solely from my position with the Company.

I am a member of the Bar of the State of New York, and I do not express any opinion herein concerning any law other than the law of the State of New York, the federal law of the United States, the Delaware Revised Uniform Limited Partnership Act, the Delaware General Corporation Law and the Delaware Limited Liability Company Act.

EXHIBIT C

FORM OF CERTIFICATE FROM
ACQUIRING ACCREDITED INVESTOR

LEHMAN BROTHERS INC.
MORGAN STANLEY & CO. INCORPORATED
BANC OF AMERICA SECURITIES LLC
CREDIT SUISSE FIRST BOSTON LLC
c/o Lehman Brothers Inc.
745 Seventh Avenue, Third Floor
High Yield Capital Markets
New York, New York 10019

Re: L-3 Communications Corporation

Reference is hereby made to (i) the Purchase Agreement, dated May 14, 2003 (the "Purchase Agreement") among L-3 Communications Corporation, as issuer (the "Company"), the Guarantors named on the signature pages thereto and you and (ii) the Indenture to be dated as of May 21, 2003 (the "Indenture") relating to the 6-1/8% Senior Subordinated Notes due 2013, among the Company, the Guarantors named on the signature pages thereto and The Bank of New York, as Trustee. Capitalized terms used but not defined herein shall have the meanings given to them in the Indenture or the Purchase Agreement.

In connection with my proposed purchase of $1,000,000 aggregate principal amount of Series A Notes, I hereby confirm that:

1. I understand that any subsequent transfer of the Series A Notes, or any interest therein is subject to certain restrictions and conditions set forth in the Indenture and the Series A Notes and the undersigned agrees to be bound by, and not to resell, pledge or otherwise transfer the Series A Notes or any interest therein except in compliance with, such restrictions and conditions and the Securities Act of 1933, as amended (the "Securities Act").

2. I understand that the offer and sale of the Series A Notes has not been registered under the Securities Act, and that the Series A Notes and any interest therein may not be offered or sold except as permitted in the following sentence. I agree that if I should sell the Series A Notes or any interest therein, I will do so only (1) (a) to a person who I reasonably believe is a Qualified Institutional Buyer (as defined in Rule 144A under the Act) in a transaction meeting the requirements of Rule 144A, (b) in a transaction meeting the requirements of Rule 144 under the Securities Act, (c) outside the United States to a foreign person in a transaction meeting the requirements of Rule 904 under the Securities Act or (d) in accordance with another exemption from the registration requirements of the Securities Act (and based on an opinion of counsel if the Company so requests), (2) to the Company or (3) pursuant to an effective registration statement and, in each case, in accordance with any applicable securities laws of any state of the United States or any other applicable jurisdiction, and I further agree to provide to any person purchasing a beneficial interest in a Series A Note from me in a transaction meeting the requirements of clauses (a) through (d) above a notice advising such purchaser that resales thereof are restricted as stated herein.

3. I understand that, on any proposed resale of the Series A Notes or beneficial interest therein, I will be required to furnish to the Company such certifications, legal opinions and other information as the Company may reasonably require to confirm that the proposed sale complies with the foregoing restrictions. I further understand that the Series A Notes purchased by me will bear a legend to the foregoing effect.

4. I am an "accredited investor" (as defined in Rule 501(a)(4), (5) or (6) of Regulation D under the Securities Act) and have such knowledge and experience in financial and business matters as to be capable of evaluating the merits and risks of my investment in the Series A Notes and I am able to bear the economic risk of my investment.

5. I am acquiring the Series A Notes or beneficial interest therein purchased by me for my account.

6. I am acquiring the Series A Notes for investment purposes only with no present intention to resell the Series A Notes, and agree not to sell, transfer, assign, pledge or hypothecate any of the Series A Notes for at least three months following the completion of the offering.

You and the Company are entitled to rely upon this letter and are irrevocably authorized to produce this letter or a copy hereof to any interested party in any administrative or legal proceedings or official inquiry with respect to the matters covered hereby.

[Signature Page to Follow]

By:

Name:
Title:

Dated:

STATE OF DELAWARE
SECRETARY OF STATE
DIVISION OF CORPORATIONS
FILED 03:15 PM 03/29/1996
960092927 - 2608614

Exhibit 3.69

CERTIFICATE OF INCORPORATION

OF

BST INC.

1. The name of the Corporation is BST Inc.

2. The address of its registered office is 103 Springer Building, 3411 Silverside Road, Wilmington, County of New Castle, Delaware 19810. The name of its registered agent at such address is Organization Services, Inc.

3. The nature of the business to be conducted or promoted is to engage in any lawful act or activity for which corporations may be organized under the General Corporation Law of Delaware.

4. The total number of shares of stock which the Corporation shall have authority to issue is One Hundred (100) shares of common stock; each such share shall have One Dollar ($1.00) par value.

5. The name and mailing address of each incorporator is as follows:

NAME	ADDRESS
Gilbert B. Warren	103 Springer Building 3411 Silverside Road Wilmington, DE 19810
Cynthia L. Conner	103 Springer Building 3411 Silverside Road Wilmington, DE 19810

6. The corporation is to have perpetual existence.

7. In furtherance and not in limitation of the powers conferred by statute, the Board of Directors is expressly authorized to make, alter or repeal the By-Laws of the Corporation.

8. Meetings of stockholders may be held within or without the State of Delaware as the By-Laws may provide. The books of the Corporation may be kept (subject to any provisions contained in the statutes) outside the State of Delaware at such place or places as may be designated from time to time by the Board of Directors or in the By-Laws of the Corporation. Elections of Directors need not be by written ballot unless the By-Laws of the Corporation shall so provide.

9. The Corporation reserves the right to amend, alter, change or repeal any provision contained in this Certificate of Incorporation, in the manner now or hereinafter prescribed by statute, and all rights conferred upon stockholders herein are granted subject to this reservation.

10. To the fullest extent permitted by the Delaware General Corporation Law as the same exists or may hereafter be amended, a director of this corporation shall not be liable to the corporation or its stockholders for monetary damages for breach of fiduciary duty as a director.

WE THE UNDERSIGNED, being each of the incorporators hereinbefore named, for the purpose of forming a corporation pursuant to the General Corporation Law of the State of Delaware, do make this certificate hereby declaring and certifying that this is our act and deed and the facts herein stated are true, accordingly have hereunto set our hands this 29th day of March, 1996.

/s/ Gilbert B. Warren

Gilbert B. Warren

/s/ Cynthia L. Conner

Cynthia L. Conner

STATE OF DELAWARE
SECRETARY OF STATE
DIVISION OF CORPORATIONS
FILED 03:15 PM 03/29/1996
960092927 - 2608614

CERTIFICATE OF AMENDMENT
OF
CERTIFICATE OF INCORPORATION
OF
BST INC.

BST INC., a corporation duly organized and existing under and by virtue of the General Corporation Law of the State of Delaware, DOES HEREBY CERTIFY THAT:

FIRST: That the Board of Directors of the Corporation, by unanimous written consent of the sole member of the Board of Directors, as filed with the minutes of the Board, approved and adopted on April 30, 1998, the following resolution for amending its Certificate of Incorporation and submitted said amendment to the stockholders of the Corporation for their consideration and approval:

"RESOLVED, that the FIRST Article of the Certificate of Incorporation of the Corporation be amended in its entirety to read as follows:

FIRST: The name of the Corporation is Broadcast Sports Inc."

SECOND: That in lieu of a meeting and vote of stockholders, all the stockholders entitled to vote, have approved and adopted said amendment by unanimous written consent on April 30, 1998, in accordance with the provisions of Section 228 of the General Corporation Law of the State of Delaware.

THIRD: The amendment was duly adopted in accordance with the provisions of Sections 242 and 228 of the General Corporation Law of the State of Delaware.

IN WITNESS WHEREOF, BST Inc. has caused this certificate to be executed by its Secretary this 4th day of May, 1998.

BST INC.

By: /s/ Bruce Latimer

Its: Secretary

To the Delaware Secretary of State
Division of Corporations
Dover, Delaware

Dear Sir/Madam:

I, Tom Storli, a duly authorized officer of Broadcast Sports Corp., a Delaware corporation, hereby authorize on behalf of Broadcast Sports Corp. the use of the name "Broadcast Sports Inc." in Delaware by BST Inc., effective immediately.

Broadcast Sports Corp.

By: /s/ Tom Storli

Its: President

BST INC.

BY-LAWS

ARTICLE I

OFFICES

Section 1. Registered Office. The registered office of the Corporation shall be in the City of Wilmington, County of New Castle, State of Delaware.

Section 2. Other Offices. The Corporation may also have offices at such other places both within and without the State of Delaware as the board of directors may from time to time determine or the business of the Corporation may require.

ARTICLE II

MEETINGS OF STOCKHOLDERS

Section 1. Time and Place of Meetings. All meetings of the stockholders for the election of directors or for any other purpose shall be held at such time and place, within or without the State of Delaware, as shall be stated in the notice of the meeting or in a duly executed waiver of notice thereof.

Section 2. Annual Meetings. Annual meetings of stockholders shall be held at such date and time as shall be designated from time to time by the board of directors and stated in the notice of the meeting, at which meeting, the stockholders shall elect by a plurality vote or by written ballot a board of directors and transact such other business as may properly be brought before the meeting.

Section 3. Notice of Annual Meetings. Written notice of the annual meeting stating the place, date and hour of the meeting shall be given to each stockholder entitled to vote at such meeting not less than ten nor more than sixty days before the date of the meeting.

Section 4. Special Meetings. Special meetings of the stockholders, for any purpose or purposes, unless otherwise prescribed by statute or by the Certificate of Incorporation, may be called by the president and shall be called by the president or secretary at the request in writing of a majority of the board of directors, or at the request in writing of stockholders owning a majority in amount of the entire capital stock of the Corporation issued and outstanding and entitled to vote. Such request shall state the purpose or purposes of the proposed meeting.

Section 5. Notice of Special Meetings. Written notice of a special meeting stating the place, date and hour of the meeting and the purpose or purposes for which the meeting is called, shall be given not less than ten nor more than sixty days before the date of the meeting, to each stockholder entitled to vote at such meeting.

Section 6. Quorum. The holders of a majority of the stock issued and outstanding and entitled to vote thereat, present in person or represented by proxy, shall constitute a quorum at all meetings of the stockholders for the transaction of business except as otherwise provided by statute or by the Certificate of Incorporation. If, however, such quorum shall not be present or represented at any meeting of the stockholders, the stockholders entitled to vote thereat, present in person or represented by proxy, shall have power to adjourn the meeting from time to time, without notice other than announcement at the meeting, until a quorum shall be present or represented.

Section 7. Action by Stockholders. When a quorum is present at any meeting, the vote of the holders of a majority of the stock having voting power present in person or represented by

proxy shall decide any question brought before such meeting, unless the question is one upon which by express provision of the statutes or of the Certificates of Incorporation, a different vote is required in which case such express provision shall govern and control the decision of such question.

Section 8. Voting. Each stockholder shall at every meeting of the stockholders be entitled to one vote in person or by proxy or each share of the capital stock having voting power held by such stockholder. Section 9. Written Action. Any action required to be taken at any annual or special meeting of stockholders of the Corporation, or any action which may be taken at any annual or special meeting of such stockholders, may be taken without a meeting, without prior notice and without a vote, if a consent in writing, setting forth the action so taken, shall be signed by the holders of outstanding stock having not less than the minimum number of votes that would be necessary to authorize or take such action at a meeting at which all shares entitled to vote thereon were present and voted.

ARTICLE III

DIRECTORS

Section 1. Number and Term. The board of directors shall consist of one or more members. The first board shall consist of three directors. Thereafter, within the limits above specified, the number of directors shall be determined by resolution of the board of directors or by the stockholders at the annual meeting or a special meeting. The directors shall be elected at the annual meeting of the stockholders, except as provided in Section 2 of this Article, and each director elected shall hold office until his or her successor is elected and qualified. Directors need not be stockholders.

Section 2. Vacancies and New Directorships. Vacancies and newly created directorships resulting from any increase in the authorized number of directors may be filled by a majority of the directors then in office, though less than a quorum, or by a sole remaining director, and the directors so chosen shall hold office until the next annual election and until their successors are duly elected and shall qualify, unless sooner displaced. If there are no directors in office, then an election of directors may be held in the manner provided by statute.

Section 3. Powers. The business and affairs of the Corporation shall be managed by or under the direction of its board of directors which may exercise all such powers of the Corporation and do all such lawful acts and things as are not by statute or by the Certificate of Incorporation or by these By-laws directed or required to be exercised or done by the stockholders.

Section 4. Place of Meetings. The board of directors of the Corporation may hold meetings, both regular and special, either within or without the State of Delaware.

Section 5. Regular Meetings. Regular meetings of the board of directors may be held without notice at such time and at such place as shall from time to time be determined by the board.

Section 6. Special Meetings. Special meetings of the board may be called by the chairman of the board or by the President on one day's notice to each director, either personally or by mail or by telegram; special meetings of the board shall be called by the president or secretary in like manner and on like notice on the written request of two directors.

Section 7. Quorum. At all meetings of the board, a majority of the directors then in office shall constitute a quorum for transaction of business, and the act of a majority of the directors present at any meeting at which there is a quorum shall be the act of the board of

directors, except as may be otherwise specifically provided by statute or by the Certificate of Incorporation. If a quorum shall not be present at any meeting of the board of directors, the directors present thereat may adjourn the meeting from time to time, without notice other than announcement at the meeting, until a quorum shall be present.

Section 8. Written Action. Unless otherwise restricted by the Certificate of Incorporation or these By-laws, any action required or permitted to be taken at any meeting of the board of directors or of any committee thereof may be taken without a meeting, if all members of the board or committee, as the case may be, consent thereto in writing, and the writing or writings are filed with the minutes or proceedings of the board or committee.

Section 9. Participation in Meetings by Conference Telephone. Unless otherwise restricted by the certificate or incorporation or these By-laws, members of the board of directors, or any committee designated by the board of directors, may participate in a meeting of the board of directors, or any committee, by means of conference telephone or similar communications equipment by means of which all persons participating in the meeting can hear each other, and such participation in a meeting shall constitute presence in person at the meeting.

Section 10. Committees. The board of directors may from time to time, by resolution passed by a majority of the whole board of directors, designate one or more committees, each committee to consist of one or more of the directors of the Corporation. The board of directors may designate one or more directors as alternate members of any committee, who may replace any absent or disqualified member at any meeting of the committee, and in the absence or disqualification of a member of a committee, the member or members thereof present at any meeting and not disqualified from voting, whether or not he or she or they constitute a quorum, may unanimously appoint another member of the board of directors to act at the meeting in the

place of any such absent or disqualified member. Any such committee, to the extent provided in the resolution of the board of directors, shall have and may exercise all the powers and authority of the board of directors in the management of the business and affairs of the Corporation, and may authorize the seal of the Corporation to be affixed to all papers which may require it; but no such committee shall have the power or authority in reference to amending the Certificate of Incorporation (except that a committee may, to the extent authorized in the resolution or resolutions providing for the issuance of shares of stock adopted by the board of directors as provided in subsection (a) of Section 151 of the General Corporation Law of the State of Delaware, fix the designation and any of the preferences or rights of such shares relating to dividends, redemption, dissolution, any distribution of assets of the Corporation or the conversion into, or the exchange of such shares for, shares of any other class or classes or any other series of the same or any other class or classes of stock of the Corporation), adopting an agreement of merger or consolidation under Section 251 or 252 of the General Corporation Law of the State of Delaware, recommending to the stockholders the sale, lease or exchange of all or substantially all of the Corporation's property and assets, recommending to the stockholders a dissolution of the Corporation or a revocation of a dissolution, or amending the By-laws of the Corporation; and, unless the resolution designating such committee expressly so provides, no such committee shall have the power or authority to declare a dividend, to authorize the issuance of stock or to adopt a certificate of ownership and merger pursuant to Section 253 of the General Corporation Law of the State of Delaware.

Unless otherwise ordered by the board of directors, a majority of the members of any committee appointed by the board of directors pursuant to this section shall constitute a quorum at any meeting thereof, and the act of a majority of the members present at a meeting at which a

quorum is present shall be the act of such committee. Any such committee shall prescribe its own rules for calling and holding meetings and its method of procedure, subject to any rules prescribed by the board of directors, and shall keep a written record of all action taken by it and report the same to the board of directors when required.

ARTICLE IV

NOTICES

Section 1. Generally. Whenever, under the provisions of the statutes or of the Certificate of Incorporation or of these By-laws, notice is required to be given to any director or stockholder, it shall not be construed to mean personal notice, but such notice may be given in writing, by mail, addressed to such director or stockholder, at his or her address as it appears on the records of the Corporation, with postage thereon prepaid, and such notice shall be deemed to be given at the time when the same shall be deposited in the United States mail. Notice to directors may also be given by telegram or telephone.

Section 2. Waiver. Whenever any notice is required to be given under the provisions of the statutes or of the Certificate of Incorporation or of these By-laws, a waiver thereof in writing, signed by the person or persons entitled to said notice, whether before or after the time stated therein, shall be deemed equivalent thereto.

ARTICLE V

OFFICERS

Section 1. Generally. The officers of the Corporation shall be chosen by the board of directors and shall be a president, a secretary and a treasurer. The board of directors may also choose a chairman of the board of directors, a vice chairman of the board of directors, one or

more vice-presidents, and one or more assistant secretaries and assistant treasurers. Any number of offices may be held by the same person, unless the Certificate of Incorporation or these By-laws otherwise provide.

Section 2. Compensation. The compensation of all officers and agents of the Corporation who are also directors of the Corporation shall be fixed by the board of directors. The board of directors may delegate the power to fix the compensation of all other officers and agents of the Corporation to an officer of the Corporation.

Section 3. Succession. The officers of the Corporation shall hold office until their successors are chosen and qualified. Any officer elected or appointed by the board of directors may be removed at any time by the affirmative vote of a majority of the board of directors. Any vacancy occurring in any office of the Corporation shall be filled by the board of directors.

Section 4. Authorities and Duties. The officers of the Corporation shall have such authority and shall perform such duties as are customarily incident to their respective offices, or as may be specified from time to time by the directors regardless of whether such authority and duties are customarily incident to such office.

ARTICLE VI

CERTIFICATES OF STOCK

Section 1. Certificates. Every holder of stock in the Corporation shall be entitled to have a certificate, signed by, or in the name of the Corporation by the president or vice-president and the secretary or an assistant secretary of the Corporation, certifying the number of shares owned by him in the Corporation.

Section 2. Transfer. Upon surrender to the Corporation or the transfer agent of the Corporation of a certificate for shares duly endorsed or accompanied by proper evidence of

succession, assignation or authority to transfer, it shall be the duty of the Corporation to, or to cause its transfer agent to, issue a new certificate to the person entitled thereto, cancel the old certificate and record the transaction upon its books.

Section 3. Lost, Stolen or Destroyed Certificates. In the event of the loss, theft or destruction of any certificate for shares, another may be issued in its place pursuant to such requirements as the board of directors may establish concerning proof of such loss, theft or destruction and concerning the giving of a satisfactory bond or bonds of indemnity.

ARTICLE VII

INDEMNIFICATION OF DIRECTORS AND OFFICERS

Each person who is or was a director, officer, employee or agent of the Corporation, or is or was serving at the request of the Corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise (including the heirs, executors, administrators or estate of such person) shall be indemnified by the Corporation to the full extent permitted or authorized by the General Corporation Law of the State of Delaware. The Corporation may, but shall not be obligated to, maintain insurance, at its expense, for its benefit in respect of such indemnification and that of any such person whether or not the Corporation would otherwise have the power to indemnify such person.

ARTICLE VIII

GENERAL PROVISIONS

Section 1. Dividends upon the capital stock of the Corporation, subject to the provisions of the Certificate of Incorporation, if any, may be declared by the board of directors at any

regular or special meeting, pursuant to law. Dividends may be paid in cash, in property, or in shares of the capital stock, subject to the provisions of the Certificate of Incorporation.

Section 2. Before payment of any dividend, there may be set aside out of any funds of the Corporation available for dividends such sum or sums as the directors from time to time, in their absolute discretion, think proper as a reserve or reserves to meet contingencies, or for equalizing dividends, or for repairing or maintaining any property of the Corporation, or for such other purpose as the directors shall think conducive to the interest of the Corporation, and the directors may modify or abolish any such reserve in the manner in which it was created.

Section 3. All checks or demands for money and notes of the Corporation shall be signed by such officer or officers or such other person or persons as the board of directors may from time to time designate.

Section 4. The fiscal year of the Corporation shall be fixed by resolution of the board of directors.

Section 5. The board of directors may adopt a corporate seal and use the same by causing it or a facsimile thereof to be impressed or affixed or reproduced or otherwise.

ARTICLE IX

AMENDMENTS

These By-laws may be altered, amended or repealed or new By-laws may be adopted by the stockholders or by the board of directors.

Exhibit 3.71

DELAWARE

The First State

I, HARRIET SMITH WINDSOR, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY THE ATTACHED ARE TRUE AND CORRECT COPIES OF ALL DOCUMENTS ON FILE OF "GOODRICH AEROSPACE COMPONENT OVERHAUL & REPAIR, INC." AS RECEIVED AND FILED IN THIS OFFICE.

THE FOLLOWING DOCUMENTS HAVE BEEN CERTIFIED:

CERTIFICATE OF INCORPORATION, FILED THE TWENTY-FIRST DAY OF MAY, A.D. 1986, AT 10 O'CLOCK A.M.

CERTIFICATE OF AMENDMENT, CHANGING ITS NAME FROM "CASTLEBERRY INSTRUMENTS & AVIONICS, INC." TO "BFGOODRICH AEROSPACE COMPONENT OVERHAUL & REPAIR, INC.", FILED THE TWENTY-SEVENTH DAY OF FEBRUARY, A.D. 1992, AT 10 O'CLOCK A.M.

AND I DO HEREBY FURTHER CERTIFY THAT THE EFFECTIVE DATE OF THE AFORESAID CERTIFICATE OF AMENDMENT IS THE TWENTY-EIGHTH DAY OF FEBRUARY, A.D. 1992.

CERTIFICATE OF AMENDMENT, CHANGING ITS NAME FROM "BFGOODRICH AEROSPACE COMPONENT OVERHAUL & REPAIR, INC." TO "GOODRICH AEROSPACE COMPONENT OVERHAUL & REPAIR, INC.", FILED THE TWENTY-THIRD DAY OF MAY, A.D. 2001, AT 2:30 O'CLOCK P.M.

AND I DO HEREBY FURTHER CERTIFY THAT THE AFORESAID CERTIFICATES ARE THE ONLY CERTIFICATES ON RECORD OF THE AFORESAID CORPORATION.

/s/ Harriet Smith Windsor

Harriet Smith Windsor, Secretary of State

20991677 8100H AUTHENTICATION: 2410806

030305650 DATE: 05-12-03

CERTIFICATE OF INCORPORATION

OF

CASTLEBERRY INSTRUMENTS & AVIONICS, INC.

FIRST: The name of the corporation is Castleberry Instruments & Avionics, Inc.

SECOND: The address of its registered office in the State of Delaware is Corporation Trust Center, 1209 Orange Street, in the City of Wilmington, County of New Castle. The name of its registered agent at such address is The Corporation Trust Company.

THIRD: The nature of the business or purposes to be conducted or promoted is to engage in any lawful act or activity for which corporations may be organized under the General Corporation Law of Delaware.

FOURTH: The total number of shares of stock which the corporation shall have authority to issue is one thousand (1,000) and the par value of each of such shares is one dollar ($1.00) amounting in aggregate to one thousand dollars ($1,000.00).

FIFTH: The name and mailing address of the incorporator of the Corporation is Nicholas J. Calise, 500 South Main Street, Akron, Ohio 44318.

SIXTH: The corporation is to have perpetual existence.

SEVENTH: In furtherance and not in limitation of the powers conferred by statute, the board of directors is expressly authorized to make, alter or repeal the by-laws of the corporation.

EIGHTH: Elections of directors need not be by written ballot unless the by-laws of the corporation shall so provide.

Meetings of stockholders may be held within or without the State of Delaware, as the by-laws may provide. The books of the corporation may be kept (subject to any provision contained in the statutes) outside the State of Delaware at such place or places as may be designated from time to time by the board of directors or in the by-laws of the corporation.

Whenever a compromise or arrangement is proposed between this corporation and its creditors or any class of them and/or between this corporation and its stockholders or any class of them, any court of equitable jurisdiction within the State of Delaware may, on the application in a summary way of this corporation or of any creditor or stockholder thereof or on the application of any receiver or receivers appointed for this corporation under the provisions of Section 291 of Title 8 of the Delaware Code or on the application of trustees in dissolution or of any receiver or receivers appointed for this corporation under the provisions of Section 279 of Title 8 of the Delaware Code order a meeting of the creditors or class of creditors, and/or of the stockholders or class of stockholders of this corporation, as the case may be, to be summoned in such manner as the said court directs. If a majority in number representing three-fourths in value of the creditors or class of creditors, and/or of the stockholders or class of stockholders of this

corporation, as the case may be, agree to any compromise or arrangement and to any reorganization of this corporation as consequence of such compromise or arrangement, the said compromise or arrangement and the said reorganization shall, if sanctioned by the court to which the said application has been made, be binding on all the creditors or class of creditors, and/or on all the stockholders or class of stockholders, of this corporation, as the case may be, and also on this corporation.

NINTH: The corporation reserves the right to amend, alter, change or repeal any provision contained in this certificate of incorporation, in the manner now or hereafter prescribed by statute, and all rights conferred upon stockholders herein are granted subject to this reservation.

THE UNDERSIGNED, being the incorporator hereinbefore named, for the purpose of forming a corporation pursuant to the General Corporation Law of the State of Delaware, do make this certificate, hereby declaring and certifying that this is my act and deed and the facts herein stated are true, and accordingly have hereunto set my hand this 19th day of May, 1986.

/s/ Nicholas J. Calise

Nicholas J. Calise, Incorporator

CERTIFICATE OF AMENDMENT

OF

CERTIFICATE OF INCORPORATION

CASTLEBERRY INSTRUMENTS & AVIONICS, INC.

Castleberry Instruments & Avionics, Inc., a corporation organized and existing under and by virtue of the General Corporation Law of the State of Delaware,

DOES HEREBY CERTIFY:

FIRST: That the Board of Directors of said corporation by the unanimous written consent of its members, filed with the minutes of the Board, adopted a resolution proposing and declaring advisable the following amendment to the Certificate of Incorporation of said corporation:

RESOLVED, that the Certificate of Incorporation of Castleberry Instruments & Avionics, Inc. be amended by changing the FIRST Article thereof, effective February 28, 1992, so that, as amended, said Article shall be and read as follows:

FIRST: The name of the corporation is BFGoodrich Aerospace Component Overhaul & Repair, Inc.

SECOND: That in lieu of a meeting and vote of stockholders, the stockholders have given unanimous written consent to said amendment in accordance with the provisions of Section 228 of the General Corporation Law of the State of Delaware.

THIRD: That the aforesaid amendment was duly adopted in accordance with the applicable provisions of Sections 242 and 228 of the General Corporation Law of the State of Delaware.

FOURTH: The effective date of the aforesaid amendment shall be February 28, 1992.

IN WITNESS WHEREOF, said Castleberry Instruments & Avionics, Inc. has caused this certificate to be signed by George K. Sherwood, its Vice President and attested by Nicholas J. Calise, its Secretary this 24th of February, 1992.

/s/ George K. Sherwood

George K. Sherwood, Vice President

ATTEST:

By /s/ Nicholas J. Calise

Nicholas J. Calise, Secretary

CERTIFICATE OF AMENDMENT
OF
CERTIFICATE OF INCORPORATION

BFGoodrich Aerospace Component Overhaul & Repair, Inc., a corporation organized and existing under the laws of the State of Delaware (the "Company"), hereby certifies that:

1. Article 1 of the Company's Certificate of Incorporation is hereby amended to read as follows:

"1. The name of this corporation is Goodrich Aerospace Component Overhaul & Repair, Inc."

2. In lieu of a meeting and vote of shareholders, the shareholders have given unanimous written consent to such amendment in accordance with the provisions of Section 228 of the General Corporation Law of the State of Delaware.

3. Such amendment was duly adopted in accordance with the applicable provisions of Sections 242 and 228 of the General Corporation Law of the State of Delaware.

IN WITNESS WHEREOF, the Company has caused this certificate to be signed by its Secretary this 14th day of May, 2001.

BFGOODRICH AEROSPACE COMPONENT
OVERHAUL & REPAIR, INC.

BY:/s/ Kenneth L. Wagner

Kenneth L. Wagner
Secretary

ATTEST:

/s/ Jennie M. Raine
- ---
Jennie M. Raine
Assistant Secretary

Exhibit 3.72

GOODRICH AEROSPACE COMPONENT
OVERHAUL & REPAIR, INC.

* * * * * *

BY - LAWS

* * * * * *

ARTICLE I
OFFICES

Section 1. The registered office shall be in the City of Wilmington, County of New Castle, State of Delaware.

Section 2. The corporation may also have offices at such other places both within and without the State of Delaware as the board of directors may from time to time determine or the business of the corporation may require.

ARTICLE II
MEETINGS OF STOCKHOLDERS

Section 1. All meetings of the stockholders shall be held at such place within or without the State of Delaware as may be fixed from time to time by the board of directors and stated in the notice of the meeting.

Section 2. The annual meeting of shareholders shall be held at such time and place and on such date as is set by the Board of Directors or at such time and place as 100% of the shareholders may attend. Unless otherwise set by the Board of Directors, the Annual Meeting of Shareholders shall be held on the first Monday in September of each year at 10:00 a.m., or if such day is a legal holiday, the annual meeting shall be held on the next business day thereafter, for the purpose of electing directors and for the transaction of such other business as may be brought before the meeting. If such annual meeting is not held on the designated date, the directors shall cause the meeting to be held as soon after such date as is convenient.

Section 3. Written notice of the annual meeting stating the place, date and hour of the meeting shall be given to each stockholder entitled to vote at such meeting not less than ten nor more than sixty days before the date of the meeting.

Section 4. The officer who has charge of the stock ledger of the corporation shall prepare and make, at least ten days before every meeting of stockholders, a complete list of the stockholders entitled to vote at the meeting, arranged in alphabetical order, and showing the address of each stockholder and the number of shares registered in the name of each stockholder. Such list shall be open to the examination of any stockholder, for any purpose germane to the meeting, during ordinary business hours, for a period of at least ten days prior to the meeting, either at a place within the city where the meeting is to be held, which place shall be specified in the notice of the meeting, or, if not so specified, at the place where the meeting is to be held. The list shall also be produced and kept at the time and place of the meeting during the whole time thereof, and may be inspected by any stockholder who is present.

Section 5. Special meetings of the stockholders, for any purpose or purposes, unless otherwise prescribed by statute or by the certificate of incorporation, may be called by the chairman of the board or the president and shall be called by the president or secretary at the request in writing of a majority of the board of directors, or at the request in writing of stockholders owning a majority in amount of the entire capital stock of the corporation issued and outstanding and entitled to vote. Such request shall state the purpose or purposes of the proposed meeting.

Section 6. Written notice of a special meeting stating the place, date and hour of the meeting and the purpose or purposes for which the meeting is called, shall be given not less than ten nor more than sixty days before the date of the meeting, to each stockholder entitled to vote at such meeting.

Section 7. Business transacted at any special meeting of stockholders shall be limited to the purposes stated in the notice.

Section 8. The holders of record of a majority of the stock issued and outstanding and entitled to vote thereat, present in person or represented by proxy, shall constitute a quorum at all meetings of the stockholders for the transaction of business except as otherwise provided by statute or by the certificate of incorporation. If, however, such quorum shall not be present or represented at any meeting of the stockholders, the stockholders entitled to vote thereat, present in person or represented by proxy, shall have power to adjourn the meeting from time to time, without notice other than announcement at the meeting, until a quorum shall be present or represented. At such adjourned meeting at which a quorum shall be present or represented any business may be transacted which might have been transacted at the meeting as originally notified. If the adjournment is for more than thirty days, or if after the adjournment a new record date is fixed for the adjourned meeting, a notice of the adjourned meeting shall be given to each stockholder of record entitled to vote at the meeting.

Section 9. When a quorum is present at any meeting, the vote of the holders of a majority of the stock having voting power present in person or represented by proxy shall decide any question brought before such meeting, unless the question is one upon which by express provision of the statutes or of the certificate of incorporation, a different vote is required in which case such express provision shall govern and control the decision of such question.

Section 10. Unless otherwise provided in the certificate of incorporation each stockholder shall at every meeting of the stockholders be entitled to one vote in person or by proxy for each share of the capital stock having voting power held by such stockholder, but no proxy shall be voted on after three years from its date, unless the proxy provides for a longer period.

Section 11. Unless otherwise provided in the certificate of incorporation, any action required to be taken at any annual or special meeting of stockholders of the corporation, or any action which may be taken at any annual or special meeting of such stockholders, may be taken without a meeting, without prior notice and without a vote, if a consent in writing, setting forth the action so taken, shall be signed by the holders of outstanding stock having not less than the minimum number of votes that would be necessary to authorize or take such action at a meeting at which all shares entitled to vote thereon were present and voted. Prompt notice of the taking of the corporate action without a meeting by less than unanimous written consent shall be given to those stockholders who have not consented in writing.

ARTICLE III
DIRECTORS

Section 1. The number of directors which shall constitute the whole board shall be not less than three nor more than fifteen. The first board shall consist of the number of directors elected at the initial meeting of the stockholders. Thereafter, within the limits above specified, the number of directors shall be determined by resolution of the board of directors or by the stockholders at the annual meeting. The directors shall be elected at the annual meeting of the stockholders, except as provided in Section 2 of this Article, and each director elected shall hold office until his successor is elected and qualified. Directors need not be stockholders.

Section 2. Vacancies and newly created directorships resulting from any increase in the authorized number of directors may be filled by a majority of the directors then in office, though less than a quorum, or by a sole remaining director, and the directors so chosen shall hold office until the next annual election and until their successors are duly elected and shall qualify, unless sooner displaced. If there are no directors in office, then an election of directors may be held in the manner provided by statute.

Section 3. The business of the corporation shall be managed by or under the direction of its board of directors which may exercise all such powers of the corporation and do all such lawful acts and things as are not by statute or by the certificate of incorporation or by these by-laws directed or required to be exercised or done by the stockholders.

MEETINGS OF THE BOARD OF DIRECTORS

Section 4. The board of directors of the corporation may hold meetings, both regular and special, either within or without the State of Delaware.

Section 5. Regular meetings of the board of directors may be held without notice at such time and at such place as shall from time to time be determined by the board.

Section 6. Special meetings of the board of directors may be called by the chairman, president or secretary on not less than three hours' notice to each director, by oral, written or electronic communication; special meetings shall be called by the chairman, president or secretary in like manner and on like notice on the written request of two directors. Any oral notice may be given to each member of the board of directors at his or her office or his or her address as it appears on the books of the corporation, whether or not the director is present personally to receive it. Any written or electronic notice shall be addressed to each member of the board of directors at his or her office or his or her address as it appears on the books of the corporation.

Section 7. At all meetings of the board, one-third of the directors shall constitute a quorum for the transaction of business and the act of a majority of the directors present at any meeting at which there is a quorum shall be the act of the board of directors, except as may be otherwise specifically provided by statute or by the certificate of incorporation. If a quorum shall not be present at any meeting of the board of directors, the directors present thereat may adjourn the meeting from time to time, without notice other than announcement at the meeting, until a quorum shall be present.

Section 8. Unless otherwise restricted by the certificate of incorporation or these by-laws, any action required or permitted to be taken at any meeting of the board of directors or of any committee thereof may be taken without a meeting, if all members of the board or committee, as the case may be, consent thereto in writing, and the writing or writings are filed with the minutes of proceedings of the board or committee.

Section 9. Unless otherwise restricted by the certificate of incorporation or these by-laws, members of the board of directors, or any committee designated by the board of directors, may participate in a meeting of the board of directors, or any committee, by means of conference telephone or similar communications equipment by means of which all persons participating in the meeting can hear each other, and such participation in a meeting shall constitute presence in person at the meeting.

COMMITTEES OF DIRECTORS

Section 10. The board of directors may, by resolution passed by a majority of the whole board, designate one or more committees, each committee to consist of one or more of the directors of the corporation. The board may designate one or more directors as alternate members of any committee, who may replace any absent or disqualified member at any meeting of the committee.

In the absence or disqualification of a member of a committee, the member or members thereof present at any meeting and not disqualified from voting, whether or not he or they constitute a quorum, may unanimously appoint another member of the board of directors to act at the meeting in the place of any such absent or disqualified member.

Any such committee, to the extent provided in the resolution of the board of directors, shall have and may exercise all the powers and authority of the board of directors in the management of the business and affairs of the corporation, and may authorize the seal of the corporation to be affixed to all papers which may require it; but no such committee shall have the power or authority in reference to amending the certificate of incorporation, adopting an agreement of merger or consolidation, recommending to the stockholders the sale, lease or exchange of all or substantially all of the corporation's property and assets, recommending to the stockholders a dissolution of the corporation or a revocation of a dissolution, or amending the by-laws of the corporation; and, unless the resolution or the certificate of incorporation expressly so provide, no such committee shall have the power or authority to declare a dividend or to authorize the issuance of stock. Such committee or committees shall have such name or names as may be determined from time to time by resolution adopted by the board of directors.

Section 11. Each committee shall keep regular minutes of its meetings and report the same to the board of directors when required.

COMPENSATION OF DIRECTORS

Section 12. Unless otherwise restricted by the certificate of incorporation or these by-laws, the board of directors shall have the authority to fix the compensation of directors. The directors may be paid their expenses, if any, of attendance at each meeting of the board of directors and may be paid a fixed sum for attendance at each meeting of the board of directors or a stated salary as director. No such payment shall preclude any director from serving the corporation in any other capacity and receiving compensation therefor. Members of special or standing committees may be allowed like compensation for attending committee meetings.

REMOVAL OF DIRECTORS

Section 13. Unless otherwise restricted by the certificate of incorporation or by-laws, any director or the entire board of directors may be removed, with or without cause, by the holders of a majority of shares entitled to vote at an election of directors.

ARTICLE IV
NOTICES

Section 1. Whenever, under the provisions of the statutes or of the certificate of incorporation or of these by-laws, notice is required to be given to any director or stockholder, it shall not be construed to mean personal notice, but such notice may be given in writing, by mail, addressed to such director or stockholder, at his address as it appears on the records of the corporation, with postage thereon prepaid, and such notice shall be deemed to be given at the time when the same shall be deposited in the United States mail. Notice may also be given orally by telephone or in person, or by written communication by telegraph, telex, telecopy, courier delivery, facsimile transmission, electronic mail or other transmission, or other written

notification and such notice shall be deemed to be given at the time when the same shall be communicated or transmitted to the director or stockholder, or delivered to the company which will make such delivery or transmission.

Section 2. Whenever any notice is required to be given under the provisions of the statutes or of the certificate of incorporation or of these by-laws, a waiver thereof in writing, signed by the person or persons entitled to said notice, whether before or after the time stated therein, shall be deemed equivalent thereto.

ARTICLE V
OFFICERS

Section 1. The officers of the corporation shall be chosen by the board of directors and shall be a president, a secretary and a treasurer. The board of directors may also choose a chairman of the board, a chief executive officer, a chief operating officer, a chief financial officer, a controller, one or more vice chairmen of the board, executive vice presidents, senior vice presidents, vice-presidents, assistant secretaries and assistant treasurers. Any number of offices may be held by the same person, unless the certificate of incorporation or these by-laws otherwise provide.

Section 2. The board of directors at its first meeting after each annual meeting of stockholders shall determine the officers of the corporation.

Section 3. The board of directors may appoint such other officers and agents as it shall deem necessary who shall hold their offices for such terms and shall exercise such powers and perform such duties as shall be determined from time to time by the board.

Section 4. The salaries of all officers and agents of the corporation shall be fixed by the board of directors.

Section 5. The officers of the corporation shall hold office until their successors are chosen and qualify. Any officer elected or appointed by the board of directors may be removed at any time by the affirmative vote of a majority of the board of directors. Any vacancy occurring in any office of the corporation shall be filled by the board of directors.

THE CHIEF EXECUTIVE OFFICER

Section 6. The chief executive officer of the corporation shall preside at all meetings of the stockholders and the board of directors, shall have general and active management of the business of the corporation, subject to the board of directors, and shall see that all orders and resolutions of the board of directors are carried into effect. He or she may appoint and discharge employees and agents and perform such other duties as are incident to his or her office or delegated to him or her by the board of directors or which are or may at any time be authorized or required by law.

THE CHIEF OPERATING OFFICER

Section 7. The chief operating officer, if he or she is not also the chief executive officer, shall act as the chief executive officer in the absence or disability of the chief executive officer, and shall have such other duties as are prescribed by the board of directors or the chief executive officer.

THE PRESIDENT

Section 8. The president, if he or she is not also the chief executive officer or chief operating officer, shall act as the chief executive officer in the absence or disability of the chief executive officer and chief operating officer, and shall have such other duties as are prescribed by the board of directors or the chief executive officer.

THE VICE-PRESIDENTS

Section 9. In the absence of the president or in the event of his inability or refusal to act, the vice-president if there be one (or in the event there be more than one vice-president, the vice-presidents in the order designated by the directors, or in the absence of any designation, then in the order of their election) shall perform the duties of the president, and when so acting, shall have all the powers of and be subject to all the restrictions upon the president. The vice-presidents shall perform such other duties and have such other powers as the board of directors or the chief executive officer may from time to time prescribe.

THE SECRETARY AND ASSISTANT SECRETARY

Section 10. The secretary shall attend all meetings of the board of directors and all meetings of the stockholders and record all the proceedings of the meetings of the corporation and of the board of directors in a book to be kept for that purpose and shall perform like duties for the standing committees when required. He shall give, or cause to be given, notice of all meetings of the stockholders and special meetings of the board of directors, and shall perform such other duties as may be prescribed by the board of directors or chief executive officer, under whose supervision he shall be. He shall have custody of the corporate seal of the corporation and he, or an assistant secretary, shall have authority to affix the same to any instrument requiring it and when so affixed, it may be attested by his signature or by the signature of such assistant secretary. Any other officer also shall have authority to affix the seal of the corporation and to attest the affixing by his signature.

Section 11. The assistant secretary, if there be one, or if there be more than one, the assistant secretaries in the order determined by the board of directors (or if there be no such determination, then in the order of their election) shall, in the absence of the secretary or in the event of his inability or refusal to act, perform the duties and exercise the powers of the secretary and shall perform such other duties and have such other powers as the board of directors may from time to time prescribe.

THE TREASURER AND ASSISTANT TREASURERS

Section 12. The treasurer shall have the custody of the corporate funds and securities and shall keep full and accurate accounts of receipts and disbursements in books belonging to the corporation and shall deposit all monies and other valuable effects in the name and to the credit of the corporation in such depositories as may be designated by the board of directors.

Section 13. He shall disburse the funds of the corporation as may be ordered by the board of directors or the chief executive officer, taking proper vouchers for such disbursements, and shall render to the chief executive officer and the board of directors, at its regular meetings, or when the board of directors so requires, an account of all his transactions as treasurer and of the financial condition of the corporation.

Section 14. The assistant treasurer if there be one, or if there shall be more than one, the assistant treasurers in the order determined by the board of directors (or if there be no such determination, then in the order of their election, shall, in the absence of the treasurer or in the event of his inability or refusal to act, perform the duties and exercise the powers of the treasurer and shall perform such other duties and have such other powers as the board of directors may from time to time prescribe.

ARTICLE VI
CERTIFICATE OF STOCK

Section 1. Every holder of stock in the corporation shall be entitled to have a certificate, signed by, or in the name of the corporation by, the chairman or vice-chairman of the board of directors, or the president or a vice-president and the treasurer or an assistant treasurer, or the secretary or an assistant secretary of the corporation, certifying the number of shares owned by him in the corporation.

If the corporation shall be authorized to issue more than one class of stock or more than one series of any class, the powers, designations, preferences and relative, participating, optional or other special rights of each class of stock or series thereof and the qualification, limitations or restrictions of such preferences and/or rights shall be set forth in full or summarized on the face or back of the certificate which the corporation shall issue to represent such class or series of stock, provided that, except as otherwise provided in section 202 of the General Corporation Law of Delaware, in lieu of the foregoing requirements, there may be set forth on the face or back of the certificate which the corporation shall issue to represent such class or series of stock, a statement that the corporation will furnish without charge to each stockholder who so requests the powers, designations, preferences and relative, participating, optional or other special rights of each class of stock or series thereof and the qualifications, limitations or restrictions of such preferences and/or rights.

Section 2. Any of or all the signatures on the certificate may be facsimile. In case any officer, transfer agent or registrar who has signed or whose facsimile signature has been

placed upon a certificate shall have ceased to be such officer, transfer agent or registrar before such certificate is issued, it may be issued by the corporation with the same effect as if he were such officer, transfer agent or registrar at the date of issue.

LOST CERTIFICATES

Section 3. The board of directors may direct a new certificate or certificates to be issued in place of any certificate or certificates theretofore issued by the corporation alleged to have been lost, stolen or destroyed, upon the making of an affidavit of that fact by the person claiming the certificate of stock to be lost, stolen or destroyed. When authorizing such issue of a new certificate or certificates, the board of directors may, in its discretion and as a condition precedent to the issuance thereof, require the owner of such lost, stolen or destroyed certificate or certificates, or his legal representative, to advertise the same in such manner as it shall require and/or to give the corporation a bond in such sum as it may direct as indemnity against any claim that may be made against the corporation with respect to the certificate alleged to have been lost, stolen or destroyed.

TRANSFER OF STOCK

Section 4. Upon surrender to the corporation or the transfer agent of the corporation of a certificate for shares duly endorsed or accompanied by proper evidence of succession, assignation or authority to transfer, it shall be the duty of the corporation to issue a new certificate to the person entitled thereto, cancel the old certificate and record the transaction upon its books.

FIXING RECORD DATE

Section 5. In order that the corporation may determine the stockholders entitled to notice of or to vote at any meeting of stockholders or any adjournment thereof, or to express consent to corporate action in writing without a meeting, or entitled to receive payment of any dividend or other distribution or allotment of any rights, or entitled to exercise any rights in respect of any change, conversion or exchange of stock or for the purpose of any other lawful action, the board of directors may fix, in advance, a record date, which shall not be more than sixty nor less than ten days before the date of such meeting, nor more than sixty days prior to any other action. A determination of stockholders of record entitled to notice of or to vote at a meeting of stockholders shall apply to any adjournment of the meeting; provided, however, that the board of directors may fix a new record date for the adjourned meeting.

REGISTERED STOCKHOLDERS

Section 6. The corporation shall be entitled to recognize the exclusive right of a person registered on its books as the owner of shares to receive dividends, and to vote as such

owner, and to hold liable for calls and assessments a person registered on its books as the owner of shares, and shall not be bound to recognize any equitable or other claim to or interest in such share or shares on the part of any other person, whether or not it shall have express or other notice thereof, except as otherwise provided by the laws of Delaware.

ARTICLE VII
GENERAL PROVISIONS

DIVIDENDS

Section 1. Dividends upon the capital stock of the corporation, subject to the provisions of the certificate of incorporation, if any, may be declared by the board of directors at any regular or special meeting pursuant to law. Dividends may be paid in cash, in property, or in shares of the capital stock, subject to the provisions of the certificate of incorporation.

Section 2. Before payment of any dividend, there may be set aside out of any funds of the corporation available for dividends such sum or sums as the directors from time to time, in their absolute discretion, think proper as a reserve or reserves to meet contingencies, or for equalizing dividends, or for repairing or maintaining any property of the corporation, or for such other purpose as the directors shall think conducive to the interest of the corporation, and the directors may modify or abolish any such reserve in the manner in which it was created.

CHECKS

Section 3. All checks or demands for money and notes of the corporation shall be signed by such officer or officers or such other person or persons as the board of directors may from time to time designate.

FISCAL YEAR

Section 4. The fiscal year of the corporation shall be fixed by resolution of the board of directors.

SEAL

Section 5. The corporate seal shall have inscribed thereon the name of the corporation, the year of its organization and the words "Corporate Seal, Delaware". The seal may be used by causing it or a facsimile thereof to be impressed or affixed or reproduced or otherwise.

INDEMNIFICATION

Section 6. The corporation shall indemnify its officers, directors, employees and agents to the extent permitted by the General Corporation Law of Delaware.

ARTICLE VIII
AMENDMENTS

Section 1. These by-laws may be altered, amended or repealed or new by-laws may be adopted by the stockholders or by the board of directors, when such power is conferred upon the board of directors by the certificate of incorporation at any regular meeting of the stockholders or of the board of directors or at any special meeting of the stockholders or of the board of directors if notice of such alteration, amendment, repeal or adoption of new by-laws be contained in the notice of such special meeting. If the power to adopt, amend or repeal by-laws is conferred upon the board of directors by the certificate of incorporation it shall not divest or limit the power of the stockholders to adopt, amend or repeal by-laws.

Exhibit 3.73

CERTIFICATE OF INCORPORATION

OF

JET ELECTRONICS AND TECHNOLOGY, INCORPORATED

CERTIFICATE OF INCORPORATION

OF

JET ELECTRONICS AND TECHNOLOGY, INCORPORATED

* * * * *

FIRST. The name of the corporation is JET ELECTRONICS AND TECHNOLOGY, INCORPORATED.

SECOND. The address of its registered office in the State of Delaware is No. 100 West Tenth Street, in the City of Wilmington, County of New Castle. The name of its registered agent at such address is The Corporation Trust Company.

THIRD. The nature of the business or purposes to be conducted or promoted is:

To engage in any lawful act or activity for which corporations may be organized under the General Corporation Law of Delaware.

FOURTH. The total number of shares of Common stock which the corporation shall have authority to issue is five hundred thousand (500,000) and the par value of each of such shares is One Dollar ($1.00) amounting in the aggregate to Five Hundred Thousand Dollars ($500,000.00).

At all elections of directors of the corporation, each stockholder shall be entitled to as many votes as shall equal the number of votes which (except for such provision as to cumulative voting) he would be entitled to cast for the election of directors with respect to his share of stock multiplied by the number of directors to be elected, and he may cast all of such votes for a single director or may distribute them among the number to be voted for, or for any two or more of them as he may see fit.

FIFTH. The name and mailing address of each incorporator is as follows:

NAME	MAILING ADDRESS
B. J. Consono	100 West Tenth Street Wilmington, Delaware
F. J. Obara, Jr.	100 West Tenth Street Wilmington, Delaware
J. J. Rivera	100 West Tenth Street Wilmington, Delaware

SIXTH. The corporation is to have perpetual existence.

SEVENTH. In furtherance and not in limitation of the powers conferred by statute, the board of directors is expressly authorized:

To make, alter or repeal the by-laws of the corporation.

To authorize and cause to be executed mortgages and liens upon the real and personal property of the corporation.

To set apart out of any of the funds of the corporation available for dividends a reserve or reserves for any proper purpose and to abolish any such reserve in the manner in which it was created.

By a majority of the whole board, to designate one or more committees, each committee to consist of two or more of the directors of the corporation. The board may designate one or more directors as alternate members of any committee, who may replace any absent or disqualified member at any meeting of the committee. Any such committee, to the extent provided in the resolution or in the by-laws of the corporation, shall have and may exercise the powers of the board of directors in the management of the business and affairs of the corporation, and may authorize the seal of the corporation to be affixed to all papers which may require it, provided, however, the by-laws may provide that in the absence or disqualification of

any member of such committee or committees, the member or members thereof present at any meeting and not disqualified from voting, whether or not he or they constitute a quorum, may unanimously appoint another member of the board of directors to act at the meeting in the place of any such absent or disqualified member.

When and as authorized by the affirmative vote of the holders of a majority of the stock issued and outstanding having voting power given at a stockholders' meeting duly called upon such notice as is required by statute, or when authorized by the written consent of the holders of a majority of the voting stock issued and outstanding, to sell, lease or exchange all or substantially all of the property and assets of the corporation, including its good will and its corporate franchises, upon such terms and conditions and for such consideration, which may consist in whole or in part of money or property including shares of stock in, and/or other securities of, any other corporation or corporations, as its board of directors shall deem expedient and for the best interests of the corporation.

EIGHTH. Whenever a compromise or arrangement is proposed between this corporation and its creditors or any class of them and/or between this corporation and its stockholders or any class of them, any court of equitable jurisdiction within the State of Delaware may, on the application in a summary way of this corporation or of any creditor or stockholder thereof, or on the application of any receiver or receivers appointed for this corporation under the provisions of section 291 of Title 8 of the Delaware Code or on the application of trustees in dissolution or of any receiver or receivers appointed for this corporation under the provisions of section 279 of Title 8 of the Delaware Code order a meeting of the creditors or class of creditors, and/or of the stockholders or class of stockholders of this corporation, as the case may be, to be summoned in such manner as the said court directs. If a

majority in number representing three-fourths in value of the creditors or class of creditors, and/or of the stockholders or class of stockholders of this corporation, as the case may be, agree to any compromise or arrangement and to any reorganization of this corporation as consequence of such compromise or arrangement, the said compromise or arrangement and the said reorganization shall, if sanctioned by the court to which the said application has been made, be binding on all the creditors or class of creditors, and/or on all the stockholders or class of stockholders, of this corporation, as the case may be, and also on this corporation.

NINTH. Meetings of stockholders may be held within or without the State of Delaware, as the by-laws may provide. The books of the corporation may be kept (subject to any provision contained in the statutes) outside the State of Delaware at such place or places as my be designated from time to time by the board of directors or in the by-laws of the corporation. Elections of directors need not be by written ballot unless the by-laws of the corporation shall so provide.

TENTH. The corporation reserves the right to amend, alter, change or repeal any provision contained in this certificate of incorporation, in the manner now or hereafter prescribed by statute, and all rights conferred upon stockholders herein are granted subject to this reservation.

WE, THE UNDERSIGNED, being each of the incorporators hereinbefore named, for the purpose of forming a corporation pursuant to the General Corporation Law of the State of Delaware, do make this certificate, hereby declaring and certifying that this is our act and deed and the facts herein stated are true, and accordingly have hereunto set our hands this first day of May, 1968.

/s/ B. J. Consono

/s/ F. J. Obara, Jr.

/s/ J. C. Rivera

STATE OF DELAWARE)
) ss:
COUNTY OF NEW CASTLE)

BE IT REMEMBERED that on this 1st day of May, 1968, personally came before me, a Notary Public for the State of Delaware, B. J. Consono, F. J. Obara, Jr. and J. L Rivera, all of the parties to the foregoing certificate of incorporation, known to me personally to be such, and severally acknowledged the said certificate to be the act and deed of the signers respectively and that the facts stated therein are true.

GIVEN under my hand and seal of office the day and year aforesaid.

/s/

Notary Public

CERTIFICATE OF AMENDMENT OF
CERTIFICATE OF INCORPORATION OF
JET ELECTRONICS AND TECHNOLOGY, INCORPORATED

Jet Electronics and Technology, Incorporated, a corporation organized and existing under and by virtue of the General Corporation Law of the State of Delaware, DOES HEREBY CERTIFY:

FIRST: That the Board of Directors of said corporation by the unanimous written consent of its members, filed with the minutes of the Board, adopted a resolution proposing and declaring advisable the following amendment to the Certificate of Incorporation of said corporation:

NOW, THEREFORE, BE IT RESOLVED, that the Certificate of Incorporation of Jet Electronics and Technology, Incorporated be amended by changing the first paragraph of the FOURTH Article thereof so that, as amended, said first paragraph of the Article shall be and read as follows:

> "The total number of shares of Common Stock which the corporation shall have authority to issue is one thousand (1,000) and the par value of each of such shares is One Dollar ($1.00) amounting in the aggregate to One Thousand Dollars ($1,000.00)."

SECOND: That in lieu of a meeting and vote of stockholders, the sole shareholder has given unanimous written consent to said amendment in accordance with the provisions of section 228 of the General Corporation Law of the State of Delaware.

THIRD: That the aforesaid amendment was duly adopted in accordance with the applicable provisions of sections 242 and 228 of the General Corporation Law of the State of Delaware.

IN WITNESS WHEREOF, said Jet Electronics and Technology, Incorporated has caused this Certificate to be signed by George K. Sherwood, its Vice President, and attested by Nicholas J. Calise, its Secretary, this 12th day of December, 1988.

/s/ George K. Sherwood

George K. Sherwood
Vice President

ATTEST:

/s/ Nicholas J. Calise

Nicholas J. Calise
Secretary

CERTIFICATE OF AMENDMENT OF

CERTIFICATE OF INCORPORATION

JET ELECTRONICS AND TECHNOLOGY, INCORPORATED

Jet Electronics and Technology, Incorporated, a corporation organized and existing under and by virtue of the General Corporation Law of the State of Delaware,

DOES HEREBY CERTIFY:

FIRST: That the Board of Directors of said corporation by the unanimous written consent of its members, filed with the minutes of the Board, adopted a resolution proposing and declaring advisable the following amendment to the Certificate of Incorporation of said corporation:

RESOLVED, that the Certificate of Incorporation of Jet Electronics and Technology, Incorporated be amended by changing the FIRST Article thereof, effective June 1, 1996, so that, as amended, said Article shall be and read as follows:

> FIRST. The name of the corporation is BFGoodrich Avionics Systems, Inc.

SECOND: That in lieu of a meeting and vote of stockholders, the stockholders have given unanimous written consent to said amendment in accordance with the provisions of Section 228 of the General Corporation Law of the State of Delaware.

THIRD: That the aforesaid amendment was duly adopted in accordance with the applicable provisions of Sections 242 and 228 of the General Corporation Law of the State of Delaware.

FOURTH: The effective date of the aforesaid amendment shall be June 1, 1996.

IN WITNESS WHEREOF, said Jet Electronics and Technology, Incorporated has caused this certificate to be signed by George K. Sherwood, its Vice President and attested by Nicholas J. Calise, its Secretary this 29th day of May, 1996.

/s/ George K. Sherwood

George K. Sherwood, Vice President

ATTEST:

/s/ Nicholas J. Calise
- ---
Nicholas J. Calise, Secretary

CERTIFICATE OF AMENDMENT OF

CERTIFICATE OF INCORPORATION

BFGOODRICH AVIONICS SYSTEMS, INC.

BFGoodrich Avionics Systems, Inc., a corporation organized and existing under and by virtue of the General Corporation Law of the State of Delaware,

DOES HEREBY CERTIFY:

FIRST: That the Board of Directors of said corporation by the unanimous written consent of its members, filed with the minutes of the Board of Directors, adopted a resolution proposing and declaring advisable the following amendment to the Certificate of Incorporation of said corporation:

RESOLVED, that the Certificate of Incorporation of BFGoodrich Avionics Systems, Inc. be amended by changing the FIRST Article thereof, effective June 1, 2001, so that, as amended, said Article shall be read as follows:

FIRST: The name of the corporation is Goodrich Avionics Systems, Inc.

SECOND: That in lieu of a meeting and vote of shareholders, the shareholders have given unanimous written consent to said amendment in accordance with the provisions of Section 228 of the General Corporation Law of the State of Delaware.

THIRD: That the aforesaid amendment was duly adopted in accordance with the applicable provisions of Sections 242 and 228 of the General Corporation Law of the State of Delaware:

FOURTH: The effective date of the aforesaid amendment shall be June 1, 2001.

IN WITNESS WHEREOF, said BFGoodrich Avionics Systems, Inc. has caused this certificate to be signed by Edward S. Kalvenas, its President, and attested by Kenneth L. Wagner, its Secretary, this 15th day of May, 2001.

/s/ Kenneth L. Wagner

Kenneth L. Wagner, Secretary

ATTEST:

/s/ Alexander C. Schoch
- ---
Alexander C. Schoch, Assistant Secretary

GOODRICH AVIONICS SYSTEMS, INC.

* * * * * *

BY - LAWS

* * * * * *

ARTICLE I
OFFICES

Section 1 . The registered office shall be in the City of Wilmington, County of New Castle, State of Delaware.

Section 2 . The corporation may also have offices at such other places both within and without the State of Delaware as the Board of Directors may from time to time determine or the business of the corporation may require.

ARTICLE II
MEETINGS OF SHAREHOLDERS

Section 1. All meetings of the shareholders shall be held at such place within or without the State of Delaware as may be fixed from time to time by the Board of Directors and stated in the notice of the meeting.

Section 2. The annual meeting of shareholders shall be held at such time and place and on such date as is set by the Board of Directors or at such time and place as 100% of the shareholders may attend. Unless otherwise set by the Board of Directors, the Annual Meeting of Shareholders shall be held on the first Monday in September of each year at 10:00 a.m., or if such day is a legal holiday, the annual meeting shall be held on the next business day thereafter, for the purpose of electing directors and for the transaction of such other business as may be brought before the meeting. If such annual meeting is not held on the designated date, the directors shall cause the meeting to be held as soon after such date as is convenient.

Section 3. Written notice of the annual meeting stating the place, date and hour of the meeting shall be given to each shareholder entitled to vote at such meeting not less than ten nor more than sixty days before the date of the meeting.

Section 4. The officer who has charge of the stock ledger of the corporation shall prepare and make, at least ten days before every meeting of shareholders, a complete list of the shareholders entitled to vote at the meeting, arranged in alphabetical order, and showing the

address of each shareholder and the number of shares registered in the name of each shareholder. Such list shall be open to the examination of any shareholder, for any purpose germane to the meeting, during ordinary business hours, for a period of at least ten days prior to the meeting, either at a place within the city where the meeting is to be held, which place shall be specified in the notice of the meeting, or, if not so specified, at the place where the meeting is to be held. The list shall also be produced and kept at the time and place of the meeting during the whole time thereof, and may be inspected by any shareholder who is present.

Section 5. Special meetings of the shareholders, for any purpose or purposes, unless otherwise prescribed by statute or by the certificate of incorporation, may be called by the chairman of the board or the president and shall be called by the president or secretary at the request in writing of a majority of the board of directors, or at the request in writing of shareholders owning a majority in amount of the entire capital stock of the corporation issued and outstanding and entitled to vote. Such request shall state the purpose or purposes of the proposed meeting.

Section 6. Written notice of a special meeting stating the place, date and hour of the meeting and the purpose or purposes for which the meeting is called, shall be given not less than ten nor more than sixty days before the date of the meeting, to each shareholder entitled to vote at such meeting.

Section 7. Business transacted at any special meeting of shareholders shall be limited to the purposes stated in the notice.

Section 8. The holders of record of a majority of the stock issued and outstanding and entitled to vote thereat, present in person or represented by proxy, shall constitute a quorum at all meetings of the shareholders for the transaction of business except as otherwise provided by statute or by the certificate of incorporation. If, however, such quorum shall not be present or represented at any meeting of the shareholders, the shareholders entitled to vote thereat, present in person or represented by proxy, shall have power to adjourn the meeting from time to time, without notice other than announcement at the meeting, until a quorum shall be present or represented. At such adjourned meeting at which a quorum shall be present or represented any business may be transacted which might have been transacted at the meeting as originally notified. If the adjournment is for more than thirty days, or if after the adjournment a new record date is fixed for the adjourned meeting, a notice of the adjourned meeting shall be given to each shareholder of record entitled to vote at the meeting.

Section 9. When a quorum is present at any meeting, the vote of the holders of a majority of the stock having voting power present in person or represented by proxy shall decide any question brought before such meeting, unless the question is one upon which by express provision of the statutes or of the certificate of incorporation, a different vote is required in which case such express provision shall govern and control the decision of such question.

Section 10. Unless otherwise provided in the certificate of incorporation each shareholder shall at every meeting of the shareholders be entitled to one vote in person or by proxy for each share of the capital stock having voting power held by such shareholder, but no

proxy shall be voted on after three years from its date, unless the proxy provides for a longer period.

Section 11. Unless otherwise provided in the certificate of incorporation, any action required to be taken at any annual or special meeting of shareholders of the corporation, or any action which may be taken at any annual or special meeting of such shareholders, may be taken without a meeting, without prior notice and without a vote, if a consent in writing, setting forth the action so taken, shall be signed by the holders of outstanding stock having not less than the minimum number of votes that would be necessary to authorize or take such action at a meeting at which all shares entitled to vote thereon were present and voted. Prompt notice of the taking of the corporate action without a meeting by less than unanimous written consent shall be given to those shareholders who have not consented in writing.

ARTICLE III
DIRECTORS

Section 1. The number of directors, which shall constitute the whole board, shall be not less than three nor more than fifteen. The first board shall consist of the number of directors elected at the initial meeting of the shareholders. Thereafter, within the limits above specified, the number of directors shall be determined by resolution of the board of directors or by the shareholders at the annual meeting. The directors shall be elected at the annual meeting of the shareholders, except as provided in Section 2 of this Article, and each director elected shall hold office until his successor is elected and qualified. Directors need not be shareholders.

Section 2. Vacancies and newly created directorships resulting from any increase in the authorized number of directors may be filled by a majority of the directors then in office, though less than a quorum, or by a sole remaining director, and the directors so chosen shall hold office until the next annual election and until their successors are duly elected and shall qualify, unless sooner displaced. If there are no directors in office, then an election of directors may be held in the manner provided by statute.

Section 3. The business of the corporation shall be managed by or under the direction of its board of directors which may exercise all such powers of the corporation and do all such lawful acts and things as are not by statute or by the certificate of incorporation or by these by-laws directed or required to be exercised or done by the shareholders.

MEETINGS OF THE BOARD OF DIRECTORS

Section 4. The Board of Directors of the corporation may hold meetings, both regular and special, either within or without the State of Delaware.

Section 5. Regular meetings of the Board of Directors may be held without notice at such time and at such place as shall from time to time be determined by the Board.

Section 6. Special meetings of the Board may be called by the president or chairman of the Board on one day's notice to each director; special meetings shall be called by

the president or secretary in like manner and on like notice on the written request of two directors unless the board consists on only one director; in which case special meetings shall be called by the president or secretary in like manner and on like notice on the written request of the sole director.

Section 7. At all meetings of the Board, one-third of the directors shall constitute a quorum for the transaction of business and the act of a majority of the directors present at any meeting at which there is a quorum shall be the act of the Board of Directors, except as may be otherwise specifically provided by statute or by the certificate of incorporation. If a quorum shall not be present at any meeting of the Board of Directors, the Directors present thereat may adjourn the meeting from time to time, without notice other than announcement at the meeting, until a quorum shall be present.

Section 8. Unless otherwise restricted by the certificate of incorporation or these By-Laws, any action required or permitted to be take at any meeting of the Board of Directors or of any committee thereof may be taken without a meeting, if all members of the board or committee, as the case may be, consent thereto in writing, and the writing or writings are filed with the minutes of proceedings of the Board or committee.

Section 9. Unless otherwise restricted by the certificate of incorporation or these By-Laws, members of the Board of Directors, or any committee designated by the board of directors, may participate in a meeting of the board of directors, or any committee, by means of conference telephone or similar communications equipment by means of which all persons participating in the meeting can hear each other, and such participation in a meeting shall constitute presence in person at the meeting.

COMMITTEES OF DIRECTORS

Section 10. The Board of Directors may, by resolution passed by a majority of the whole board, designate one or more committees, each committee to consist of one or more of the directors of the corporation. The board may designate one or more directors as alternate members of any committee, who may replace any absent or disqualified member at any meeting of the committee.

In the absence or disqualification of a member of a committee, the member or members thereof present at any meeting and not disqualified from voting, whether or not he or they constitute a forum, may unanimously appoint another member of the board of directors to act at the meeting in the place of any such absent or disqualified member.

Any such committee, to the extent provided in the resolution of the board of directors, shall have and may exercise all the powers and authority of the board of directors in the management of the business and affairs of the corporation, and may authorize the seal of the corporation to be affixed to all papers which may require it; but no such committee shall have the power or authority in reference to amending the certificate of incorporation, adopting an agreement of merger or consolidation, recommending to the shareholders the sale, lease or exchange of all or substantially all of the corporation's property and assets, recommending to the shareholders a dissolution of the corporation or a revocation of a dissolution, or amending the

by-laws of the corporation; and, unless the resolution or the certificate of incorporation expressly so provide, no such committee shall have the power or authority to declare a dividend or to authorize the issuance of stock. Such committee or committees shall have such name or names as may be determined from time to time by resolution adopted by the board of directors.

Section 11. Each committee shall keep regular minutes of its meetings and report the same to the board of directors when required.

COMPENSATION OF DIRECTORS

Section 12. Unless otherwise restricted by the certificate of incorporation or these by-laws, the board of directors shall have the authority to fix the compensation of directors. The directors may be paid their expenses, if any, of attendance at each meeting of the board of directors and may be paid a fixed sum for attendance at each meeting of the board of directors or a stated salary as director. No such payment shall preclude any director from serving the corporation in any other capacity and receiving compensation therefore. Members of special or standing committees may be allowed like compensation for attending committee meetings.

REMOVAL OF DIRECTORS

Section 13. Unless otherwise restricted by the certificate of incorporation or by-laws, any director or the entire board of directors may be removed, with or without cause, by the holders of a majority of shares entitled to vote at an election of directors.

ARTICLE IV
NOTICES

Section 1. Whenever, under the provisions of the statutes or of the certificate of incorporation or of these by-laws, notice is required to be given to any director or shareholder, it shall not be construed to mean personal notice, but such notice may be given in writing, by mail, addressed to such director or shareholder, at his address as it appears on the records of the corporation, with postage thereon prepaid, and such notice shall be deemed to be given at the time when the same shall be deposited in the United States mail. Notice may also be given orally by telephone or in person, or by written communication by telegraph, telex, telecopy, courier, delivery, facsimile transmission, electronic mail or other transmission, or other written notification and such notice shall be deemed to be given at the time when the same shall be communicated or transmitted to the director or shareholder, or delivered to the company which will make such delivery or transmission.

Section 2. Whenever any notice is required to be given under the provisions of the statutes or of the certificate of incorporation or of these by-laws, a waiver thereof in writing, signed by the person or persons entitled to said notice, whether before or after the time stated therein, shall be deemed equivalent thereto.

ARTICLE V
OFFICERS

Section 1. The officers of the corporation shall be chosen by the board of directors and shall be a president, a. secretary and a treasurer. The board of directors may also choose a chairman of the board, a chief executive officer, a chief operating officer, a chief financial officer, a controller, one or more vice chairmen of the board, executive vice presidents, senior vice presidents, vice presidents, assistant secretaries and assistant treasurers. Any number of offices may be held by the same person, unless the certificate of incorporation or these by-laws otherwise provide.

Section 2. The board of directors at its first meeting after each annual meeting of shareholders shall determine the officers of the corporation.

Section 3. The board of directors may appoint such other officers and agents as it shall deem necessary who shall hold their offices for such terms and shall exercise such powers and perform such duties as shall be determined from time to time by the board.

Section 4. The salaries of all officers and agents of the corporation shall be fixed by the board of directors.

Section 5. The officers of the corporation shall hold office until their successors are chosen and qualify. Any officer elected or appointed by the board of directors may be removed at any time by the affirmative vote of a majority of the board of directors. Any vacancy occurring in any office of the corporation shall be filled by the board of directors.

THE CHIEF EXECUTIVE OFFICER

Section 6. The chief executive officer of the corporation shall preside at all meetings of the shareholders and the board of directors, shall have general and active management of the business of the corporation, subject to the board of directors, and shall see that all orders and resolutions of the board of directors are carried into effect. He or she may appoint and discharge employees and agents and perform such other duties as are incident to his or her office or delegated to him or her by the board of directors or which are or may at any time be authorized or required by law.

THE CHIEF OPERATING OFFICER

Section 7. The chief operating officer, if he or she is not also the chief executive officer, shall act as the chief executive officer in the absence or disability of the chief executive officer, and shall have such other duties as are prescribed by the board of directors or the chief executive officer.

THE PRESIDENT

Section 8. The president, if he or she is not also the chief executive officer or chief operating officer, shall act as the chief executive officer in the absence or disability of the chief executive officer and chief operating officer, and shall have such other duties as are prescribed by the board of directors or the chief executive officer.

THE VICE PRESIDENTS

Section 9. In the absence of the president or in the event of his inability or refusal to act, the vice president if there be one (or in the event there be more than one vice president, the vice presidents in the order designated by the directors, or in the absence of any designation, then in the order of their election) shall perform the duties of the president, and when so acting, shall have all the powers of and be subject to all the restrictions upon the president. The vice presidents shall perform such other duties and have such other powers as the board of directors or the chief executive officer may from time to time prescribe.

THE SECRETARY AND ASSISTANT SECRETARY

Section 10. The secretary shall attend all meetings of the board of directors and all meetings of the shareholders and record all the proceedings of the meetings of the corporation and of the board of directors in a book to be kept for that purpose and shall perform like duties for the standing committees when required. He shall give, or cause to be given, notice of all meetings of the shareholders and special meetings of the board of directors, and shall perform such other duties as may be prescribed by the board of directors or chief executive officer, under whose supervision he shall be. He shall have custody of the corporate seal of the corporation and he, or an assistant secretary, shall have authority to affix the same to any instrument requiring it and when so affixed, it may be attested by his signature or by the signature of such assistant secretary. Any other officer also shall have authority to affix the seal of the corporation and to attest the affixing by his signature.

Section 11. The assistant secretary, if there be one, or if there be more than one, the assistant secretaries in the order determined by the board of directors (of if there be no such determination, then in the order of their election) shall, in the absence of the secretary or in the event of his inability or refusal to act, perform the duties and exercise the powers of the secretary and shall perform such other duties and have such other powers as the board of directors may from time to time prescribe.

THE TREASURER AND ASSISTANT TREASURERS

Section 12. The treasurer shall have the custody of the corporate funds and securities and shall keep full and accurate accounts of receipts and disbursements in books belonging to the corporation and shall deposit all monies and other valuable effects in the name

and to the credit of the corporation in such depositories as may be designated by the board of directors.

Section 13. He shall disburse the funds of the corporation as may be ordered by the board of directors or the chief executive officer, taking proper vouchers for such disbursements, and shall render to the chief executive officer and the board of directors, at its regular meetings, or when the board of directors so requires, an account of all his transactions as treasurer and of the financial condition of the corporation.

Section 14. The assistant treasurer if there be one, or if there shall be more than one, the assistant treasurers in the order determined by the board of directors (or if there be no such determination, then in the order of their election, shall, in the absence of the treasurer or in the event of his inability or refusal to act, perform the duties and exercise the powers of the treasurer and shall perform such other duties and have such other powers as the board of directors may from time to time prescribe.

ARTICLE VI
CERTIFICATE OF STOCK

Section 1. Every holder of stock in the corporation shall be entitled to have a certificate, signed by, or in the name of the corporation by, the chairman or vice-chairman of the board of directors, or the president or a vice-president and the treasurer or an assistant treasurer, or the secretary or an assistant secretary of the corporation, certifying the number of shares owned by him in the corporation.

If the corporation shall be authorized to issue more than one class of stock or more than one series of any class, the powers, designations, preferences and relative, participating, optional or other special rights of each class of stock or series thereof and the qualification, limitations or restrictions of such preferences and/or rights shall be set forth in full or summarized on the face or back of the certificate which the corporation shall issue to represent such class or series of stock, provided that, except as otherwise provided in section 202 of the General Corporation Law of Delaware, in lieu of the foregoing requirements, there may be set forth on the face or back of the certificate which the corporation shall issue to represent such class or series of stock, a statement that the corporation will furnish without charge to each shareholder who so requests the powers, designations, preferences and relative, participating, optional or other special rights of each class of stock or series thereof and the qualifications, limitations or restrictions of such preferences and/or rights.

Section 2. Any of or all the signatures on the certificate may be facsimile. In case any officer, transfer agent or registrar who has signed or whose facsimile signature has been placed upon a certificate shall have ceased to be such officer, transfer agent or registrar before such certificate is issued, it may be issued by the corporation with the same effect as if he were such officer, transfer agent or registrar at the date of issue.

LOST CERTIFICATES

Section 3. The board of directors may direct a new certificate or certificates to be issued in place of any certificate or certificates to be issued in place of any certificate or certificates theretofore issued by the corporation alleged to have been lost, stolen or destroyed, upon the making of an affidavit of that fact by the person claiming the certificate of stock to be lost, stolen or destroyed. When authorizing such issue of a new certificate or certificates, the board of directors may, in its discretion and as a condition precedent to the issuance thereof, require the owner of such lost, stolen or destroyed certificate or certificates, or his legal representative, to advertise the same in such manner as it shall require and/or to give the corporation a bond in such sum as it may direct as indemnity against any claim that may be made against the corporation with respect to the certificate alleged to have been lost, stolen or destroyed.

TRANSFER OF STOCK

Section 4. Upon surrender to the corporation or the transfer agent of the corporation of a certificate for shares duly endorsed or accompanied by proper evidence of succession, assignation or authority to transfer, it shall be the duty of the corporation to issue a new certificate to the person entitled thereto, cancel the old certificate and record the transaction upon its books.

FIXING RECORD DATE

Section 5. In order that the corporation may determine the shareholders entitled to notice of or to vote at any meeting of shareholders or any adjournment thereof, or to express consent to corporate action in writing without a meeting, or entitled to receive payment of any dividend or other distribution or allotment of any rights, or entitled to exercise any rights in respect of any change, conversion or exchange of stock or for the purpose of any other lawful action, the board of directors may fix, in advance, a record date, which shall not be more than sixty nor less than ten days before the date of such meeting, nor more than sixty days prior to any other action. A determination of shareholders of record entitled to notice of or to vote at a meeting of shareholders shall apply to any adjournment of the meeting; provide, however, that the board of directors may fix a new record date for the adjourned meeting.

REGISTERED SHAREHOLDERS

Section 6. The corporation shall be entitled to recognize the exclusive right of a person registered on its books as the owner of shares to receive dividends, and to vote as such owner, and to hold liable for calls and assessments a person registered on its books as the owner of shares, and shall not be bound to recognize any equitable or other claim to or interest in such share or shares on the part of any other person, whether or not it shall have express or other notice thereof, except as otherwise provided by the laws of Delaware.

ARTICLE VII

GENERAL PROVISIONS

DIVIDENDS

Section 1. Dividends upon the capital stock of the corporation, subject to the provisions of the certificate of incorporation, if any, may be declared by the board of directors at any regular or special meeting pursuant to law. Dividends may be paid in cash, in property, or in shares of the capital stock, subject to the provisions of the certificate of incorporation.

Section 2. Before payment of any dividend, there may be set aside out of any funds of the corporation available for dividends such sum or sums as the directors from time to time, in their absolute discretion, think proper as a reserve or reserves to meet contingencies, or for equalizing dividends, or for repairing or maintaining any property of the corporation, or for such other purpose as the directors shall think conducive to the interest of the corporation, and the directors may modify or abolish any such reserve in the manner in which it was created.

CHECKS

Section 3. All checks or demands for money and notes of the corporation shall be signed by such officer or officers or such other person or persons as the board of directors may from time to time designate.

FISCAL YEAR

Section 4. The fiscal year of the corporation shall be fixed by resolution of the board of directors.

SEAL

Section 5. The corporate seal shall have inscribed thereon the name of the corporation, the year of its organization and the words "Corporate Seal, Delaware". The seal may be used by causing it or a facsimile thereof to be impressed or affixed or reproduced or otherwise.

INDEMNIFICATION

Section 6. The corporation shall indemnify its officers, directors, employees and agents to the extent permitted by the General Corporation Law of Delaware.

ARTICLE VIII
AMENDMENTS

Section 1. These By-Laws may be altered, amended or repealed or new By-Laws may be adopted by the shareholders or by the board of directors, when such power is conferred upon the board of directors by the certificate of incorporation at any regular meeting of the shareholders or of the board of directors or at any special meeting of the shareholders or of the board of directors if notice of such alteration, amendment, repeal or adoption of new by-laws be contained in the notice of such special meeting. If the power to adopt, amend or repeal by-laws is conferred upon the board of directors by the certificate of incorporation it shall not divest or limit the power of the shareholders to adopt, amend or repeal by-laws.

PRESCRIBED BY J. KENNETH BLACKWELL
PLEASE OBTAIN FEE AMOUNT AND MAILING INSTRUCTIONS FROM THE FORMS INVENTORY LIST (USING THE 3 DIGIT FORM # LOCATED AT THE BOTTOM OF THIS FORM). TO OBTAIN THE FORMS INVENTORY LIST OR FOR ASSISTANCE, PLEASE CALL CUSTOMER SERVICE:

CENTRAL OHIO: (614) 466-3910 TOLL FREE: 1-877-SOS-FILE (1-877-767-3453)

CERTIFICATE OF AMENDMENT BY SHAREHOLDERS TO ARTICLES OF

BFGoodrich FlightSystems, Inc.
(Name of Corporation)

750003
(charter number)

Kenneth L. Wagner (name), who is the Secretary (title) of the above named Ohio corporation organized for profit, does hereby certify that: (Please check the appropriate box and complete the appropriate statements.)

|X| a meeting of the shareholders was duly called and held on May 15, 2001 at which meeting a quorum the shareholders was present in person or by proxy, and that by the affirmative vote of the holders of shares entitling them to exercise 100% of the voting power of the corporation,

|X| in a writing signed by all the shareholders who would be entitled to notice of a meeting held for that purpose, the following resolution to amend the articles was adopted:

RESOLVED, that the Articles of Incorporation of the Company be amended by changing Article I thereof, effective June 1, 2001, so that, as amended, said Article shall be and read as follows:

ARTICLE I

The name of this corporation shall be Goodrich Flightsystems, Inc.

IN WITNESS WHEREOF, the above named officer, acting for and on behalf of the corporation, has hereunto subscribed his (his/her) name on May 15, 2001. (date)

Signature: /s/ Kenneth L. Wagner

Title: Secretary

Certificate of Amendment

By Shareholders

to the Articles of Incorporation of

Foster Airdata Systems, Inc.

George K. Sherwood, who is [ ] Chairman of the Board [ ] President [X] Vice President (Check one) and Nicholas J. Calise, who is [X] Secretary [ ] Assistant Secretary (Check one) of the above named Ohio corporation for profit with its principal location at 2001 Polaris Parkway, Columbus, Ohio 43240-2001. Ohio do hereby certify that: (check the appropriate box and complete the appropriate statement) formerly Bath Twp. Summit City

/ / a meeting of the shareholders was duly called for the purpose of adopting this amendment and held on _____ 19____, at which meeting a quorum of the shareholders was present in person or by proxy, and by the affirmative vote of the holders of shares entitling them to exercise _____% of the voting power of the corporation.

/X/ in a writing signed by all of the shareholders who would be entitled to notice of a meeting held for that purpose.

the following resolution to amend the articles was adopted:

On October 28, 1991 by an Action by Unanimous Written Consent of Shareholder, Foster Airdata Systems, Inc. adopted the following resolution:

RESOLVED, that Article First of the Company's Certificate of Incorporation be amended to read in its entirety as set forth below:

FIRST: The name of said corporation shall be BFGoodrich FlightSystems, Inc.

SECOND: The location shall be, Columbus, Franklin County, Ohio.

IN WITNESS WHEREOF, the above named officers, acting for and on behalf of the corporation, have hereto subscribed their names this 28th day of October, 1991.

BY /s/ George K. Sherwood

Vice President

BY /s/ Nicholas J. Calise

Secretary

NOTE: Ohio law does not permit one officer to sign in two capacities. Two separate signatures are required even necessitates the election of a second officer before a filing can be made.

CONSENT FOR USE OF SIMILAR NAME

The undersigned, Nicholas J. Calise, hereby certifies that he is the Secretary of the B.F.Goodrich Company, a New York corporation and that the following is a true and correct copy of resolutions duly adopted by the Board of Directors of said Company at a meeting duly called and held on January 16, 1989 at which a quorum was present and voting, and now in full force and effect, all as appears by the records of the Company in his official custody as such Secretary.

RESOLVED, that the officers of the Company are hereby authorized to consent to the incorporation and qualification of corporations which are directly or indirectly wholly-owned subsidiaries of the Company and the Chief Executive Officer is authorized to consent to the incorporation and qualification of other corporations which utilize as part of their name "B.F.Goodrich", "BFGoodrich", "Goodrich", "BFG", or any derivation thereof or any name similar thereto, in any of the states of the United States or the District of Columbia or in any other jurisdiction; and

FURTHER RESOLVED, that the officers of the Company be and they severally are authorized to do and perform each and every act and thing and to execute and deliver any and all documents, as on the advice of legal counsel of the Company, may be necessary or advisable to implement the intent and purpose of the preceding resolution.

IN WITNESS WHEREOF, the undersigned has signed this Certificate as Secretary and affixed the corporate seal of the Company this 28th day of October, 1991.

Sincerely,

/s/ The B.F. Goodrich Company

THE B.F.GOODRICH COMPANY

CERTIFICATE OF MERGER

The undersigned, being the President and Assistant Secretary of BFG Merger Subsidiary, Inc., an Ohio for profit corporation, do hereby certify that the attached Agreement of Merger dated as of May 31, 1989, whereby Foster Airdata Systems, Inc. shall merge into BFG Merger Subsidiary, Inc., with BFG Merger Subsidiary, Inc. being the surviving corporation, was duly approved in a writing signed by all of the directors of BFG Merger Subsidiary, Inc. entitled to a notice of meeting for such purposes, and duly approved in a writing signed by all of the shareholders of BFG Merger Subsidiary, Inc. entitled to a notice of meeting for such purposes.

DATE: May 31, 1989

/s/

President

/s/

Assistant Secretary

CERTIFICATE OF MERGER

The undersigned, being the President and Secretary of Foster Airdata Systems, Inc., an Ohio for profit corporation, do hereby certify that the attached Agreement of Merger dated as of May 31, 1989, whereby Foster Airdata Systems, Inc. shall merge into BFG Merger Subsidiary, Inc., with BFG Merger Subsidiary, Inc. being the surviving corporation, was duly approved in a writing signed by all of the directors of Foster Airdata Systems, Inc. entitled to a notice of a meeting for such purposes, and was approved at a meeting of the shareholders of Foster Airdata Systems, Inc. which was duly called for such purpose, at which meeting a quorum of the shareholders was present in person or by proxy, and by the affirmative vote of the holders of in excess of seventy-five percent of the voting shares of such corporation.

DATE: May 31, 1989

/s/

President

/s/

Secretary

AGREEMENT OF MERGER

THIS AGREEMENT OF MERGER (this "Agreement") is made as of the 31st day of May, 1989 by and between BFG MERGER SUBSIDIARY, INC., an Ohio corporation (hereinafter "BFGsub") and FOSTER AIRDATA SYSTEMS, INC., an Ohio corporation (hereinafter "Foster Co.").

WITNESSETH :

WHEREAS, as contemplated by that certain Agreement and Plan of Reorganization (the "Reorganization Agreement"), dated as of the date hereof, by and among The B. F. Goodrich Company ("BFG"), BFGsub, Foster Co. and the various shareholders of Foster Co. named therein, the Board of Directors of each of BFGsub and Foster Co. (collectively referred to as the "Constituent Corporations" individually as a "Constituent Corporation") deems it advisable and in the best interests of the Constituent Corporations that the Constituent Corporations be merged in a transaction through which Foster Co. shall be merged with and into BFGsub, with BFGsub to be the surviving corporation (the "Surviving Corporation"), which shall continue its corporate existence under Ohio law as a wholly-owned subsidiary of BFG; and

WHEREAS, the Board of Directors and shareholders of each of the Constituent Corporations have approved this Agreement and the merger contemplated hereby (the "Merger");

NOW, THEREFORE, the parties hereto agree as follows:

THE SURVIVING CORPORATION

1.1 At the time when the Merger shall become effective as provided in Section 4.1 hereof (the "Effective Date"), Foster Co. will merge into BFGsub and BFGsub will be the continuing and Surviving Corporation in the Merger, which will continue to exist under the laws of the State of Ohio, and will be the only one of the Constituent Corporations to continue its separate corporate existence after the Effective Date. As used in this Agreement, the term "Surviving Corporation" refers to BFGsub at and after the Effective Date.

1.2 The name of the Surviving Corporation shall be Foster Airdata Systems, Inc.

1.3 The existing articles of incorporation of BFGsub shall be the articles of the Surviving Corporation until amended in accordance with law, provided, however, that the name of the Surviving Corporation shall be as set forth in Section 1.2 hereof.

1.4 The Code of Regulations of BFGsub existing at the Effective Date shall be the Code of Regulations of the Surviving Corporation until amended in accordance with law, provided, however, that the name of the Surviving Corporation shall be as set forth in Section 1.2 hereof.

1.5 The officers and directors of BFGsub at the Effective Date shall be the officers and directors of the Surviving Corporation existing at the Effective Date until changed in accordance with the law.

1.6 The name and address of the statutory agent in Ohio upon whom any process, notice or demand against either Constituent Corporation or the Surviving Corporation may be served is:

CT Corporation System
815 Superior Ave., N. E.
Cleveland, Ohio 44114

CONVERSION EXTINGUISHMENT OF CONSTITUENT SHARES

2.1 At the Effective Date and as a result of the Merger of Foster Co. into the Surviving Corporation., each of the shares of the capital stock of Foster Co. issued and outstanding immediately prior to the Effective Date ("Foster Co. Common Stock") shall automatically and without any further act of any person be converted into and exchangeable for that number of shares of BFG Common Stock (as defined below) rounded to the nearest hundredth equal to the Conversion Ratio (as defined herein). Each share of Foster Co. Common Stock that is either authorized and unissued, or is authorized, issued and held in treasury, at the Effective Date, and each option, warrant or other right granted by Foster Co. either to purchase, or to convert or exchange another security or other property into or for, any share of Foster Co. Common Stock shall, at the Effective Date, be extinguished.

2.2 (a) Upon surrender of a certificate or certificates which immediately prior to the Merger represented outstanding shares of Foster Co. Common Stock (the "Certificates") for cancellation to BFG, each holder of Certificates shall be entitled to receive in exchange therefor a certificate

representing that number of shares of BFG Common Stock into which the shares of Foster Co. Common Stock theretofore represented by the Certificate so surrendered shall have been converted pursuant to the provisions of this Article 2 and the Shareholders shall also receive their proportionate share of the Holdback Distribution (as defined in the Reorganization Agreement) pursuant to Article 8 of the Reorganization Agreement, and the Certificate so surrendered shall forthwith be cancelled.

(b) All dividends or other distributions declared after the Merger with respect to BFG Common Stock and otherwise payable to the holders of record thereof who were previously holders of Foster Co. Common Stock shall be paid by BFG to the holder of any unsurrendered Certificate only after the holder has surrendered such Certificate to BFG pursuant to the Reorganization Agreement, without any interest thereon, and subject to the effect if any, of applicable law.

(c) After the Merger there shall be no transfers on the stock transfer books of the Surviving Corporation of the shares of Foster Co. Common Stock which were issued and outstanding immediately prior to the Merger. If, after the Merger, Certificates representing such shares are presented for transfer, they shall be cancelled and exchanged for certificates representing shares of BFG Common Stock as provided in this Agreement.

(d) No fractional shares of BFG Common Stock shall be issued to holders of shares of Foster Co. Common Stock by virtue of the Conversion Ratio. In lieu of`any such fractional shares, each Shareholder who would otherwise be entitled to receive a fractional share of BFG Common Stock shall receive an amount in cash determined by multiplying (i) the Average Price Per Share of BFG Common Stock (as defined below) by (ii) the fraction of a share of BFG Common Stock to which such shareholder would otherwise be entitled.

2.3 As used in this Agreement:

(a) the term "Conversion Ratio" shall mean the number (rounded to the nearest hundred-thousandth) determined by dividing (i) the Aggregate Exchange Shares of BFG Common Stock by (ii) the number of shares of Foster Co. Common Stock issued and outstanding immediately prior to the Merger.

(b) the term "Aggregate Exchange Shares of BFG Common Stock" shall mean the quotient (rounded to the nearest whole number) determined by dividing (i) Four Million Dollars ($4,000,000) by (ii) the "Average Price per Share of BFG Common Stock", which quotient is equal to seventy one thousand three hundred eighty-nine (71,389) shares.

(c) the term "Average Price Per Share of BFG Common Stock."

ARTICLE FOUR

EFFECTIVE DATE OF THE MERGER

4.1 Upon approval of this Agreement by shareholders of each of the Constituent Corporations, each of the Constituent Corporations shall cause a Certificate of Merger (in the form required by Ohio Revised Code Section 1701.81) to be executed and filed with the Secretary of State of Ohio, and the Merger shall become effective at the close of regular business hours on the date of such filing of the Certificate of Merger.

ARTICLE FIVE

MISCELLANEOUS

5.1 This Agreement may be executed in one or more counterparts, each of which shall be deemed to be a duplicate original, but all of which, taken together, shall be deemed to constitute a single instrument.

5.2 The captions contained in this Agreement are included only for convenience of reference and not to define, limit, explain or modify this Agreement or its interpretation, construction or meaning and are in no way to be construed as part of this Agreement.

5.3 This Agreement shall inure to the benefit of and be binding upon the respective successors and assigns (including successive, as well as immediate successors and assigns) or the parties hereto.

5.4 The number and gender of each pronoun used in this Agreement shall be construed to mean such number and gender as the context, circumstances, or its antecedents may require.

5.5 This Agreement shall be governed by and construed in accordance with the laws of the State of Ohio.

IN WITNESS WHEREOF, this Agreement has been executed on behalf of the Constituent Corporations by their officers duly authorized in the premises.

BFG MERGER SUBSIDIARY, INC.	FOSTER AIRDATA SYSTEMS, INC.
By:/s/	By:/s/
Its:	Its:
ATTEST:	ATTEST:
/s/	/s/

ARTICLES OF INCORPORATION

OF

BFG MERGER SUBSIDIARY, INC.

The undersigned, desiring to form a corporation for profit, under Sections 1701.01 et seq. of the Revised Code of Ohio, do hereby certify:

FIRST: The name of said corporation shall be BFG Merger Subsidiary, Inc.

SECOND: The place in the State of Ohio where its principal office is to be located is Bath Township, in Summit County.

THIRD: The purpose for which it is formed is to engage in any lawful act or activity for which corporations may be formed under Chapter 1701 of the Revised Code of Ohio.

FOURTH: The authorized number of shares of the corporation is 100 (one hundred) and the par value of each of such shares is one dollar ($1.00).

FIFTH: The amount of stated capital with which the corporation will begin business is one hundred dollars ($100.00).

SIXTH: The following provisions are hereby agreed to for the purpose of defining, limiting and regulating the exercise of the authority of the corporation, or of the directors, or of all of the shareholders:

The board of directors is expressly authorized to set apart out of any of the funds of the corporation available for dividends a reserve or reserves for any proper purpose or to abolish any such reserve in the manner in which it was created, and to purchase on behalf of the corporation any shares issued by it to the extent of the surplus of the aggregate of its assets over the aggregate of its liabilities plus stated capital.

The corporation may in its regulations confer powers upon its board of directors in addition to the powers and authorities conferred upon it expressly by Sections 1701.01 et seq. of the Revised Code of Ohio.

Any meeting of the shareholders or the board of directors may be held at any place within or without the State of Ohio in the manner provided for in the regulations of the corporation.

Any amendments to the articles of incorporation may be made from time to time, and any proposal or proposition requiring the action of shareholders may be authorized from time to time

by the affirmative vote of the holders of shares entitling them to exercise a majority of the voting power of the corporation.

SEVENTH: The corporation reserves the right to amend, alter, change or repeal any provision contained in its articles of incorporation, in the manner now or hereafter prescribed by Sections 1701.01 et seq. of the Revised Code of Ohio, and all rights conferred upon shareholders herein are granted subject to this reservation.

IN WITNESS WHEREOF, I have hereunto subscribed my name this 24th day of May, 1989.

/s/ Nicholas J. Calise

Nicholas J. Calise, Incorporator

Form AGO August, 1983
Prescribed by Sherrod Brown
Secretary of State

ORIGINAL APPOINTMENT OF STATUTORY AGENT

The undersigned, being at least a majority of the incorporators of BFG Merger Subsidiary, Inc., hereby appoint Nicholas J. Calise to be statutory agent upon whom any process, notice of demand required or permitted by statute to be served upon the corporation may be served.

The complete address of the agent is: 3925 Embassy Parkway, Akron, Summit County, Ohio 44313.

Date: May 24, 1989

/s/ Nicholas J. Calise

Nicholas J. Calise (Incorporator)

(Incorporator)

(Incorporator)

Instructions

1) Profit and non-profit articles of incorporation must be accompanied by an original appointment of agent. R.C. 1701.04(C), 1702.04(C).

2) The statutory agent for a corporation may be (a) a natural person who is a resident of Ohio, or (b) an Ohio corporation or a foreign profit corporation licensed in Ohio which has a business address in this state and is explicitly authorized by its articles of incorporation to act as a statutory agent. R.C. 1701.07(A), 1702.06(A).

3) The agent's complete street address must be given; a post office box number is not acceptable. R.C. 1701.07(C). 1702.06(C).

4) An original appointment of agent form must be signed by at least a majority of the incorporators of the corporation. R.C. 1701.07(B), 1702.06(B).

GOODRICH FLIGHTSYSTEMS, INC.

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REGULATIONS

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ARTICLE I
OFFICES

Section 1. The principal office shall be in the City of Columbus, County of Franklin, State of Ohio

Section 2. The corporation may also have offices at such other places as the board of directors may from time to time determine or the business of the corporation may require.

ARTICLE II
MEETINGS OF SHAREHOLDERS

Section 1. Meetings of the shareholders shall be held in the City of Columbus, State of Ohio.

Section 2. The annual meeting of shareholders shall be held at such time and place and on such date as is set by the Board of Directors or at such time and place as 100% of the shareholders may attend. Unless otherwise set by the Board of Directors, the Annual Meeting of Shareholders shall be held on the first Monday in September of each year at 10:00 a.m., or if such day is a legal holiday, the annual meeting shall be held on the next business day thereafter, for the purpose of electing directors and for the transaction of such other business as may be brought before the meeting. If such annual meeting is not held on the designated date, the directors shall cause the meeting to be held as soon after such date as is convenient.

Section 3. Written notice stating the time, place and purpose of a meeting of the shareholders shall be given either by personal delivery or by mail not less than ten nor more than sixty days before the date of the meeting to each shareholder of record entitled to notice of the meeting by or at the direction of the president or a vice president or the secretary or an assistant secretary. If mailed, such notice shall be addressed to the shareholder at his address as it appears on the records of the corporation. Notice of adjournment of a meeting need not be given if the time and place to which it is adjourned are fixed and announced at such meeting.

Section 4. Meetings of the shareholders may be called by the president or a vice president, or the directors by action at a meeting, or a majority of the directors acting without a meeting or by the secretary of the corporation upon the order of the board of directors, or by the

persons who hold twenty-five percent of all the shares outstanding and entitled to vote thereat. Upon the request in writing delivered either in person or by registered mail to the president or secretary by any persons entitled to call a meeting of the shareholders, such officer shall forthwith cause notice to be given to the shareholders entitled thereto. If such request be refused, then the persons making such request may call a meeting by giving notice in the manner provided in these regulations.

Section 5. Business transacted at any special meeting of shareholders shall be confined to the purposes stated in the notice.

Section 6. Upon request of any shareholders at any meeting of shareholders, there shall be produced at such meeting an alphabetically arranged list, or classified lists, of the shareholders of record as of the record date of such meeting, who are entitled to vote, showing their respective addresses and the number and class of shares held by each. Such list or lists when certified by the officer or agent in charge of the transfers of shares shall be prima facie evidence of the facts shown therein.

Section 7. The holders of record of a majority of the shares issued and outstanding having voting power, present in person or represented by proxy, shall be requisite and shall constitute a quorum at all meetings of shareholders for the transaction of business, except that at any meeting of shareholders called to take any action which is authorized or regulated by statute, in order to constitute a quorum, there shall be present in person or represented by proxy the holders of record of shares entitling them to exercise the voting power required by statute, the articles of incorporation, or these regulations, to authorize or take the action proposed or stated in the notice of the meeting. If, however, such quorum shall not be present or represented at any meeting of the shareholders, the shareholders entitled to vote thereat, present in person or represented by proxy, shall have power to adjourn the meeting from time to time, without notice other than announcement at the meeting, until a quorum shall be present or represented. At such adjourned meeting at which a quorum shall be present or represented any business may be transacted which might have been transacted at the meeting as originally notified.

Section 8. When a quorum is present or represented at any meeting, the vote of the holders of a majority of the stock having voting power, present in person or represented by proxy, shall decide any question brought before such meeting, unless the question is one upon which, by express provision of the statutes or of the articles of incorporation or of these regulations, a different vote is required, in which case such express provision shall govern and control the decision of such question.

Section 9. At every meeting of shareholders, each outstanding share having voting power shall entitle the holder thereof to one vote on each matter properly submitted to the shareholders, subject to the provisions with respect to cumulative voting set forth in this section. If notice in writing is given by any shareholder to the president, a vice president or the: secretary, not less than forty-eight hours before the time fixed for holding a meeting of the shareholders for the purpose of electing directors if notice of such meeting shall have been given at least ten days prior thereto, and otherwise not less than twenty-four hours before such time, that he desires that the voting at such election shall be cumulative, and if an announcement of the giving of such

notice is made upon the convening of the meeting by the chairman or secretary of by or on behalf of the shareholders giving such notice, each shareholder shall have the right to cumulate such voting power as he possesses and to give one candidate as many votes as the number of directors to be elected multiplied by the number of his votes equals, or to distribute his votes on the same principle among two or more candidates, as he sees fit. A shareholder shall be entitled to vote even though his shares have not been fully paid, but shares upon which an installment of the purpose price is overdue and unpaid shall not be voted.

Section 10. A person who is entitled to attend a shareholders' meeting, to vote thereat, or to execute consents, waivers, or releases, may be represented at such meeting or vote thereat, and execute consents, waivers, and releases, and exercise any of his other rights, by proxy or proxies appointed by a writing signed by such person. A telegram or cablegram appearing to have been transmitted by such person, or a photographic, photo static, or equivalent reproduction of a writing, appointing a proxy is sufficient writing. No appointment of a proxy shall be valid after the expiration of eleven months after it is made unless the writing specifies the date on which it is to expire or the length of time it is to continue in force.

Section 11. Unless the articles or these regulations prohibit the authorization or taking of any action of the shareholders without a meeting, any action which may be authorized or taken at a meeting of the shareholders may be authorized or taken without a meeting with the affirmative vote or approval of, and in a writing or writings signed by all the shareholders who would be entitled to notice of a meeting of the shareholders held for such purpose, which writing or writings shall be filed with or entered upon the records of the corporation.

ARTICLE III
DIRECTORS

Section 1. The number of directors, which shall not be less than three, may be fixed or changed at a meeting of shareholders called for the purpose of electing directors. The first board shall consist of three directors. Except where the law, the articles of incorporation, or these regulations require any action to be authorized or taken by shareholders, all of the authority of the corporation shall be exercised by the directors. The directors shall be elected at the annual meeting of shareholders, except as provided in Section 2 of this article, and each director shall hold office until the next annual meeting of the shareholders and until his successor is elected and qualified, or until his earlier resignation, removal from office, or death. When the annual meeting is not held or directors are not elected thereat, they may be elected at a special meeting called for that purpose. Directors need not be shareholders.

Section 2. If the office of any director or directors becomes vacant by reason of death, resignation, retirement, disqualification, removal from office, or otherwise, the remaining directors, though less than a quorum, shall by a vote of a majority of their number, choose a successor or successors, who shall hold office for the unexpired term in respect to which such vacancy has occurred.

Section 3. For their own government the directors may adopt by-laws not inconsistent with the articles of incorporation or these regulations.

Section 4. The directors may hold their meeting, and keep the books of the corporation, outside the State of Ohio, at such places as they may from time to time determine but, if no transfer agent is appointed to act for the corporation in Ohio, it shall keep an office in Ohio at which shares shall be transferable and at which it shall keep books in which shall be recorded the names and addresses of all shareholders and all transfer of shares.

COMMITTEES

Section 5. The directors may at any time elect three or more of their number as an executive committee or other committee, which shall, in the interval between meetings of the board of directors, exercise such powers and perform such duties as may from time to time be prescribed by the board of directors. Any such committee shall be subject at all times to the control and direction of the board of directors. Unless otherwise ordered by the board of directors, any such committee may act by a majority of its members at a meeting or by a writing or writings signed by all its members. An act or authorization of an act by any such committee within the authority delegated to it shall be as effective for all purposes as the act or authorization of the board of directors.

Section 6. The committee shall keep regular minutes of their proceedings and report the same to the board when required.

COMPENSATION OF DIRECTORS

Section 7. Directors, as such, shall not receive any stated salary for their services, but, by resolution of the board, a fixed sum, and expenses of attendance if any, may be allowed for attendance at each regular or special meeting of the board; provided that nothing herein contained shall be construed to preclude any director from serving the corporation in any other capacity and receiving compensation therefore.

Section 8. Member of the executive committee or other committees may be allowed like compensation for attending committee meetings.

MEETINGS OF THE BOARD

Section 9. The first meeting of each newly elected board shall be held at such time and place, either within or without the State of Ohio, as shall be fixed by the vote of the shareholders at the annual meeting, of which two days' notice shall be delivered personally or sent by mail or telegram to each newly elected director. Such meeting may be held at any place or time as may be fixed by the consent in writing of all the directors, given either before or after the meeting.

Section 10. The first meeting of each newly elected board other than the board first elected shall be held at such time and place, either within or without the State of Ohio, as shall be fixed by the vote of the shareholders at the annual meeting, and no notice of such meeting shall be necessary to the newly elected directors in order legally to constitute the meeting, provided a quorum shall be present, or they may meet at such place and time as shall be fixed by the consent in writing of all the directors given either before or after the meeting.

Section 11. Regular meetings of the board may be held at such time and place, either within or without the State of Ohio, as shall be determined by the board.

Section 12. Special meetings of the board may be called by the president, any vice president, or by two directors on two days' notice to each director, either delivered personally or sent by mail, telegram or cablegram. The notice need not specify the purposes of the meeting.

Section 13. At all meetings of the board two directors shall be necessary and sufficient to constitute a quorum for the transaction of business, and the act of a majority of the directors present at any meeting at which there is a quorum shall be the act of the board of directors, except as may be otherwise specifically provided by statute or by the articles of incorporation or by these regulations. If a quorum shall not be present at any meeting of directors, the directors present thereat may adjourn the meeting from time to time, until a quorum shall be present. Notice of adjournment of a meeting need not be given to absent directors if the time and place are fixed at the meeting adjourned.

Section 14. Unless the articles or these regulations prohibit the authorization or taking of any action of the directors without a meeting, any action which may be authorized or taken at a meeting of the directors may be authorized or taken without a meeting with the affirmative vote or approval of, and in a writing or writings signed by all the directors, which writing or writings shall be filed with or entered upon the records of the corporation.

REMOVAL OF DIRECTORS

Section 15. All the directors, or all the directors of a particular class, if any, or any individual director may be removed from office, without assigning any cause, by the vote of the holders of a majority of the voting power entitling them to elect directors in place of those to be removed, provided that unless all the directors, or all the directors of a particular class, if any, are removed, no individual director shall be removed in case the votes of a sufficient number of shares are cast against his removal which, if cumulatively voted at an election of all the directors, or all the directors of a particular class, if any, as the case may be, would be sufficient to elect at least one director. In case of any such removal, a new director may be elected at the same meeting for the unexpired term of each director removed. Failure to elect a director to fill the unexpired term of any director removed shall be deemed to create a vacancy in the board.

ARTICLE IV
NOTICES

Section 1. Notices to directors and shareholders shall be in writing and delivered personally or mailed to the directors or shareholders at their addresses appearing on the books of the corporation. Notice by mail shall be deemed to be given at the time when the same shall be mailed. Notice to directors and shareholders may also be given by telegram or telephone.

Section 2. Notice of the time, place and purposes of any meeting of shareholders or directors as the case may be, whether required by law, the articles of incorporation or these regulations, may be waived in writing, either before or after the holding of such meeting, by any

shareholder, or by any director, which writing shall be filed with or entered upon the records of the meeting.

ARTICLE V
OFFICERS

Section 1. The officers of the corporation shall be chosen by the directors and shall be a president, a vice president, a secretary and a treasurer. The board of directors may also choose additional vice presidents, and one or more assistant secretaries and assistant treasurers. Any two or more of such offices except the offices of president and vice president, may be held by the same person, but no officer shall executive, acknowledge or verify any instrument in more than one capacity if such instrument is required by law or by these regulations to be executed, acknowledged or verified by any two or more officers.

Section 2. The board of directors at its first meeting after each annual meeting of shareholders shall choose a president, a vice president, a secretary and a treasurer, none of whom need be a member of the board.

Section 3. The board may appoint such other officers and agents as it shall deem necessary, who shall hold their offices for such terms and shall exercise such powers and perform such duties as shall be determined from time to time by the board.

Section 4. The salaries of all officers and agents of the corporation shall be fixed by the board of directors.

Section 5. The officers of the corporation shall hold office until their successors are chosen and qualify in their stead. Any officer elected or appointed by the board of directors may be removed at any time by the affirmative vote of a majority of the whole board of directors. If the office of any officer or officers becomes vacant for any reason, the vacancy shall be filled by the board of directors.

THE PRESIDENT

Section 6. The president shall be the chief executive officer of the corporation; he shall preside at all meetings of the shareholders and directors, shall be ex officio a member of the executive committee or any other committee, shall have general and active management of the business of the corporation, and shall see that all orders and resolutions of the board are carried into effect.

Section 7. He shall execute bonds, mortgages and other contracts requiring a seal, under the seal of the corporation, except where required or permitted by law to be otherwise signed and executed and except where the signing and execution thereof shall be expressly delegated by the board of directors to some other office or agent of the corporation.

THE VICE PRESIDENTS

Section 8. The vice presidents in the order of their seniority, unless otherwise determined by the board of directors, shall, in the absence or disability of the president, perform

the duties and exercise the powers of the president. They shall perform such other duties and have such other powers as the board of directors may from time to time prescribe.

THE SECRETARY AND ASSISTANT SECRETARIES

Section 9. The secretary shall attend all meetings of the board of directors and all meetings of the shareholders and record all the proceedings of the meetings of the corporation and of the board of directors in a book to be kept for that purpose and shall perform like duties for the standing committees when required. He shall give, or cause to be given, notice of all meetings of the shareholders and special meetings of the board of directors, and shall perform such other duties as may be prescribed by the board of directors or president, under whose supervision he shall be. He shall keep in safe custody the seal of the corporation and, when authorized by the board of directors, affix the same to any instrument requiring it and, when so affixed, it shall be attested by his signature or by the signature of the treasurer or an assistant secretary.

Section 10. The assistant secretaries in the order of their seniority, unless otherwise determined by the board of directors, shall, in the absence or disability of the secretary, perform the duties and exercise the powers of the secretary. They shall perform such other duties and have such other powers as the board of directors may from time to time prescribe.

THE TREASURER AND ASSISTANT TREASURERS

Section 11. The treasurer shall have the custody of the corporate funds and securities and shall keep full and accurate accounts of receipts and disbursements in books belonging to the corporation and shall deposit all moneys and other valuable effects in the name and to the credit of the corporation in such depositories as may be designated by the board of directors.

Section 12. He shall disburse the funds of the corporation as may be ordered by the board of directors, taking proper vouchers for such disbursements, and shall render to the president and the board of directors, at its regular meetings, or when the board of directors so requires; an account of all his transactions as treasurer and of the financial condition of the corporation.

Section 13. If required by the board of directors, he shall give the corporation a bond (which shall be renewed every six years) in such sum and with such surety or sureties as shall be satisfactory to the board of directors for the faithful performance of the duties of his office and for the restoration to the corporation, in case of his death, resignation, retirement or removal from office, of all books, papers, vouchers, money and other property of whatever kind in his possession or under his control belonging to the corporation.

Section 14. The assistant treasurers in the order of their seniority, unless otherwise determined by the board of directors, shall, in the absence or disability of the treasurer, perform the duties and exercise the powers of the treasurer. They shall perform such other duties and have such other powers as the board of directors may from time to time prescribe.

ARTICLE VI
CERTIFICATES OF STOCK

Section 1. Each holder of shares is entitled to one or more certificates, signed by the president or a vice president and by the secretary, an assistant secretary, the treasurer, or an assistant treasurer of the corporation, which shall certify the number and class of shares held by him in the corporation. Every certificate shall state that the corporation is organized under the laws of Ohio, the name of the person to whom the shares represented by the certificate are issued, the number of shares represented by the certificate, and the par value of each share represented by it or that the shares are without par value, and if the shares are classified, the designation of the class, and the series, if any, of the shares represented by the certificate. There shall also be stated on the face or back of the certificate the express terms, if any, of the shares represented by the certificate and of the other class or classes and series of shares, if any, which the corporation is authorized to issue, or a summary of such express terms, or that the corporation will mail to the shareholder a copy of such express terms without charge within five days after receipt of written request therefore, or that a copy of such express terms is attached to and by reference made a part of such certificate and that the corporation will mail to the shareholder a copy of such express terms without charge within five days after receipt of written request therefore if the copy has become detached from the certificate.

Section 2. In case of any restriction on transferability of shares or reservation of lien thereon, the certificate representing such shares shall set forth on the face or back thereof the statements required by the General Corporation law of Ohio to make such restrictions or reservations effective.

Section 3. Where a certificate is countersigned by an incorporated transfer agent or registrar, the signature of any of the officers specified in Section 1 of this article may be facsimile, engraved, stamped, or printed. Although any officer of the corporation, whose manual or facsimile signature has been placed upon such certificate, ceases to be such officer before the certificate is delivered, such certificate nevertheless shall be effective in all respects when delivered.

LOST CERTIFICATES

Section 4. The board of directors may direct a new certificate or certificates to be issued in place of any certificate or certificates theretofore issued by the corporation alleged to have been lost or destroyed, upon the making of an affidavit of that fact by the person claiming the certificate of stocks to be lost or destroyed. When authorizing such issue of a new certificate or certificates, the board of directors may, in its discretion and as a condition precedent to the issuance thereof, require the owner of such lost or destroyed certificate or certificates, or his legal representative, to advertise the same in such manner as it shall require and/or to give the corporation a bond in such sum as it may direct as indemnity against any claim that may be made against the corporation with respect to the certificate alleged to have been lost or destroyed.

TRANSFERS OF STOCK

Section 5. Upon surrender to the corporation or the transfer agent of the corporation of a certificate for shares duly endorsed or accompanied by proper evidence of succession, assignment or authority to transfer, it shall be the duty of the corporation to issue a new certificate to the person entitled thereto, cancel the old certificate and record the transaction upon its books.

Section 6. For any lawful purpose, including without limitation, (1) the determination of the shareholders who are entitled to receive notice of or to vote at a meeting of shareholders; (2) receive payment of any dividend or distribution; (3) receive or exercise rights of purchase or of subscription for, or exchange or conversion of, shares or other securities, subject to contract rights with respect thereto; or (4) participate in the execution of written consents, waivers, or releases, the directors may fix a record date which shall not be a date earlier than the date on which the record date is fixed and, in the cases provided for in clauses (1), (2) and (3) above, shall not be more than sixty days, preceding the date of the meeting of the shareholders, or the date fixed for the payment of any dividend or distribution, or the date fixed for the receipt or the exercise of rights, as the case may be.

Section 7. If a meeting of the shareholders is called by persons entitled to call the same, or action is taken by shareholders without a meeting, and if the directors fail or refuse, within such time as the persons calling such meeting or initiating such other action may request, to fix a record date for the purpose of determining the shareholders entitled to receive notice of or vote at such meeting, or to participate in the execution of written consents, waivers, or releases, then the persons calling such meeting or initiating such other action may fix a record date for such purposes, subject to the limitations set forth in Section 6 of this article.

Section 8. The record date for the purpose of clause (1) of Section 6 of this article shall continue to be the record date for all adjournments of such meeting, unless the directors or the persons who shall have fixed the original record date shall, subject to the limitations set forth in Section 6 of this article, fix another date, and in case a new record date is so fixed, notice thereof and of the date to which the meeting shall have been adjourned shall be given to shareholders of record as of said date in accordance with the same requirements as those applying to a meeting newly called.

Section 9. The directors may close the share transfer books against transfers of shares during the whole or any part of the period provided for in Section 6 of this article, including the date of the meeting of the shareholders and the period ending with the date, if any, to which adjourned. If no record date is fixed therefore, the record date for determining the shareholders who are entitled to receive notice of, or who are entitled to vote at, a meeting of shareholders, shall be the date next preceding the day on which notice is given, or the date next preceding the day on which the meeting is held, as the case may be.

Section 10. The corporation shall be entitled to recognize the exclusive rights of a person registered on its books as the owner of shares to receive dividends, and to vote as such owner, and shall not be bound to recognize any equitable or other claim to or interest in such

share or shares on the part of any other person, whether or not it shall have express or other notice thereof, except as otherwise provided by the laws of the State of Ohio.

ARTICLE VII
GENERAL PROVISIONS
DIVIDENDS

Section 1. The board of directors may declare and the corporation may pay dividends and distributions on its outstanding shares in cash, property, or its own shares pursuant to law and subject tot the provisions of its articles of incorporation.

Section 2. Before payment of any dividend or distribution, there may be set aside out of any funds of the corporation available for dividends or distributions such sum or sums as the directors from time to time, in their absolute discretion, think proper as a reserve fund to meet contingencies, or for equalizing dividends or distributions, or for repairing or maintaining any property of the corporation, or for such other purposes as the directors shall think conducive to the interests of the corporation, and the directors may modify or abolish any such reserve in the manner in which it was created.

ANNUAL STATEMENT

Section 3. At the annual meeting of shareholders, or the meeting held in lieu of it, the corporation shall prepare and lay before the shareholders a financial statement consisting of: A balance sheet containing a summary of the assets, liabilities, stated capital, if any, and surplus (showing separately any capital surplus arising from unrealized appreciation of assets, other capital surplus, and earned surplus) of the corporation as of a date not more than four months before such meeting; if such meeting is an adjourned meeting, the balance sheet may be as of a date not more than four months before the date of the meeting as originally convened; and a statement of profit and loss and surplus, including a summary of profits, dividends or distributions paid, and other changes in the surplus accounts of the corporation for the period commencing with the date marking the end of the period for which the last preceding statement of profit and loss required under this section was made and ending with the date of the balance sheet, or in the case of the first statement of profit and loss, from the incorporation of the corporation to the date of the balance sheet.

The financial statement shall have appended to it a certificate signed by the president or a vice president or the treasurer or an assistant treasurer or by a public accountant or firm of public accountants to the effect that the financial statement presents fairly the position of the corporation and the results of its operations in conformity with generally accepted accounting principles applied on a basis consistent for the period covered thereby, or to the effect that the financial statements have been prepared on the basis of accounting practices and principles that are reasonable in the circumstances.

Section 4. Upon the written request of any shareholder made within sixty days after notice of any such meeting has been given, the corporation, not later than the fifth day after receiving such request or the fifth day before such meeting, whichever is the later date, shall mail to such shareholder a copy of such financial statement.

CHECKS

Section 3. All checks or demands for money and notes of the corporation shall be signed by such officer or officers or such other person or persons as the board of directors may from time to time designate.

FISCAL YEAR

Section 4. The fiscal year of the corporation shall be fixed by resolution of the board of directors.

SEAL

Section 5. The corporate seal shall have inscribed thereon the name of the corporation, the year of its organization and the words "Corporate Seal, Delaware". The seal maybe used by causing it or a facsimile thereof to be impressed or affixed or reproduced or otherwise.

INDEMNIFICATION

Section 6. The corporation shall indemnify its officers, directors, employees and agents to the extent permitted by the General Corporation Law of Delaware.

ARTICLE VIII
AMENDMENTS

Section 1. These By-Laws may be altered, amended or repealed or new By-Laws may be adopted by the shareholders or by the board of directors, when such power is conferred upon the board of directors by the certificate of incorporation at any regular meeting of the shareholders or of the board of directors or at any special meeting of the shareholders or of the board of directors if notice of such alteration, amendment, repeal or adoption of new by-laws be contained in the notice of such special meeting. If the power to adopt, amend or repeal by-laws is conferred upon the board of directors by the certificate of incorporation it shall not divest or limit the power of the shareholders to adopt, amend or repeal by-laws

Exhibit 3.77

CERTIFICATE OF AMENDMENT
STOCK CORPORATION
Office of the Secretary of the State
30 Trinity Street / P.O. Box 150470 / Hartford, CT 06115-0470 / Rev. 12/1999

Space

FILING #0002533869 PG 01 OF 02 VOL B-00556
FILED 02/13/2003 09:15 AM PAGE 00100
SECRETARY OF THE STATE
CONNECTICUT SECRETARY OF THE STATE

1. NAME OF CORPORATION
International Microwave Corporation

2. THE CERTIFICATE OF INCORPORATION IS (CHECK A., B., OR C.):

X A. AMENDED.

B. AMENDED AND RESTATED.

C. RESTATED.

3. TEXT OF EACH AMENDMENT / RESTATEMENT

RESOLVED, that Article First of the Amended Certificate of Incorporation of the Corporation be amended to read as follows:

"FIRST: The name of the corporation is L-3 Communications IMC Corporation."

(PLEASE REFERENCE AN 8 1/2 X 11 ATTACHMENT IF ADDITIONAL SPACE IS NEEDED)

Space

FILING #0002533869 PG 02 OF 02 VOL B-00556
FILED 02/13/2003 09:15 AM PAGE 00101
SECRETARY OF THE STATE

CONNECTICUT SECRETARY OF THE STATE

4. VOTE INFORMATION (CHECK A., B. OR C.):

X A. THE RESOLUTION WAS APPROVED BY SHAREHOLDERS AS FOLLOWS:

(SET FORTH ALL VOTING INFORMATION REQUIRED BY CONN. GEN. STAT. SECTION 33-800 AS AMENDED IN THE SPACE PROVIDED BELOW)

The Corporation's issued and outstanding capital stock consists solely of 200 shares of common stock, par value $0.01 per share. The resolution was approved by stockholders of record representing all 200 shares of the Corporation's common stock.

_____B. THE AMENDMENT WAS ADOPTED BY THE BOARD OF DIRECTORS WITHOUT SHAREHOLDER ACTION.
NO SHAREHOLDER VOTE WAS REQUIRED FOR ADOPTION.

_____C. THE AMENDMENT WAS ADOPTED BY THE INCORPORATORS WITHOUT SHAREHOLDER ACTION.
NO SHAREHOLDER VOTE WAS REQUIRED FOR ADOPTION.

5. EXECUTION:

Dated this 5th day of February, 2003

PRINT OR TYPE NAME OF SIGNATORY	CAPACITY OF SIGNATORY	SIGNATURE
Christopher C. Cambria	Secretary	/s/ Christopher C. Cambria

CERTIFICATE OF INCORPORATION

OF

IMC ACQUISITION CORP.

The undersigned, for the purpose of forming a corporation under the provisions of the Stock Corporation Act of the State of Connecticut, does hereby certify that:

FIRST: The name of the corporation is IMC ACQUISITION CORP.

SECOND: The nature of the business to be transacted, or the purposes to be promoted or carried out by the corporation.

To engage in any lawful act or activity for which corporations may be formed under the Stock Corporation Act.

THIRD: The authorized number of shares of the corporation is two hundred, all of which are designated as common shares and are of a par value of one cent each.

FOURTH: No holder of any of the shares of the corporation shall be entitled as of right to purchase or subscribe for any unissued shares of any class or any additional shares of any class to be issued by reason of any increase of the authorized shares of the corporation, or bonds, certificates of indebtedness, debentures, or other securities convertible into shares of the corporation or carrying any right to purchase shares of any class, but any such unissued shares or such additional authorized issue of any shares or of other securities convertible into shares, or carrying any right to purchase shares, may be issued and disposed of pursuant to resolution of the Board of Directors to such persons, firms, corporations, or associations and upon such terms as may be deemed advisable by the Board of Directors in the exercise of its discretion.

FIFTH: The minimum amount of stated capital with which the corporation shall commence business is one thousand dollars.

SIXTH: For the regulation and management of the affairs of the corporation, it is further provided:

1. Whenever any provision of the Stock Corporation Act shall otherwise require for the approval of any specified corporate action the authorization of at least two-thirds of the voting power of shareholders entitled to vote, any such corporate action shall be approved by the authorization of at least a majority of the voting power of the shareholders entitled to vote; and whenever the corporation shall have one or more classes or series of shares which are denied voting power under the Certificate of Incorporation but the authorization of at least two-thirds of the voting power of said class or series is otherwise required for the approval of any specified corporate action under the Stock Corporation Act, any such corporate action shall be approved by said class or series by the authorization of at least a majority of the voting power of each such class and of each such series.

2. To the extent permitted by the Stock Corporation Act, and in conformity with the provisions thereof, any corporate action permitted to be taken at a meeting of shareholders entitled to vote may be taken without a meeting by a consent in writing signed by the holders of at least a majority of the voting power of each class entitled to vote.

3. Whenever the corporation shall be engaged in the business of exploiting natural resources, dividends may be declared and paid in cash or property and charged against depletion reserves.

4. To the extent permitted by the Stock Corporation Act, and in conformity with the provisions thereof, distributions in cash or property may be made out of capital surplus available therefor without the authorization of the shareholders of any class of the corporation.

5. To the extent permitted by the Stock Corporation Act, and in conformity with the provisions thereof, acquisitions of its own shares out of unreserved and unrestricted capital surplus may be made by the corporation without the authorization of the shareholders of any class of the corporation.

6. One or more or all of the directors of the corporation may be removed for cause or without cause by the shareholders entitled to vote for their election. The Board of Directors shall have power to remove any director for cause and to suspend any director pending a final determination that cause exists.

7. The corporation shall, to the fullest extent permitted by Section 33-320a of the Stock Corporation Act, as the same may be amended and supplemented, indemnify any and all persons whom it shall have power to indemnify under said section from and against any and all of the expenses, liabilities, or other matters referred to in or covered by said section.

I, the undersigned, do hereby declare under the penalties of false statement that the statements contained in the foregoing document are true and do hereby sign this document at New York, New York on June 19, 1989.

/s/ Devi Sakhichand

Devi Sakhichand, Incorporator

CERTIFICATE

AMENDING OR RESTATING CERTIFICATE
OF INCORPORATION BY ACTION OF [ ] INCORPORATORS [ ] BOARD OF DIRECTORS [X] BOARD OF DIRECTORS AND SHAREHOLDERS (Stock Corporation) [ ] BOARD OF DIRECTORS AND MEMBERS (Nonstock Corporation)
41-38

For office use only

STATE OF CONNECTICUT
SECRETARY OF THE STATE

ACCOUNT NO.

INITIALS

1. NAME OF CORPORATION: IMC ACQUISITION CORP. DATE: September 15, 1989

2. THE CERTIFICATE OF INCORPORATION IS [ ] A. AMENDED ONLY [ ] B. AMENDED AND RESTATED [ ] C. RESTATED ONLY BY THE FOLLOWING RESOLUTIONS

RESOLVED, that the officers of IMC Acquisition Corp. (the "Corporation") are authorized and directed to take any and all steps necessary to amend Article "FIRST" of the Certificate of Incorporation of the Corporation by deleting such Article in its entirety and by substituting the following in its place and stead:

"FIRST: The name of the corporation is INTERNATIONAL MICROWAVE CORPORATION."

3. (Omit if 2A is checked.)

(a) THE ABOVE RESOLUTION MERELY RESTTES AND DOES NOT CHANGE THE PROVISIONS OF THE ORIGINAL CERTIFICATE OF INCORPORATION AS SUPPLEMENTED AND AMENDED TO DATE, EXCEPT AS FOLLOWS: (Indicate amendments made, if any; if note, so indicate.)

(b) OTHER THAN AS INDICATED IN PAR. 3(A), THERE IS NO DISCREPANCY BETWEEN THE PROVISIONS OF THE ORIGINAL CERTIFICATE OF INCORPORATION AS SUPPLEMENTED TO DATE, AND THE PROVISIONS OF THIS CERTIFICATE RESTATING THE CERTIFICATE OF INCORPORATION.

BY ACTION OF THE INCORPORATORS

[ ] 4. THE ABOVE RESOLUTION WAS ADOPTED BY VOTE OF AT LEAST TWO-THIRDS OF THE INCORPORATORS BEFORE THE ORGANIZATION MEETING OF THE CORPORATION, AND APPROVED IN WRITING BY ALL SUBSCRIBERS (if any) FOR SHARES OF THE CORPORATION (or if nonstock corporation, by all applicants for membership entitled to vote, if any.)

WE (at least two-thirds of the incorporators) HEREBY DECLARE, UNDER THE PENALTIES OF FALSE STATEMENT THAT THE STATEMENTS MADE IN THE FOREGOING CERTIFICATE ARE TRUE.

SIGNED SIGNED SIGNED

APPROVED

(All subscribers, or, if nonstick corporation, all applicants for membership entitled to vote, if none, so indicate)

SIGNED SIGNED SIGNED

(Over)

(Continued)

BY ACTION OF BOARD OF DIRECTORS

[ ] 4. (Omit if 2.C is checked) THE ABOVE RESOLUTION WAS ADOPTED BY THE BOARD OF DIRECTORS ACTING ALONE,

[ ] THERE BEING NO SHAREHOLDERS OR SUBSCRIBERS.
[ ] THE CORPORATION BEING A NONSTOCK CORPORATION AND HAVING NO MEMBERS AND NO APPLICANTS FOR MEMBERSHIP ENTITLED TO VOTE ON SUCH RESOLUTION.
[ ] THE BOARD OF DIRECTORS BEING SO AUTHORIZED PURSUANT TO SECTION 33-341, CONN. G.S. AS AMENDED:

5. THE NUMBER OF AFFIRMATIVE VOTES REQUIRED TO ADOPT SUCH RESOLUTION IS:	6. THE NUMBER OF DIRECTORS' VOTES IN FAVOR OF THE RESOLUTION WAS:

WE HEREBY DECLARE, UNDER THE PENALTIES OF FALSE STATEMENT THAT THE STATEMENTS MADE IN THE FOREGOING CERTIFICATE ARE TRUE.

NAME OF PRESIDENT OR VICE PRESIDENT (Print or Type)	NAME OF SECRETARY OR ASSISTANT SECRETARY (Print or Type)
SIGNED (President or Vice President)	SIGNED (Secretary or Assistant Secretary)

BY ACTION OF BOARD OF DIRECTORS AND MEMBERS

[X] 4. THE ABOVE RESOLUTION WAS ADOPTED BY THE BOARD OF DIRECTORS AND BY SHAREHOLDERS.
5. VOTE OF SHAREHOLDERS:
(a) (Use if no shares are required to be voted as a class.)

NUMBER OF SHARES ENTITLED TO VOTE -100-	TOTAL VOTING POWER -100-	VOTE REQUIRED FOR ADOPTION -100-	VOTE FAVORING ADOPTION -100-

(b) (If the shares of any class are entitled to vote as a class, indicate the designation and number of outstanding shares of each such class, the voting power thereof, and the vote of each such class for the amendment resolution.)

WE HEREBY DECLARE, UNDER THE PENALTIES OF FALSE STATEMENT THAT THE STATEMENTS MADE IN THE FOREGOING CERTIFICATES ARE TRUE.

NAME OF PRESIDENT OR VICE PRESIDENT (Print or Type)	NAME OF SECRETARY OR ASSISTANT SECRETARY (Print or Type)
Joseph Profit, Sr., President	Daniel B. Mitchell, Secretary
SIGNED (President or Vice President)	SIGNED (Secretary or Assistant Secretary)
/s/ Joseph Profit, Sr., President	/s/ Daniel B. Mitchell, Srecretary

BY ACTION OF BOARD OF DIRECTORS AND MEMBERS

[X] 4. THE ABOVE RESOLUTION WAS ADOPTED BY THE BOARD OF DIRECTORS AND BY MEMBERS.
5. VOTE OF MEMBERS:
(a) (Use if no members are required to be voted as a class.)

NUMBER OF MEMBERS VOTING	TOTAL VOTING POWER	VOTE REQUIRED FOR ADOPTION	VOTE FAVORING ADOPTION

(b) (If the members of any class are entitled to vote as a class, indicate the designation and number of members of each such class, the voting power thereof, and the vote of each such class for the amendment resolution.)

WE HEREBY DECLARE, UNDER THE PENALTIES OF FALSE STATEMENT THAT THE STATEMENTS MADE IN THE FOREGOING CERTIFICATES ARE TRUE.

NAME OF PRESIDENT OR VICE PRESIDENT (Print or Type)	NAME OF SECRETARY OR ASSISTANT SECRETARY (Print or Type)
SIGNED (President or Vice President)	SIGNED (Secretary or Assistant Secretary)

FILING FEE	CERTIFICATION FEE	TOTAL FEES
$	$	$

SIGNED (FOR SECRETARY OF THE STATE)

CERTIFIED COPY SENT ON (Date) INITIALS

TO

CARD PROOF

APPOINTMENT OF STATUTORY AGENT FOR SERVICE
DOMESTIC CORPORATION
61-6 Rev. 6/88

SECRETARY OF THE STATE

State of Connecticut

Name of Corporation: IMC ACQUISITION CORP. Complete All Blanks

The above corporation appoints as its statutory agent for service, one of the following:

Name of Natural Person Who is Resident of Connecticut	Business Address Residence Address	Zip Code Zip Code
Name of Connecticut Corporation	Address of Principal Office in Conn. (If none, enter address of appointee's statutory agent for service)	
Name of Corporation (Not organized under the Laws of Conn.*) The Prentice-Hall Corportion Systems, Inc.	Address of Principal Office in Conn. (If none, enter ``Secretary of the State of Conn.'' 30 High Street Hartford, Connecticut 06103	

* Which has procured a Certificate of Authority to transact business or conduct affairs in this state

AUTHORIZATION

	NAME OF INCORPORATOR (PRINT OR TYPE)	SIGNED (INCORPORATOR)	DATE
ORIGINAL APPOINTMENT (MUST BE SIGNED BY A MAJORITY OF INCORPORATORS)	DEVI SAKHICHAND	/S/ DEVI SAKHICHAND	
	NAME OF INCORPORATOR (PRINT OR TYPE)	SIGNED (INCORPORATOR)	
	NAME OF INCORPORATOR (PRINT OR TYPE)	SIGNED (INCORPORATOR)	

	NAME OF PRESIDENT, VICE PRESIDENT OR SECRETARY	DATE
SUBSEQUENT APPOINTMENT	SIGNED (PRESIDENT, VICE PRESIDENT OR SECRETARY)	

ACCEPTANCE: NAME OF STATUTORY AGENT FOR SERVICE (PRINT OR TYPE) SIGNED (STATUTORY AGENT FOR SERVICE)

The Prentice-Hall Corporation System, Inc. By Grant M. Dawson (secretary)

FOR OFFICIAL USE ONLY REC: CC:

PLEASE PROVIDE FILER'S NAME AND COMPLETE ADDRESS FOR MAILING RECEIPT

INTERNATIONAL MICROWAVE CORPORATION

UNANIMOUS WRITTEN CONSENT
OF
THE SOLE SHAREHOLDER
TO ACTION IN LIEU OF MEETING

EFFECTIVE DATE: AS OF NOVEMBER 8, 2002

The undersigned, L-3 Communications Corporation, a Delaware corporation, being the sole shareholder of International Microwave Corporation, hereby consents to the adoption of the following resolutions and to the taking of the actions contemplated thereby:

RESOLVED, that Section 4.03 of the By-laws of the Corporation be, and it hereby is, amended to read as follows:

"NUMBER OF DIRECTORS

4.03 The number of Directors of the corporation that shall constitute the whole board of directors shall be one (1). A director need not be a resident of the State of Connecticut or a shareholder of the corporation. A director shall hold office until his or her successor shall have been duly elected and qualified.";

RESOLVED, that the foregoing amendment to the By-laws of the Corporation be, and such amendment hereby is, adopted, authorized, approved and declared advisable and in the best interest of the Corporation, effective as of the date and year first indicated above, and the Secretary of the Corporation is hereby directed to cause a copy of such instrument to be inserted in the minute book of the Corporation;

RESOLVED, that Christopher C. Cambria be, and hereby is, elected as the sole director of the Corporation, to serve or hold office until the next annual meeting of shareholders of the Corporation and until his successor is elected and shall have qualified or until his earlier resignation or removal;

RESOLVED, that the Secretary or Assistant Secretary of the Corporation is hereby authorized to certify and deliver, to any person to whom such certification and delivery may be deemed necessary or appropriate in the opinion of such Secretary or Assistant Secretary, a true copy of the foregoing resolutions; and

RESOLVED, that a copy of this written consent be filed with the minutes of proceedings of the Corporation.

IN WITNESS WHEREOF, the undersigned, being the sole shareholder of the Corporation, has executed this written consent as of the date and year first above written.

L-3 COMMUNICATIONS CORPORATION

By:/s/ Christopher C. Cambria

Name: Christopher C. Cambria
Title: Secretary

Exhibit 3.78

INTERNATIONAL MICROWAVE CORPORATION

BYLAWS

ARTICLE ONE

OFFICES

PRINCIPAL OFFICE

1.01 The principal office of the corporation is located at 25 Van Zant Street, Norwalk, Connecticut 06855.

OTHER OFFICES

1.02 The corporation may also have offices at such other places, within or without the State of Connecticut, where the corporation is qualified to do business, as the Chairman of the Board, may from time to time designate or as the business of the corporation may require upon the direction of the Board of Director[s].

ARTICLE TWO

SHAREHOLDERS

CLOSING TRANSFER BOOKS

2.01 For the purpose of taking a record of the shareholders entitled to notice of or to vote at any meeting shareholders, or shareholders entitled to receive payment of any dividend, or in order, to make a determination of shareholders for any other proper purpose, the Chairman of the Board at the direction of the Board of Director[s] may provide that the share transfer books shall be closed for a stated period but not to exceed fifty days, in which case written or printed notice thereof shall be mailed at ten days before the closing thereof to each shareholder of record at the address appearing on the books of the corporation or supplied by him to the corporation for the purpose of notice.

DATE FOR RECORD OF SHAREHOLDERS

2.02 In lieu of closing the share transfer books, the Chairman of the Board at the direction of the Board of Director[s] may fix in advance a date as the record date for any such record of shareholders. Such date may not be earlier than the date on which it is fixed and in any case may not be more than fifty days and, for a meeting of shareholders, not less than ten days prior to the date on which the particular action, requiring such determination of shareholders, is to be taken.

DATE OF NOTICE OR RESOLUTION FOR DETERMINATION OF SHAREHOLDERS

2.03 If the share transfer books are not closed and no record date is fixed for the determination of shareholders entitled to notice of or to vote at a meeting of shareholders, or shareholders entitled to receive payment of a dividend, the date on which notice of the meeting is mailed or

the date on which the resolution of the Board of Directors declaring such dividend is adopted, as the case may be, shall be the record date for such determination of shareholders.

ARTICLE THREE

SHAREHOLDERS' MEETINGS

PLACE OF MEETINGS

3.01 Meeting of shareholders shall be held at any place within or without the State of Connecticut fixed by the Board of Director[s]. In the absence of such designation, shareholders' meeting shall be held at the principal office of the corporation in the State of Connecticut.

TIME OF ANNUAL MEETING--BUSINESS TRANSACTED

3.02 The annual meeting of shareholders shall be held on the first Tuesday of the month of October or a day to be selected by the President each year, at 1:00 p.m. However, if that day falls on a legal holiday, then at the same time on the next business day. At the meetings, directors shall be elected, reports of the affairs of the corporation shall be considered, and, any other business may be transacted that is within the powers of the shareholders.

CALLING OF SPECIAL MEETINGS

3.03 Any persons who are entitled to call a special shareholders' meeting may do so by sending by registered mail, or personally delivering, a written request to the president, vice president, or secretary. Within ten (10) days of receipt of the request, the secretary of the corporation shall fix the date of the meeting and cause notice to be given to the shareholders entitled to vote that a meeting will be held. Nothing contained in this paragraph shall be construed as limiting, fixing or affecting the time or date when a meeting of shareholders called by action of the Board of Directors may be held.

PERSONS ENTITLED TO CALL SPECIAL MEETINGS

3.04 Special meeting of the shareholders may be called at any time by any of the following; the chairman of the board; the Chief Financial Officer; the vice president entitled to exercise the Chief Financial Officer's authority in case of the latter's absence, death, or disability; the Board of Directors by action at a meeting or a majority action without meeting; or the Executive Committee. Persons holding twenty-five percent of the outstanding shares entitled to vote at the meeting may also call special meetings.

NOTICE OF MEETING

3.05 Written notice of each shareholders' meeting shall be delivered to each shareholder of record entitled to vote at the meeting. The notice must be delivered personally or by mail, postage prepaid, and addressed to the shareholder at the address appearing on the corporation's books or supplied by the shareholder to the corporation for the purpose of notice. Notice shall be given by, or at the direction of, the president, the secretary, or the officer or persons calling the

meeting. In case of that officer's neglect or refusal to give the notice, it may be given by any director or shareholder.

TIME OF NOTICE

3.06 Except as provided in this paragraph, notice of any shareholders' meeting shall be delivered not less than ten (10) days nor more than fifty (50) days before the date of the meeting in accordance with Connecticut Corporate Law. If mailed, the notice shall be deemed to be delivered when deposited in the United states mail in accordance with Paragraph 3.05. In the case of a meeting to be held to consider a merger or consolidation, notice must be delivered not less than five (5) nor more than fifty (50) days before the date of the meeting.

CONTENTS OF NOTICE

3.07 The notice of any meeting of shareholders shall state the place, day, and hour of the meeting. The notice shall also state the general nature of the business to be transacted if it is a special meeting.

NOTICE OF ADJOURNED MEETING

3.08 When a shareholders' meeting is adjourned for thirty (30) days or more, notice of the adjourned meeting shall be given as in the case of an original meeting. When a meeting is adjourned for less than thirty (30) days, it is not necessary to give any notice of the time and place of the adjourned meeting or of the business to be transacted thereat other than by announcement at the meeting at which the adjournment is taken.

QUORUM OF SHAREHOLDERS

3.09 A majority of the outstanding shares, represented in person or by proxy, shall constitute a quorum at a meeting of shareholders. If a quorum is present, the affirmative vote of a majority of the shares represented at the meeting shall be the act of the shareholders, unless the vote of a greater number or voting by classes on the matter being voted upon is required by statute, the articles of incorporation, or these bylaws.

ADJOURNMENT FOR LACK OR LOSS OF QUORUM

3.10 In the absence of a quorum or with the withdrawal of enough shareholders to leave less than a quorum, any meeting of shareholders may be adjourned from time to time by the vote of a majority of the shares, the holders of which are either present in person or represented by proxy thereat, but no other business may be transacted. Meetings at which Directors are to be elected may be adjourned for periods not to exceed fifteen (15) days.

ADJOURNED MEETING

3.11 When any determination of shareholders entitled to vote at any meeting of shareholders has been made as provided in this Article, such determination shall apply to any adjournment thereof.

RECORD OF SHAREHOLDERS

3.12 The officer or agent having charge of the transfer book for shares of the corporation shall make, at least ten (10) days before each meeting of shareholders, a complete record of shareholders listing the shareholders entitled to vote at such meeting, arranged in alphabetical orders, with the address of and the number of shares held by each, which list, for a period of ten (10) days prior to such meeting, shall be kept on file at the principal office of the corporation and shall be subject to inspection by any shareholder at any time during usual business hours. Such list shall also be produced and kept open at the time and place of the meeting and shall be subject to the inspection of any shareholder during the whole time of the meeting. The original share ledger of transfer book, or a duplicate thereof kept in thin State, shall be prima facie evidence as to who are the shareholders entitled to examine such or share ledger or transfer book or to vote at any meeting of shareholders.

VOTING OF SHARES

3.13 Each outstanding share including shares not fully paid, regardless of class, shall be entitled to one vote on each matter submitted to a vote at a meeting of shareholders, except as otherwise provided in the article of incorporation.

CUMULATIVE VOTING

3.14 In all elections for Directors every shareholder shall have the right to vote, in share or by proxy, for the number of shares owned by him, for as many persons as there are Directors to be elected, or to cumulate said votes, and give one candidate as many votes as the number of Directors multiplied by the number of his share shall equal, or to distribute them on the same principle among as many candidates as he shall think fit.

VOTING BY VOICE AND BALLOT

3.15 Voting by shareholders in elections for Directors need not be by ballot unless a shareholder demands election by ballot at the election and before the voting begins.

PROXIES

3.16 A shareholder may vote either in person or by proxy executed in writing by the shareholder or by his duly authorized attorney-in-fact filed with the Secretary of the corporation. No proxy shall be valid after eleven (11) months from the date of its execution unless otherwise provided in the proxy.

WAIVER OF NOTICE

3.17 Whenever any notice whatever is required to be given a shareholder under law or under the provision of the article of incorporation or bylaws of the corporation, a waiver thereof in writing signed by the shareholder entitled to such notice, whether before or after the time for giving such notice, shall be deemed equivalent to the giving of such notice; however, in the case of special meetings, the business to be transacted and the purpose of the meeting shall be stated in the waiver of notice.

ACTION WITHOUT MEETING

3.18 Any action required by law to be taken at a meeting of the shareholders, or any other action which may be taken at a meeting of the shareholders, may be taken without a meeting if a consent in writing, setting forth the action so taken, shall be signed by all of the shareholders entitled to vote at a meeting for such purpose and filed with the Secretary of the corporation.

APPOINTMENT OF INSPECTORS OF ELECTIONS

3.19 In advance of any meeting of shareholders, the President may appoint inspectors of elections to act at such meeting or any adjournment thereof. If inspectors of elections be not so appointed, the Chairman of any such meeting may, and on the request of any shareholder or his proxy shall, make such appointment at the meeting. The number of inspectors shall be one (1) or three (3). If appointed at a meeting on the request of one (1) or more shareholders or proxies, the majority of shares present and entitled to vote shall determine whether one (1) or three (3) inspectors are to be appointed. No person who is a candidate for office shall act as an inspector. In case any person appointed as an inspector fails to appear or fails or refuses to act, the vacancy may be filled by appointment made by the Board of Director[s] in advance of the convening of the meeting or at the meeting by the person or officer action as Chairman.

DUTIES OF INSPECTORS

3.20 The inspectors of elections shall determine the number of shares outstanding and the voting rights of each; the shares represented at the meeting; the existence of a quorum; the authenticity, validity, and effect of proxies, ballots, consents, waivers, or releases; hear and determine all challenges and questions in any way arising in connection with the vote; count and tabulate all votes, ballots consents, waivers, or releases; determine and announce the result; and perform such other acts as may be proper to conduct the election or vote with fairness to all shareholders. The inspectors of elections shall perform their duties impartially, in good faith, to the best of their ability, and as expeditiously as is practical. If there be three (3) or more inspectors of elections, the decision, act, or certificate of a majority shall be effective in all respects as the decision, act, or certificate of all.

REPORT OF INSPECTORS

3.21 On request of the President of the meeting, or of any shareholder or his proxy, the inspectors shall make a report in writing of any challenge or question or matter determined by them, and execute a certificate of any fact found by them.

CONDUCT OF MEETINGS

3.22 At every meeting of the shareholders, the President or in his absence, the officer designated by the Chairman of the Board, or, in the absence of such designation, such other person (who shall be one of the officers, if any is present) chosen by a majority in interest of the shareholders of the corporation present in person or by proxy and entitled to vote, shall act as Chairman. The Secretary of the corporation, or in his absence, an Assistant Secretary, shall act as Secretary of all meeting of the shareholders. In the absence at such meeting of the Secretary or

Assistant secretary, the Chairman may appoint another person to act as Secretary of the meeting.

ARTICLE FOUR

DIRECTORS

DIRECTORS DEFINED

4.01 "Directors," when used in relation to any power or duty requiring collective action, means "Board of Directors."

POWERS

4.02 The business and affairs of the corporation and all corporate authority and powers shall be exercised by or under authority of the Board of Directors, subject to limitation imposed by law, the articles of incorporation, or these bylaws as to action which requires authorization or approval by the shareholders.

NUMBER OF DIRECTORS

4.03 The number of Directors of the corporation shall be determined by resolution of the shareholders entitled to vote, but shall not be less than three (3) members.

TERM OF OFFICE

4.04 The Directors shall be elected at each annual meeting of shareholders, or at a special meeting called for the purpose of electing Directors, or the Directors may be designated at any time by the unanimous written consent of the shareholders. Each Director shall hold office until the next annual meeting of the shareholders and until his successor is elected, or until his earlier resignation, removal from office, or death.

VACANCIES

4.05 Vacancies in the Board of Directors shall exist in the case of the happening of any of the following events: (a) the death or resignation of any Director, (b) at any annual, regular, or special meeting of shareholders at which any director is elected, the shareholders fail to elect the full authorized number of Directors to be voted for at that meeting; or (c) an increase in the number of Directors.

FILLING VACANCIES

4.06 Any vacancy occurring in the Board of Directors shall be filled by a majority of the remaining members of the Board, though less than a quorum, and each person so elected shall be a Director until his successor is elected by the shareholders.

COMPENSATION

4.07 The Board of Directors, by the affirmative vote of a majority of the Directors then in office, and irrespective of any personal interest of any of its members, shall have authority to establish reasonable compensation of all Directors for services to the corporation as Directors, officers, or otherwise. Such compensation may include pensions, disability benefits, and death benefits.

CONFLICT OF INTEREST

4.08 Any contract or other transaction between the corporation and any of its Directors (or any corporation or firm in which any of its Directors is directly or indirectly financially interest) shall be valid for all purposes notwithstanding the presence of such Director at the meeting authorizing such contract or transaction, or his participation in such meeting. The foregoing shall, however, apply only if the interest of each such Director is known or disclosed to the Board of Directors and it shall nevertheless authorize or ratify such contract or transaction by a majority of the Directors present, each such interested Director to be counted in determining whether a quorum is present but not in calculating the majority necessary to carry such vote. This paragraph shall not be construed to invalidate any contract or transaction that would be valid in the absence of this paragraph.

EXECUTIVE COMMITTEE

4.09 The Board of Directors, by resolution adopted by a majority of the whole Board, may designate three (3) or more Directors to constitute an Executive Committee, which committee, to the extent provided in such resolution, shall have and may exercise all of the authority of the Board of Directors in the management of the corporation, the Board of Directors in reference to amending the articles of incorporation, adopting a plan of merger or adopting a plan of consolidation with another corporation or corporations, recommending to the shareholders the sale, lease, exchange, mortgage, pledge, or other disposition of all or substantially all of the property and assets of the corporation if not made in the usual shareholders a voluntary dissolution of the corporation or a revocation thereof, amending, altering, or repealing the bylaws of the corporation, electing or removing officers of the corporation or members Executive Committee, fixing the compensation of any member of the Executive Committee, declaring dividends or amending, altering, or repealing any resolution of the Board of Directors which by its terms provides that it shall not be amended, altered, or repealed by the Executive Committee. The designation of such committee and the delegation thereto of authority shall not operate to relieve the Board of Directors, or any member thereof, of any responsibility imposed upon it or him by laws.

OTHER COMMITTEES

4.10 The Board of Directors, by resolution adopted by a majority of the whole Board, may designate other committees consisting of not less than three (3) directors each which shall have and may exercise such committee may determine its action and fix the time and place of its meetings unless the Board of Directors shall otherwise provide. The Board of Directors, by such

affirmative vote, shall have power at any time to change the powers and members of any such committees, to fill vacancies, and to dispose of any such committee.

REGULATIONS

4.11 The Board of Directors may adopt and from time to time amend regulations for their own government. Such regulations may not be inconsistent with the articles of incorporation or with these bylaws.

ARTICLE FIVE

DIRECTORS' MEETINGS

PLACE OF MEETINGS

5.01 All meetings of the Board of Directors shall be held at the principal office of the corporation or at such place within or without this State as may be designated from time to time by a majority of the Directors or as may be designated in the notice calling the meeting.

REGULAR MEETINGS

5.02 Regular meetings of the Board of Directors shall be held, without call or notice, immediately following each annual meeting of the shareholders of this corporation, and at such other time as the Directors may determine.

CALL OF SPECIAL MEETING

5.03 Special meetings of the Board of Directors of this corporation shall be called by the Chairman of the Board, the President, any Vice President, by any other officer, or by any two Directors.

NOTICE OF SPECIAL MEETING

5.04 Written notice of the time, place, and purpose of special meetings of the Board of Directors shall be delivered personally to each Director, or sent to each Director by mail or by other form of written communication, at least seven (7) days before the meeting. If the address of a Director is not shown on the records and is not readily ascertainable, notice shall be addressed to him at the city or place in which the meetings of the Directors are regularly held. Notice of the time and place of holding an adjourned meeting of a meeting need not be given to absent Directors if the time and place are fixed at the meeting adjourned.

VALIDATION OF MEETING DEFECTIVELY CALLED OR NOTICED

5.05 The transactions of any meeting of the Board of Directors, however called and noticed or wherever held, are as valid as though had at a meeting duly held after regular call and notice, if a quorum is present and if, either before or after the meeting, each of the Directors not present signs a waiver of notice. All such waivers shall be filed with the corporate records or made a part of the minutes of the meeting. Attendance of a Director at any meeting shall constitute a waiver

of notice of such meeting except where a Director attends a meeting for the express purpose of objecting to the transaction of any business because the meeting is not lawfully called or convened.

QUORUM

5.06 A majority of the number of Directors in office constitutes a quorum of the Board for the transaction of business.

MAJORITY ACTION

5.07 Every act of decision done or made by a majority of the Directors present at any meeting duly held at which a quorum is present is the act of the Board of Directors. Each Director who is present at a meeting will be conclusively presumed to have assented to the action taken at such meeting unless his dissent to the action is entered on the minutes of the meeting, or, where he is absent from the meeting, his written objection to such action is promptly filed with the Secretary of the corporation upon learning of the action. Such right to dissent shall not apply to a Director who voted in favor of such action.

ACTION BY CONSENT OF BOARD WITHOUT MEETING

5.08 Any action required by law to be taken at a meeting of the Board of Directors, or any other action which may be taken at a meeting of the Board of Directors or the Executive Committee thereof, may be taken without a meeting if a consent in writing, setting forth the action so taken, shall be signed by all of the Directors entitled to vote with respect to the subject matter thereof, or by all the members of such committee, as the case may be, and filed with the Secretary of the corporation.

ADJOURNMENT

5.09 In the absence of a quorum, a majority of the Directors present may adjourn from time to time until the time fixed for the next regular meeting of the Board.

NOTICE OF ADJOURNED MEETING

5.10 Notice of the time and place of holding an adjourned meeting of a meeting need not be given to absent Directors if the time and place are fixed at the meeting adjourned.

CONDUCT OF MEETING

5.11 At every meeting of the Board of Directors, the President of the Corporation, if there shall be such an officer, and if not, a chairman chosen by a majority of the Directors present, shall preside. The Secretary of the corporation shall act as Secretary of the Board of Directors. In case the Secretary shall be absent from any meeting, the Chairman may appoint any person to act as Secretary of the meeting.

ARTICLE SIX

OFFICERS

NUMBER AND TITLES

6.01 The officers of the corporation shall be a Chairman of the Board, a President, a Vice President, a Secretary, and a Treasurer. The corporation may also have, at the discretion of the Board of directors, one (1) or more additional Vice Presidents, one (1) or more Assistant Secretaries, one (1) or more Assistant Treasurers, and such other dance with the provisions of Paragraph 6.03. of this Article. One (1) person may hold two (2) or more offices, except those of President and Secretary.

ELECTION

6.02 The officers of the corporation, except such officers as may be appointed in accordance with the provisions of Paragraphs 6.03 or 6.05 of this Article, shall be chosen annually by the Board of Directors, and each shall hold his office until his resignation, removal, disqualification, death, or until his successor shall be elected and qualified.

SUBORDINATE OFFICERS

6.03 The Board of Directors may appoint such other officers or agents as may be deemed necessary, each of whom shall hold office for such period, have such authority, and perform such duties in the management of the property and affairs of the corporation as may be provided in these regulations, or as may be determined by resolution of the Board of Directors not inconsistent herewith. The Board of Directors may delegate to any officer or committee the power to appoint any such subordinate officers, committees, or agents, to specify their duties and determine their compensation.

REMOVAL AND RESIGNATION

6.04 Any officer or agent may be removed by a majority vote by the Board of Director[s]; provided, however, that such removal shall be without prejudice to the contract rights, if any, of the person so removed. Any officer may resign at any time by giving written notice to the Board of Directors to the President, or to the Secretary of the corporation. Any such resignation shall take effect at the date of the receipt of such notice or at any later time specified therein; and, unless otherwise specified therein, the acceptance of such resignation shall not be necessary to make it effective.

VACANCIES

6.05 If the office of the President, Vice President, Secretary, Treasurer, Assistant Secretary, or assistant Treasurer becomes vacant by reason of death, resignation, removal, or otherwise, the Board of Directors shall elect a successor to such office.

CHAIRMAN OF THE BOARD

6.06 The Chairman of the Board, who must be a member of the Board of Directors, shall, if present, preside at all meetings of the Board of Directors and exercise and perform such other powers and duties as may be from time to time assigned to him by the Board of Directors or prescribed by these bylaws.

PRESIDENT

6.07 Subject to such supervisory powers, if any, as may be given by the Board of Directors to the Chairman of the Board, the President shall be the chief executive officer of the corporation and shall, subject to the control of the Board of Directors, have general supervision, direction, and shall have the general powers and duties of management vested in the office of President of a corporation, and shall have such other powers and duties as may be prescribed by the Board of Directors or these bylaws. Within this authority and in the course of his duties he shall:

CONDUCT MEETINGS

(1) Preside at all meetings of the shareholders and be ex officio a member of all standing committees of the corporation.

SIGN SHARE CERTIFICATES

(2) Sign all certificates of stock of the corporation in conjunction with the Secretary or Assistant Secretary, unless otherwise ordered by the Board of Directors on the Chairman of the Board.

EXECUTE INSTRUMENTS

(3) When authorized by the President of the Board or required by law, execute, in the name of the corporation, deeds, conveyances, notices, leases, checks, drafts, bills of exchange, warrants, promissory notes, bonds, debentures, contracts, and other papers and instruments in writing, and unless the Board of Directors shall order otherwise by resolution, make such contracts as the ordinary conduct of the corporation's business may require.

HIRE AND FIRE EMPLOYEES

(4) Appoint and remove, employ and discharge, and prescribe the duties and fix the compensation of all agents and employees of the corporation other than the duly appointed officers, subject to the approval of the Chairman of the Board, and control, subject to the direction of the Board of Directors, all of the officers, agents, and employees of the corporation.

MEETING OF OTHER CORPORATIONS

(5) Unless otherwise directed by the Board of Directors, attend in person or by substitute appointed by him or the Vice President and the Secretary or the Assistant Secretary, and act and vote on behalf of the corporation at all meetings of the shareholders of any corporation in which this corporation holds stock.

VICE PRESIDENTS

6.08 In the absence or disability of the President, the Vice Presidents, if more than one, in order of their rank as fixed by the Board of Directors or, if not ranked, the Vice President designated by the Board of Directors, shall perform all the duties of the President, and when so acting shall have all the powers of, and be subject to all the restrictions on, the President. The Vice presidents shall have such other powers and perform such other duties as from time to time may be prescribed for them respectively by the Board of Directors or the bylaws.

SECRETARY

6.09 The Secretary shall:

SIGN SHARE CERTIFICATES

(1) Sign, with the President or a Vice President, if there be such an officer, certificates for shares of the corporation.

CERTIFY REGULATIONS

(2) Certify and keep at the registered office or principal place of business of the corporation the original or a copy of its bylaws, including all amendments or alterations thereto.

(3) Keep at the place where the bylaws or a copy thereof are kept a record of the proceedings of meetings of its Directors and shareholders, Executive Committee, and other committees, with the timer and place of holding, whether regular or special, and, if special, how authorized, the notice thereof given, the names of those present at Directors' meetings, the number of shares or members present or represented at shareholders' meetings, and the proceedings thereof.

SIGN OR ATTEST DOCUMENTS AND AFFIX SEAL

(4) Sign, certify, or attest such documents as may be required by law or the business of the corporation, and keep the corporate seal, if any, and affix it to such instruments as may be necessary or proper.

NOTICES

(5) See that all notices are duly given in accordance with the provisions of these regulations or as required by law. In case of the absence or disability of the Secretary, or his refusal or neglect to act, notice may be given and served by an Assistant Secretary or by the President or Vice Presidents, if any, or by the Board of Directors.

CUSTODIAN OR RECORDS AND SEAL

(6) Be custodian of the records and of the seal of the corporation, if any, and see that it is engraved, lithographed, printed, stamped, impressed on, or affixed to all certificates for share prior to their issuance and to all documents, the execution of which, on behalf of the corporation under its seal, is duly authorized in accordance with the provisions of these bylaws.

SHARE REGISTER

(7) Keep at the place where the bylaws or a copy thereof are kept or at the office of the transfer agent or registrar a share register or duplicate share register giving the names of the shareholders, their respective addresses, and the number and classes of shares held by each. The Secretary shall also keep appropriate, complete, and accurate books or records of account at the corporation's registered officer it principal place of business.

REPORTS AND STATEMENTS

(8) See that the books, reports, statements, certificates, and all other documents and records required by law are properly kept and filed.

EXHIBIT RECORDS

(9) Exhibit at all reasonable times to proper persons on such terms as are provided by law on proper application, the regulations, the share register, and minutes of proceedings of the shareholders and Directors of the corporation.

OTHER DUTIES

(10) In general, perform all duties incident to the office of Secretary, and such other duties as from time to time may be assigned to him by the Board of Directors.

ABSENCE OF SECRETARY

(11) In case of the absence or disability of the Secretary or his refusal or neglect to act, the Assistant Secretary, or if there be none, the Treasurer, acting as Assistant Secretary, may perform all of the functions of the Secretary. In the absence or inability to act, or refusal or neglect to act of the Secretary, the Assistant Secretary, and Treasurer, any person thereunto authorized by the President or Vice Presidents, if any, or by the Board of Directors, may perform the functions of the Secretary.

ASSISTANT SECRETARY

6.10 At the request of the Secretary, or in his absence or disability, the Assistant Secretary, designated as set forth in preceding subparagraph 6.09(11) of these bylaws shall perform all the ;duties of the Secretary, and when so acting, he shall have all the powers of, and be subject to all the restrictions on, the Secretary. The Assistant Secretary shall perform such other duties as from time to time may be assigned to him by the Board of Directors or the Secretary.

TREASURER

6.11 The Treasurer shall:

FUNDS -- CUSTODY AND DEPOSIT

(1) Have charge and Custody of, and be responsible for, all funds and securities of the corporation, and deposit all such funds in the name of the corporation in such banks, trust companies, or other depositories as shall be selected by the Board of Directors.

FUNDS -- RECEIPT

(2) Receive, and give receipt for, moneys due and payable to the corporation from any source whatever.

FUNDS -- DISBURSEMENTS

(3) Disburse, or cause to be disbursed, the funds of the corporation as may be directed by the Board of Directors, taking proper vouchers for such disbursements.

MAINTAIN ACCOUNTS

(4) Keep and maintain adequate and correct accounts of the corporation's properties and business transactions including account of its assets, liabilities, receipts, disbursements, gains, losses, capital, surplus, and shares. Any surplus, including earned surplus, pain-in surplus, and surplus arising from a reduction of stated capital, shall be classified according to source and shown in a separate account.

EXHIBIT RECORDS

(5) Exhibit at all reasonable times the books of account and records of the corporation to any Director, or to proper person on such terms as are provided by law, on proper application, during business ours at the office of the corporation where such books and records are kept.

REPORTS TO PRESIDENT AND DIRECTORS

(6) When and as requested, render to the President and Directors accounts of all his transactions as Treasurer and of the financial condition of the corporation.

FINANCIAL REPORT TO SHAREHOLDERS

(7) Upon the written request of any shareholder of the corporation, and within fourteen (14) days thereafter, mail to such shareholder the then-latest annual balance sheet and income statement of the corporation. Such financial states shall have been prepared in accordance with generally accepted accounting principles by an independent public or certified public accountant.

BOND

(8) Give to the corporation a bond, if required by the Board of Directors, in a sum, and with one or more sureties, or a surety company satisfactory to the Board, for the faithful performance of the duties of his office and for the restoration to the corporation, in case of his death,

resignation, retirement, or removal from office, of all books, papers, vouchers, money, and other property of whatever kind in his possession or under his control belonging to the corporation.

OTHER DUTIES

(9) In general, perform all the duties incident to the office of Treasurer and such other duties as from time to time may be assigned by the Board of Directors.

ABSENCE OF TREASURER

(10) In case of the absence or disability of the Treasurer or his refusal or neglect to act, the Assistant Secretary or the Secretary acting as Assistant Treasurer may perform all of the functions of the Treasurer. In the absence or inability to act, or refusal, or neglect to act, of both the Treasurer and the Secretary, any person thereunto authorized by the President or Vice Presidents, if any, or by the Board of Directors may perform the functions of the Treasurer.

ASSISTANT TREASURER

6.12 The Assistant Treasurer, if required so to by the Board of Directors, shall respectively give bonds for the faithful discharge o(pound) his duties, in such sums, and with such sureties as the Board of Directors shall require. At the request of the Treasurer, or in his ability absence or disability, the Assistant Treasurer designated as set forth in preceding subparagraph 6.11(10) of these regulations shall perform all the duties of Treasurer, and when so acting, shall have all the powers of, and be subject to all restrictions on, the Treasurer. He shall perform such other duties as from time to time may be assigned to him by the Board or Directors or the Treasurer.

SALARIES

6.13 The salaries of the officers shall be fixed from time to time by the Board of Directors, and no officer shall be prevented from receiving such salary by reason of the fact that he is also a Director of the corporation.

ARTICLE SEVEN

INDEMNIFICATION OF DIRECTORS,
OFFICERS, EMPLOYEES, AND AGENTS

ACTIONS AGAINST PARTY BECAUSE OF CORPORATE POSITION

7.01 The corporation shall indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending, or completed claim, action, suit, or proceeding, whether civil, criminal, administrative, or investigative (other than an action by or in the right of the corporation) by reason of the fact that he is or was a director, officer, employee, or agent of the corporation, or is or was serving at the request of the corporation as a director, partner, officer, employee, or agent of another corporation, partnership, joint venture, trust, or other enterprise, against expenses (including attorneys' fees), judgements, fines, and. amounts paid in settlement actually and reasonably incurred by him in connection with such claim, action, suit, or proceeding if he acted in good faith and in a manner he reasonably believed to be in or not

opposed to the best interests of the corporation, and with respect to any criminal action or proceeding, had no reasonable cause to believe his conduct unlawful. The termination of any claim, action, suit, or proceeding by judgment, order, settlement, conviction, or upon a plea of nolo contendere or its equivalent, shall not, of itself, create a presumption that the person did not act in good faith and in a manner which he reasonably believed to be in or not opposed to the best interests of the corporation, and with respect to any criminal action or proceeding, had no reasonable cause to believe his conduct unlawful. The termination of any claim, action, suit, or proceeding by judgement, order, settlement, conviction, or upon a plea of nolo contendere or its equivalent, shall not, of itself, create a presumption that the person did not act in good faith and in a manner which he reasonably believed to be in or not opposed to the best interests of the corporation, and, with respect to any criminal action or proceeding, had reasonable cause to believer that his conduct was unlawful.

ACTION BY OR IN THE RIGHT OF CORPORATION

7.02 The corporation shall indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending, or completed claim, action, or suit by or in the right of the corporation to procure a judgement in its favor by reason of the fact that he is or was a director, officer, employee, or agent of the corporation, or is or was serving at the request of the corporation as a director, partner, officer, employee, or agent of another corporation, partnership, joint venture, trust, or other enterprise against expenses (including attorneys' fees) actually and reasonably incurred by him in connection with the defense or settlement of such claim, action, or suit if he acted in good faith and in a manner he reasonably believed to be in or not opposed to the best interests of the corporation and except that no indemnification shall be made in respect of any claim, issue, or matter as to which such person shall have been adjudged to be liable for negligence or misconduct in the performance of his duty to the corporation unless and only to the extent that the Court o(pound) Equity or the court in which such claim, action, or suit was brought shall determine upon application that, despite the adjudication of liability but in view of all the circumstances of the case, such person is fairly and reasonably entitled to indemnity for such expenses which the Court of Equity or such other court shall deem proper.

REIMBURSEMENT IF SUCCESSFUL

7.03 To the extent that a director, office, employee, or agent of the corporation has been. successful on the merits or otherwise in defense of any claim, action, suit, or proceeding referred to in Paragraphs 7.01 and 7.02, or in defense of any claims, issue, or matter therein, he shall be indemnified against expenses (including attorneys' fees) actually and reasonably incurred by him in connection therewith, not withstanding that he has not been successful (on the merits or otherwise) on any other claim, issue, or matter in any such claim, action, suit, or proceeding.

AUTHORIZATION

7.04 Any indemnification under Paragraphs 7.01 and 7.02 (unless ordered by a court) shall be made by the corporation only as authorized in the specific case upon determination that indemnification of the director, officer, employee, or agent is proper in the circumstances before he has met the applicable standard of conduct set forth in Paragraphs 7.01 and 7.02. Such determination shall be made (a) by the board of directors by a majority vote of a quorum

consisting of directors who were not parties to such action, suit, or proceeding, or (b) if such a quorum is not obtainable, or, even if obtainable, a quorum of disinterested directors so directs, by independent legal counsel in a written opinion, or (c) by the stockholders.

ADVANCED REIMBURSEMENT

7.05 Expenses incurred in defending a civil or criminal action, suit, or proceeding may be paid by the corporation in advance of the final disposition of such action, suit, or proceeding as authorized by the Board of Directors in the specific case upon receipt of an undertaking by or on behalf of the director, officer, employee, or agent to repay such amount unless it shall ultimately be determined that he is entitled to be indemnified by the corporation as authorized in this Article.

INDEMNIFICATION NOT EXCLUSIVE

7.06 The indemnification provided by this Article shall not be deemed exclusive of any other rights to which those indemnified may be entitled under any statute, rule of law, provision of certificate of incorporation, bylaw, agreement, vote of stockholders or disinterested directors, or otherwise, both as to action in his official capacity and as to action in another capacity, while holding such office, and shall continue as to a person who has ceased to be a director, officer, employee, or agent and shall inure to the benefit of the heirs, executors, and administrators of such a person. Where such other provision provides broader rights of indemnification than these bylaws, and other provision shall control.

SUBSIDIARIES

7.07 All references in this Article to a director, officer, employee, or agent of the corporation shall be deemed to include any director, officer, employee, or agent of corporations which are majority owned subsidiaries of this corporation.

INSURANCE

7.08 The corporation shall have power to purchase and maintain insurance on behalf of any person who is or was a director, officer, employee, or agent of the corporation, or is or was serving at the request of the corporation as a director, partner, officer, employee, or agent of another corporation, partnership, joint venture, trust, or other enterprise against any liability asserted against him and incurred by him in any such capacity, or arising out of his status as such, whether or not the corporation would have the power to indemnify him against such liability under the provisions of this Article.

INVALIDITY

7.09 The invalidity or unenforceability of any provision hereof shall not in any way affect the remaining portions hereof, which shall continue in full force and effect.

ARTICLE EIGHT

EXECUTION OF INSTRUMENTS AND DEPOSIT OF FUNDS

AUTHORITY FOR EXECUTION OF INSTRUMENTS

8.01 The Board of Directors, except as otherwise provided in these bylaws, may authorize any officer or officers, agent or agents, to enter into any contract or execute and deliver any instrument in the name of and on behalf of the corporation, and such authority may be general or confined to specific instances; and, unless so authorized, no officer, agent, or employee shall have any power or authority to bind the corporation by any contract or engagement or to pledge its credit or to render it liable for any sum of money or for any purpose:

EXECUTION OF INSTRUMENTS

8.02 Unless otherwise specifically determined by the Board of Directors or otherwise required by law, formal contracts of the corporation, promissory notes, mortgages, and other evidences of indebtedness of the corporation, and other corporate instruments or documents, and certificates of shares of stock owned by the corporation, shall be executed, signed, or endorsed by the President or any Vice President and by the Secretary or the Treasurer, or any Assistant. Secretary or Assistant Treasurer, and may have the corporate seal, if any, affixed thereto.

BANK ACCOUNTS AND DEPOSITS

8.03 All funds of the corporation shall be deposited form time to time to the credit of the corporation with such banks, bankers, trust companies, or other depositories as the Board of Directors may select or as may be selected by any officer or officers, agent or agents of the corporation to whom such power may be delegated form time to time by the. Board of Directors.

ENDORSEMENT WITHOUT COUNTERSIGNATURE

8.04 Endorsements for deposit of commercial paper to the credit of the corporation in any of its duly authorized depositories may be made without countersignature by the President or any Vice President, or the Treasurer or any Assistant Treasurer, or by any other officer or agent of the corporation to whom the Board of Directors, by resolution, shall have delegated such power.

SIGNING OF CHECKS AND DRAFTS

8.05 Except as otherwise provided in these regulations, all checks, drafts, or other order for payment of money, notes, or other evidences of indebtedness, issued in the name of or payable to the corporation shall be assigned or endorsed by such person or persons and in such manner as shall be determined from time to time by resolution of the Board of Directors or at the direction of the Chairman of the Board.

ARTICLE NINE

ISSUANCE AND TRANSFER OF SHARES

CLASSES AND SERIES OF SHARES

9.01 Subject to the provisions of its articles of incorporation, the corporation may issue one (1) or more classes or series of shares, or both, any of which classes or series may be with or without par value, and with such other designations, preferences, qualifications, privileges, limitations, options, conversion rights, and such special or relative rights as are stated in said articles of incorporation. All shares shall have the conversion, redemption, and other rights, preferences, qualifications, limitations, and restrictions, as are stated in the articles of incorporation. If a class is divided into series, all the shares of any one series shall have the same conversion, redemption, and other rights, preferences, qualifications, limitations, and restrictions. Each outstanding share, regardless of class, shall be entitled to one (1) vote on each matter submitted to a vote at a meeting of shareholders.

CERTIFICATES FOR FULLY PAID SHARES

9.02 Neither shares nor certificates representing such shares may be issued by the corporation until the full amount of the consideration has been paid. When such consideration has been paid to the corporation, the certificate representing such shares shall be issued to the shareholder.

CONSIDERATION FOR SHARES

9.03 The consideration for the issuance of share may be paid, in whole or in part, in money, in other property actually received, tangible or intangible, or in labor performed for the corporation which shall be determined by the Board of Directors.

CONTENTS OF SHARE CERTIFICATES

9.04 Certificates for shares shall be of such form and style, printed or otherwise, as the Board of Directors may designate, and each certificate shall state all of the following facts:

(1) That the corporation is organized under the laws of the State of Connecticut;

(2) The name of the registered holder of the shares represented by the certificate;

(3) The number and class of shares and the designation of the series, if any, which such certificate represents;

(4) The par value of each share represented by such certificate or a statement that the shares are without par value.

SHARES IN CLASSES OR SERIES

9.05 If the corporation is authorized to issue shares of more than one class, the certificate shall set forth, either on the face or back of the certificate, or shall state that the corporation will

furnish to any stockholder upon request and without charge, a full statement or a summary of all of the designations, preferences, limitation, and relative rights of the shares of each class authorized to be issued and, if the corporation is authorized to issue any preferred or special class in series, the variations in the relative rights and preferences between the shares of each such series, so far as the same have been fixed and determined, and the authority of the Board of Directors to fix and determine the relative rights and preferences of subsequent series.

RESTRICTIONS ON TRANSFER

9.06 Any restrictions imposed by the corporation on the sale or other disposition of its shares and on the transfer thereof must be noted conspicuously on each certificate representing shares to which the restriction applies.

PREEMPTIVE RIGHTS

9.07 A full summary or statements of any limitation or denials of preemptive rights of a shareholder to acquire unissued shares of the corporation must be set forth on the front or back of the certificate representing shares subject thereto.

INCORPORATION BY REFERENCE

9.08 In lieu of setting forth a full summary or statement of any provision, other than restrictions on transfer, on the face or back of the certificate, such statement may by omitted from the certificate if it shall be set forth upon the face or back of the certificate that such statement, in full, will be furnished by the corporation to any shareholder without charge, within five (5) days of receiving a written request therefor.

SIGNING CERTIFICATES -- FACSIMILE SIGNATURES

9.09 All share certificates shall be signed by the President or a Vice President and the Secretary Of an Assistant Secretary of the corporation. If a certificate is countersigned by a transfer agent or registrar, other than the corporation itself or its employee, any other signatures or countersignatures on the certificate may be facsimiles. In case any officer of the corporation, or any office or employee of the transfer agent or registrar, who has signed or whose facsimile signature has been placed upon such certificate cases to be as officer of the corporation, or an officer or employee of the transfer agent or registrar before such certificate may be issued by the corporation with the same effect as if the officer of the corporation, or the officer or employee of the transfer agent or registrar, had not ceased to be such at the date of its issue.

TRANSFER OF LOST OR DESTROYED SHARES

9.10 When a share certificate has been lost, or appears to have been destroyed or wrongfully taken, an the owner fails to notify the corporation of that fact within a reasonable time after he has notice of it, and the corporation registers a transfer of the share represented by the certificate before receiving such a notification, the owner is precluded from asserting against the corporation any claim arising from the registration of the transfer or any claim to a new certificate.

REPLACEMENT OF LOST OR DESTROYED CERTIFICATES

9.11 When the holder of a share certificate claims that the certificate has been lost, destroyed, or wrongfully taken, the corporation shall issue a new certificate in place of the original certificate if the owner: (1) so requests before the corporation has notice that the share has been acquired by a bona fide purchaser; (2) files with the corporation a sufficient indemnity bond; and (3) satisfies any other reasonable requirements imposed by the Board of Directors.

TRANSFER AFTER REPLACEMENT

9.12 If, after the issue of a new certificate as a replacement for a lost, destroyed, or wrongfully taken certificate, a bona fide purchaser of the original certificate presents it for registration of transfer, the corporation must register the transfer unless registration would result in overissue. In addition to any rights on the indemnity bond, the corporation may recover the new certificate from the person to whom it was issued or any person taking under him except a bona fide purchaser.

TRANSFER AGENTS AND REGISTRARS

9.13 The Board of Directors may appoint one (1) or more transfer agents, and one (1) or more registrars which shall be an incorporated bank or trust company, either domestic or foreign. Such agents and registrars shall be appointed at such times and places as the requirements of the corporation may necessitate and the Board of Directors may designate.

CONDITIONS OF TRANSFER

9.14 A person in whose name shares of stock stand on the books of the corporation shall be deemed the owner thereof as regards the corporation; provided that whenever any transfer of shares shall be made for collateral security, and not absolutely, and written notice thereof shall be given to the Secretary of the corporation or its transfer agent, if any, such fact shall be stated in the entry of the transfer.

When a transfer of shares is requested and there is reasonable doubt as to the right of the person seeking the transfer, the corporation or its transfer agent, before recording the transfer of the shares on its books or issuing any certificate therefor, may require from the person seeking the transfer reasonable proof of his right to the transfer. If there remains a reasonable doubt of the right to the transfer, the corporation may refuse a transfer unless the person giver adequate security or a bond of indemnity executed by a corporate surety or by two (2) individual sureties satisfactory to the corporation as to from, amount, and responsibility of sureties. The bond shall be conditioned to protect the corporation, its officers, transfer agents, and registrars, or any of them, against any loss, damage, expense, or other liability to the owner of the shares by reason of the recording of the transfer or the issuance of a new certificate for shares.

ARTICLE TEN

CORPORATE RECORDS, REPORTS, AND SEAL

MINUTES OF CORPORATE MEETINGS

10.01 The corporation shall keep at its principal place of business a book of minutes of all meetings of its Board of Directors and of its shareholders, with the time and place of holding, whether regular or special, and, if special, how authorized, the notice thereof given, the names of those present at Directors' meetings, the number of shares or member present or represented at shareholders' meetings, and the proceedings thereof.

BOOKS OF ACCOUNT

10.02 The corporation shall keep and maintain at its principal place of business adequate and correct accounts of its properties and business transactions, including accounts of its assets, liabilities, receipts, disbursements, gains, losses, capital, surplus, and shares. Any surplus, including a reduction of stated capital, shall be classified according to source and shown in a separate account.

SHARE REGISTER

10.03 The corporation shall keep at its principal place of business, or at the office of its transfer agent, a share register showing the names of the shareholders, their addresses, and the number and classes of shares held by each. The above-specified specified information may be kept by the corporation and punchcards, magnetic tape, or other information storage device related to electronic data processing equipment, provided that such card, tape, or other equipment is capable of reproducing the information in clearly legible form for the purposes of inspection as provided in Paragraph 10.04 of these regulations.

INSPECTION OF RECORDS BY SHAREHOLDERS

10.04 On written demand, stating a proper purpose thereof, every shareholder shall have a right to examine in person or by agent or attorney, during the usual hours for business for any proper purpose, the share register, books or records of account, and records of the proceedings of the shareholders and Directors, and make copies or extracts therefrom. A proper purpose shall mean a purpose reasonably related to such person's interest as a shareholder. In every instance in which an attorney or other agent shall be the person who seeks the right to inspection, the demand shall be accompanied by a power of attorney or such other writing which authorizes the attorney or other agent to so act on behalf of the shareholder. The demand shall be directed to the corporation at its principal place of business.

INSPECTION OF RECORDS BY DIRECTORS

10.05 Every Director shall have the absolute right at any reasonable time to inspect all books, records, documents of every kind, and the physical properties of the corporation, and also of its subsidiary corporations, domestic. or foreign. Such inspection by a Director may be made in person or by agent or attorney, and the right of inspection included the right to make extracts.

FINANCIAL REPORT TO SHAREHOLDERS

10.06 The Board of Directors shall cause an annual report to be sent to the shareholders not later than one hundred twenty (120) days after the close of the fiscal year.

CONTENTS OF ANNUAL REPORTS

10.07 The annual report shall include the following financial statements prepared so as to represent fairly the corporation's financial condition and the results of its operations:

(1) A balance sheet as of closing date;

(2) Statement of income and surplus for such year ended on closing date; and

(3) Such other information as the Directors shall determine.

PREPARATION OF FINANCIAL STATEMENTS

10.08 The financial statements shall have been examined in accordance with generally accepted auditing standards by an independent certified public accountant of any state or territory of the United States or by a firm thereof, and shall be accompanied by such accountant's or firm's opinion as to the fairness of the presentation of the financial statements. They shall be prepared in a form sanctioned by generally accepted accounting principles for the particular kind of business carried on by the corporation.

FISCAL YEAR

10.09 The fiscal year of the corporations hall be as determined by the Board of Directors.

CORPORATE SEAL

10.10 The Board of Directors may, but need not, adopt, use, and thereafter alter, a corporate seal.

ARTICLE ELEVEN

AMENDMENT OF BYLAWS

ADOPTION, AMENDMENT, AND REPEAL OF BYLAWS BY SHAREHOLDERS

Bylaws may be altered, amended, or repealed, and new bylaws may be adopted by the vote or the written assent of shareholders entitled to exercise a majority of the voting power of the corporation; provided that such bylaws as adopted or amended are not in conflict with the articles of incorporation or with law.

Exhibit 3.79

CERTIFICATE OF AMENDMENT
OF
ARTICLES OF INCORPORATION
OF
PERKINELMER DETECTION SYSTEMS, INC.

(Pursuant to Section 905 of the California General Corporation Law)

==========

Christopher C. Cambria hereby certifies that:

1. He is the Vice President and Secretary of PerkinElmer Detection Systems, Inc., a California corporation (the "Corporation").

2. Article First of the Articles of Incorporation of the Corporation is hereby amended to read in full as follows:

"First: The name of the corporation is L-3 Communications Security and Detection Systems Corporation California."

3. Article Fourth (a) of the Articles of Incorporation of the Corporation is hereby amended to read in full as follows:

"Fourth: (a) The number of directors of the corporation shall be not less than one (1) nor more than eight (8), the exact number of which shall be fixed by a Bylaw adopted by the Board of Directors or by the shareholders."

4. The foregoing amendments of the Articles of Incorporation of the Corporation have been duly approved by the Board of Directors of the Corporation.

5. The foregoing amendments of the Articles of Incorporation of the Corporation have been duly approved by the required vote of shareholders entitled to vote on such matter, pursuant to and in accordance with Section 902 of the California General Corporation Law. The total number of shares entitled to vote on the foregoing matter is 500 shares of Common Stock. The number of outstanding shares voting in favor of the foregoing amendment was 500 (100%), which equaled or exceeded the vote required. The percentage vote required to approve the foregoing amendment of the Articles of Incorporation of the Corporation was a majority of the outstanding shares of Common Stock.

I further declare under penalty of perjury under the laws of the State of California that the matters set forth in this Certificate of Amendment are true and correct of my own knowledge.

Dated: July 12, 2002

/s/ Christopher C. Cambria

Christopher C. Cambria, Vice President and Secretary

CERTIFICATE OF AMENDMENT

OF

ARTICLES OF INCORPORATION

OF

PERKINELMER INSTRUMENTS, INC.

We, Robert Rosenthal and Philip Ayers, the Vice President and Secretary of PerkinElmer Instruments, Inc., a corporation duly organized and existing under the laws of the State of California, do hereby certify:

1. That they are the Vice President and the Secretary respectively, of PerkinElmer Instruments, Inc., a California corporation.

2. That an amendment to the articles of incorporation of this corporation has been approved by the board of directors.

3. The amendment so approved by the board of directors is as follows:

Article One of the articles of incorporation of this corporation is amended to read as follows:

The name of the corporation is PerkinElmer Detection Systems, Inc.

4. That the corporation has only one class of shares and the total number of outstanding shares is 500.

5. That the percentage vote required of each class is more than fifty percent.

6. That the number of shares which gave written consent in favor of said amendment exceeded the minimum percentage vote required.

7. That this certificate shall become effective upon filing.

Each of the undersigned declares under penalty of perjury that the statements contained in the foregoing certificate are true of their own knowledge.

Executed at Norwalk, Connecticut on June 22, 2000.

/s/ Robert Rosenthal

Robert Rosenthal, Vice President

/s/ Philip Ayers

Philip Ayers, Secretary

[LETTERHEAD OF THE PERKIN-ELMER CORPORATION]

November 29, 1999

Secretary of State
Legal Review Unit
1500 11th Street
Room 390
Sacramento CA 95814

Re: Consent to Use of Name

The Perkin-Elmer Corporation consents to the use of the Perkin Elmer name in California by PerkinElmer, Inc. and its wholly owned subsidiaries.

The Perkin-Elmer Corporation

/s/ Thomas P. Livingston

Thomas P. Livingston
Assistant Secretary

[LETTERHEAD OF PERKINELMER PRECISELY.]

November 29, 1999

Secretary of State
Legal Review Unit
1500 11 th Street
Room 390
Sacramento CA 95814

Re: Consent to Use of Name

PerkinElmer, Inc., which acquired the rights to the name Perkin Elmer from The Perkin Elmer Corporation on May 28, 1999 (see attached consent from The Perkin Elmer Corporation), consents to the use of the PerkinElmer name in California by its wholly owned subsidiaries, PerkinElmer Holdings, PerkinElmer LLC, PerkinElmer Optoelectronics NC, PerkinElmer Optoelectronics SC, PerkinElmer Instruments, and PerkinElmer Astrophysics.

PerkinElmer, Inc.

/s/ Terrance L. Carlson

Terrance L. Carlson
Senior Vice President,
General Counsel & Clerk

CERTIFICATE OF AMENDMENT

OF

ARTICLES OF INCORPORATION

OF

EG&G ASTROPHYSICS

Robert Rosenthal and Philip Ayers of EG&G Astrophysics a corporation duly organized and existing under the laws of the State of California do hereby certify:

1. That they are the Vice President and the Secretary respectively of EG&G Astrophysics a California corporation.

2. That an amendment to the articles of incorporation of this corporation has been approved by the board of directors.

3. The amendment so approved by the board of directors is as follows:

Article first of the articles of incorporation of this corporation is amended to read as follows:

That the name of the corporation is PerkinElmer Instruments, Inc.

4. That the corporation has only one class of shares and the total number of outstanding shares is 500.

5. That the percentage vote required of each class is more than fifty percent.

6. That the number of shares which gave written consent in favor of said amendment exceeded the minimum percentage vote required.

7. That this Amendment shall become effective on January 1, 2000.

Each of the undersigned declares under penalty of perjury that the statements contained in the foregoing certificate are true of their own knowledge.

Executed at Wellesley, Massachusetts on December 16, 1999.

/s/ Robert Rosenthal

Vice President
Robert Rosenthal

/s/ Philip Ayers

Secretary
Philip Ayers

CERTIFICATE OF AMENDMENT
OF
ARTICLES OF INCORPORATION

The undersigned certify that:

1. They are the President and the Assistant Secretary, respectively, of EG&G ASTROPHYSICS RESEARCH CORPORATION, a California corporation.

2. Article First of the Articles of Incorporation of this corporation is amended to read as follows: "The name of this Corporation is EG&G Astrophysics."

3. The foregoing amendment of Articles of Incorporation has been duly approved by the Board of Directors.

4. The foregoing amendment of the Articles of Incorporation has been duly approved by the required vote of shareholders in accordance with Section 902, California Corporations Code. The total number of outstanding shares of the corporation is five hundred (500). The number of shares voting in favor of the amendment equaled or exceeded the vote required. The percentage vote required was more than 50%.

We further declare under penalty of perjury under the laws of the State of California that the matters set forth in this certificate are true and correct of our own knowledge.

DATE: June 4, 1996 By: /s/ Thomas R. Schorling

Its: Thomas R. Schorling
President and Chief Operating Officer

By: /s/ John L. Healy

Its: John L. Healy
Assistant Secretary

AGREEMENT OF MERGER
OF
ASTROPHYSICS RESEARCH CORPORATION
AND
ESSEX PLACE ASTROPHYSICS, INC.

THIS AGREEMENT OF MERGER (this "Agreement") is entered into as of this 31st day of October, 1988 by and among Astrophysics Research Corporation, a California corporation ("ARC"), and Essex Place Astrophysics, Inc., a California corporation ("Subsidiary").

1. ARC is a California corporation authorized to issue 20,000,000 shares of common stock, par value $.10 per share ("Common Stock"), of which 8,206,522 shares are outstanding, and 420,000 shares of 7 3/4% Cumulative Convertible Preferred Stock, par value $1.40 per share ("Preferred Stock"), of which no shares are outstanding.

2. Subsidiary is a California corporation authorized to issue 500 shares of common stock, no par value, of which 500 shares are outstanding as of the date hereof, all of which are owned by EG&G, Inc.

3. Subsidiary shall be merged with and into ARC (the "Merger") in accordance with the General Corporation Law of the State of California and on the terms and conditions hereinafter set forth. At the Effective Time of the Merger (as hereinafter defined), the separate existence of Subsidiary shall cease, ARC shall be the surviving corporation and ARC shall succeed, without other transfer, to all the rights and property of Subsidiary and shall be subject to all the debts and liabilities thereof in the same manner as if ARC had itself incurred them. All rights of creditors and all liens put on the property of each corporation shall be preserved unimpaired; provided that such liens shall be limited to the property affected thereby immediately prior to the Effective Time of the Merger.

4. At the Effective Time of the Merger, each outstanding share of common stock of Subsidiary shall be converted into one share of Common Stock of ARC.

5. At the Effective Time of the Merger, each share of Common Stock outstanding immediately prior to the Effective Time of the Merger (except for any such shares held by shareholders of ARC who perfect their rights as dissenting shareholders under California law, which shares shall have the rights and shall be extinguished as provided by California law) (collectively, the "Shares") shall by virtue of the Merger cease to be outstanding and shall be converted into .2376158 shares of common stock, par value $1.00 per share, of EG&G.

6. Fractional shares shall not be issued and fractions of half or more shall be rounded to the next higher number of whole shares and fractions of less than half shall be disregarded except that if the fraction of a share which any person would otherwise be entitled to receive is one-half of one percent or more of the total shares such person would be entitled to receive, then such person shall receive the next higher number of whole shares.

7. The conversion of shares as provided by this Agreement shall occur automatically upon the Effective Time of the Merger without action by the holders thereof. Each holder of

shares thereupon shall surrender his or her share certificate or certificates to a representative of the First National Bank of Boston (the "Disbursing Agent") and shall be entitled to receive in exchange therefor a certificate or certificates representing the number of shares into which his or her shares theretofore represented by a certificate or certificates so surrendered shall have been converted as aforesaid. Each holder of a certificate or certificates representing shares of ARC Common Stock who has not surrendered his or her shares to the Disbursing Agent within six months after the Effective Time of the Merger shall look only to the Parent for delivery of certificates representing shares of common stock in the Parent to which such stockholder is entitled, subject to applicable escheat and other similar laws.

8. Notwithstanding that the conversion of shares pursuant to this Agreement is automatic at the Effective Time of the Merger without action on the part of the shareholder, dividends shall not be paid on the converted shares until the surrender of certificates as provided in paragraph 7, but the amount of such dividends shall be set aside. Upon such surrender of the certificate or certificates, the dividends thus set aside shall be paid.

9. After the Effective Time of the Merger, Article First of the Articles of Incorporation of ARC shall be amended and restated to read as follows:

> "FIRST: The name of this corporation is EG&G Astrophysics Research Corporation."

10. The Bylaws of the Subsidiary shall become the Bylaws of ARC by the Merger.

11. Prior to the filing of this Agreement with the Secretary of State of the State of California, this Agreement may, be amended by written agreement of the Boards of Directors of Subsidiary and ARC, or by their respective officers authorized by such Boards of Directors notwithstanding approval of this Agreement by the shareholders of ARC and Subsidiary, provided that no such amendment shall reduce the amount or change the form of the consideration to be paid to the shareholders pursuant to this Agreement without the requisite vote of the shareholders.

12. The effective date of the Merger is the date on which a copy of this Agreement of Merger is filed with the Secretary of State of the State of California (the "Effective Time of the Merger").

13. The corporations parties to this Agreement are also parties to an Agreement and Plan of Reorganization and Merger.The two agreements are intended to be construed together in order to effectuate their purposes.

14. This Agreement is intended as a Plan of Reorganization within the meaning of Section 368 of the Internal Revenue Code.

IN WITNESS WHEREOF, the parties have caused this Agreement of merger to be executed as of the date first above written.

ASTROPHYSICS RESEARCH CORPORATION
a California corporation

By: /s/

Chairman of the Board of Directors

By: /s/

Secretary

ESSEX PLACE ASTROPHYSICS, INC., a
California corporation

By: /s/

President

By: /s/

Secretary

OFFICERS' CERTIFICATE
OF
ASTROPHYSICS RESEARCH CORPORATION

Albert J. Centofante and Alicia Esquivel certify that:

1. They are the Chairman of the Board of Directors and Secretary, respectively, of Astrophysics Research Corporation, a corporation organized under the laws of the State of California ("ARC").

2. The authorized capital stock of ARC consists of 20,000,000 shares of common stock, par value $.10 per share, of which 8,206,522 shares are outstanding, and 420,000 shares of 7 3/4% Cumulative Convertible Preferred Stock, par value $1.40 per share, of which no shares are outstanding.

3. The principal terms of the Agreement of Merger in the form attached hereto were approved by ARC by the vote of a number of shares of Common Stock which equaled or exceeded the vote required.

4. The percentage vote required was more than 50% of the Common Stock.

DATED: 10-31 , 1988. /s/ Albert J. Centofante

Albert J. Centofante
Chairman of the Board of Directors

DATED: 10-31 , 1988. /s/ Alicia Esquivel

Alicia Esquivel, Secretary

VERIFICATION BY WRITTEN DECLARATION

Albert J. Centofante declares under penalty of perjury under the laws of the State of California that he has read the foregoing certificate and knows the contents thereof and that the same is true of his own knowledge.

DATED: 10-31 , 1988. /s/ Albert J. Centofante

Albert J. Centofante

Alicia Esquivel declares under penalty of perjury under the laws of the State of California that she has read the foregoing certificate and knows the contents thereof and that the same is true of her own knowledge.

DATED: 10-31 , 1988. /s/ Alicia Asquivel

Alicia Esquivel

OFFICERS' CERTIFICATE
OF
ESSEX PLACE ASTROPHYSICS, INC.

Louis P. Valente and John S. Donahue certify that:

1. They are the President and Secretary, respectively, of Essex Place Astrophysics, Inc., a corporation organized under the laws of the State of California.

2. The corporation has only one class of shares and the total number of outstanding shares is 500.

3. The principal terms of the agreement in the form attached were approved by the corporation by the vote of a number of shares of each class which equaled or exceeded the vote required.

4. The percentage vote required of each class is more than fifty percent.

5. Equity securities of the corporation's parent corporation, EG&G, Inc., a corporation organized under the laws of the Commonwealth of Massachusetts, are to be issued in the merger and no vote of the shareholders of the parent corporation was required.

Dated: October 31, 1988

/s/ Louis P. Valente

Louis P. Valente, President

/s/ John S. Donahue

John S. Donahue, Secretary

The undersigned, Louis P. Valente and John S. Donahue, each declare that they have read the foregoing Certificate and know the contents thereof and that the matters set forth in such Certificate are true of their own knowledge.

Executed on October 31, 1988 at Wellesley, Massachusetts.

/s/ Louis P. Valente

/s/ John S. Donahue

CERTIFICATE OF CORRECTION OF THE
CERTIFICATE OF AMENDMENT OF
ARTICLES OF INCORPORATION OF
ASTROPHYSICS RESEARCH CORPORATION

ALBERT J. CENTOFANTE and ALICIA ESQUIVEL certify that:

1. They are President and Secretary, respectively, of ASTROPHYSICS RESEARCH CORPORATION.

2. The name of the Corporation is ASTROPHYSICS RESEARCH CORPORATION and it is a California corporation.

3. The instrument being corrected is entitled "CERTIFICATE OF AMENDMENT OF ARTICLES OF INCORPORATION OF ASTROPHYSICS RESEARCH CORPORATION" and said instrument was filed with the Secretary of State of the State of California on November 9, 1987.

4. Paragraph 4 of said Certificate of Amendment, as corrected, should read as follows:

"The foregoing amendments have been duly approved by the required number of shareholders in accordance with Section 902 of the California Corporations Code. The Corporation has one class of shares outstanding. The total number of outstanding shares of the corporation is 8,213,940. The number of shares in favor of the amendment equalled or exceeded the vote required. The percentage vote required was more than 50% of the outstanding class of shares."

5. Said Paragraph 4, as corrected, conforms to the form of the amended Articles as adopted by the Board of Directors and shareholders of the Corporation.

We further declare under penalty of perjury under the laws of the State of California that the matter set forth in this certificate are true and correct to our own knowledge.

DATE: Nov. 23, 1987.

/s/ Albert J. Centofante

Albert J. Centofante
President

/s/ Alicia Esquivel

Alicia Esquivel
Secretary

AGREEMENT OF MERGER

AGREEMENT OF MERGER dated as of October 12, 1987 ("Agreement of Merger") by and between SCANRAY CORPORATION, a California corporation ("Scanray"), and ASTROPHYSICS RESEARCH CORPORATION, a California corporation ("ARC").

WHEREAS, ARC has 8,213,940 shares of Common Stock issued and outstanding, 7,852,393 of which are owned by Scanray;

WHEREAS, the respective Boards of Directors of Scanray and ARC deem it desirable and for the benefit of Scanray and ARC (together, the "Constituent Corporations") and their respective shareholders that Scanray and ARC be merged into a single corporation with ARC being the surviving corporation (the "Surviving Corporation") on the terms and conditions herein set forth and have approved this Agreement of Merger; and

WHEREAS, as and when required by the provisions of this Agreement of Merger, the shares of Common Stock of ARC held by Scanray will be cancelled and ARC will issue shares of its Common Stock to the holders of shares of Common Stock of Scanray sufficient in number and amount to carry out the exchange of shares on the Effective Date of the Merger (as defined in Section 3.3 hereof) as herein provided.

NOW, THEREFORE, in consideration of the mutual covenants and agreements herein contained, the parties hereto agree that, pursuant to California General Corporation Law Section 1101, Scanray and ARC shall be merged into a single corporation, and that the terms and conditions of such merger (the "Merger") are as follows:

ARTICLE I

THE PLAN OF MERGER

SECTION 1.1 - MERGER AND SURVIVING CORPORATION

In accordance with the applicable laws of the State of California, Scanray shall be merged with and into ARC, and ARC shall be the Surviving Corporation after the Merger and shall continue to exist as a corporation created and governed by the laws of the State of California.

SECTION 1.2 - NAME OF THE SURVIVING CORPORATION

The name of the Surviving Corporation shall be "Astrophysics Research Corporation".

SECTION 1.3 - PURPOSES OF SURVIVING CORPORATION

The purposes of the Surviving Corporation shall be the purposes set forth in the Articles of Incorporation of ARC on file with the Secretary of the State of California, which Articles are incorporated herein by reference.

SECTION 1.4 - BY-LAWS

The By-Laws of ARC, as in effect immediately prior to the Effective Date of the Merger, shall be the By-Laws of the Surviving Corporation from and after the Effective Date of the Merger.

SECTION 1.5 - OFFICERS AND DIRECTORS

The officers and directors of ARC in office immediately prior to the Effective Date of the Merger shall be the officers and directors of the Surviving Corporation, holding the offices in the Surviving Corporation which they held in ARC immediately prior to the Effective Date of the Merger.

ARTICLE 2

CONVERSION OR CANCELLATION OF THE SHARES OF
COMMON STOCK OF THE CONSTITUENT CORPORATIONS

The manner of converting the shares of the Constituent Corporations into shares of the Surviving Corporation upon the effectiveness of the Merger shall be as follows:

SECTION 2.1 - STOCK OF ARC

Each share of Common Stock of ARC which shall be outstanding on the Effective Date of the Merger, other than shares held by Scanray and other than shares held by shareholders who perfect their rights as dissenting shareholders under California law, shall continue to be one share of Common Stock of the Surviving Corporation and shall not be affected by the Merger. Each share of Common Stock of ARC held by Scanray on the Effective Date of the Merger shall be cancelled.

SECTION 2.2 - STOCK OF SCANRAY

Each share of Common Stock of Scanray which shall be outstanding on the Effective Date of the Merger shall be converted into 196.30982 shares of Common Stock of ARC. No fractional shares, or cash in lieu thereof, will be issuable or payable as a result of such conversion.

ARTICLE 3

APPROVAL, FILING, EFFECTIVE DATE AND EFFECT OF MERGER

SECTION 3.1 - APPROVAL BY SCANRAY AS MAJORITY SHAREHOLDER OF ARC

A proposal to approve this Agreement of Merger shall be submitted to Scanray, the holder of 95% of the voting power of ARC, for consideration and action thereon by written consent. Following such approval, notice of such approval shall be given to the other shareholders of ARC, in accordance with Section 603(b)(1) of the California General Corporation Law.

SECTION 3.2 - FILING OF AGREEMENT OF MERGER

Unless abandoned pursuant to the provisions of Article 4 hereof, upon the date upon which the issuance of the shares of ARC pursuant to the Merger is effectively qualified with the California Commissioner of Corporations or the date which is ten days after the giving of the notice referred to in Section 3.1 hereof, whichever shall last occur, a copy of this Agreement of Merger with an officers' certificate of each Constituent Corporation attached, as required under Section 1103 of the California General Corporation Law, shall be filed with the Secretary of the State of California in the manner required under the laws of the State of California.

SECTION 3.3 - EFFECTIVE DATE

The Merger contemplated herein shall become effective (the "Effective Date of the Merger") upon the date of the filing referred to in Section 3.2 hereof with the Secretary of the State of California.

SECTION 3.4 - EFFECT OF MERGER

Upon the Effective Date of the Merger, the separate existence of Scanray shall cease, and Scanray shall be merged with and into ARC, which shall continue to exist as the Surviving Corporation in accordance with California General Corporation Law Section 1107.

SECTION 3.5 - DELIVERY OF SHARES

The cancellation and the conversion of shares as provided by this Agreement of Merger shall occur automatically upon the Effective Date of the Merger without action by the holders thereof. Each holder of Scanray Common Stock thereupon shall surrender his certificate or certificates to the Secretary of ARC and shall be entitled to receive in exchange therefor a certificate(s) representing the number of shares into which his shares theretofore represented by

the certificate or certificates so surrendered shall have been converted as aforesaid. Scanray shall surrender to the Secretary of ARC for cancellation the shares of ARC held by Scanray.

ARTICLE 4

ABANDONMENT

Notwithstanding approval of this Agreement of Merger by the shareholders of either of the Constituent Corporations, this Agreement of Merger may be terminated and the Merger may be abandoned at any time prior to the filing of a copy of this Agreement of Merger with the Secretary of the State of California as follows:

(a) By mutual consent of the Boards of Directors of the Constituent Corporations;

(b) By either Constituent Corporation if, in the opinion of its Board of Directors, the consummation of this Agreement of Merger and the Merger are not, for any reason, in the best interests of the corporation and its shareholders.

(c) By either Constituent Corporation if the Effective Date of the Merger shall not have occurred on or before December 31, 1987.

(d) In the event of the termination of this Agreement of Merger and the abandonment of the Merger pursuant to subsection (b) or (c), notice shall forthwith be given to the other party. In the event of the termination of this Agreement of Merger and abandonment of the Merger in accordance with the provisions of this Article 4, there shall be no liability on the part of either party hereto to the other party.

ARTICLE 5

MISCELLANEOUS

SECTION 5.1 - AMENDMENT AND MODIFICATION

The parties hereto, by mutual consent of their respective Boards of Directors or the responsible officers authorized by such Boards of Directors, may amend or supplement this Agreement of Merger in such manner as may be agreed upon by the parties hereto in writing; provided, however, that no such amendment may be made after approval of this Agreement of Merger by Scanray as the majority shareholder of ARC.

SECTION 5.2 - ARTICLE AND SECTION HEADINGS

The article and section headings contained in this Agreement of Merger are for reference purposes only and shall not affect in any way the meaning or interpretation of this Agreement of Merger.

SECTION 5.3 - COUNTERPARTS

This Agreement of Merger may be executed in two or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.

IN WITNESS WHEREOF, each of the Constituent Corporations has caused this Agreement of Merger to be executed in its corporate name by its appropriate officers as of the date first above written.

SCANRAY CORPORATION
a California corporation

By: /s/ Albert J. Centofante

Albert J. Centofante, President

By: /s/ Alicia Esquivel

Alicia Esquivel, Secretary

ASTROPHYSICS RESEARCH CORPORATION,
a California corporation

By: /s/ Albert J. Centofante

Albert J. Centofante, President

By: /s/ M. Carlene Davidson

M. Carlene Davidson, Secretary

OFFICERS' CERTIFICATE OF MERGER
FOR
SCANRAY CORPORATION

We, the undersigned, do certify that:

1. We are, and at all times herein mentioned were, the duly elected or appointed and qualified President and Secretary of Scanray Corporation, herein called "said corporation," a corporation duly organized and existing under the laws of the State of California.

2. On October 12, 1987, the Board of Directors of said corporation approved the attached merger agreement in the form attached.

3. The merger agreement was entitled to be and was approved by the Board of Directors of said corporation alone under the provisions of Section 1201 of the California Corporations Code because shareholders of said corporation immediately prior to the merger shall own, immediately after the merger, equity securities other than warrants or rights to subscribe or purchase equity securities of the surviving corporation possessing more than five-sixths of the voting power of the surviving corporation, to wit: the shareholders of said corporation immediately before the merger will immediately after the merger own 7,852,390 of the 8,213,937 outstanding voting shares of the surviving corporation.

We declare under penalty of perjury that the foregoing is true and correct of our own knowledge. Executed at Long Beach, Los Angeles County, California on October 14, 1987.

/s/ Albert J. Centofante

Albert J. Centofante, President

/s/ Alicia Esquivel

Alicia Esquivel, Secretary

OFFICERS' CERTIFICATE OF MERGER
FOR
ASTROPHYSICS RESEARCH CORPORATION

We, the undersigned, do certify that:

1. We are, and at all times herein mentioned were, the duly elected and qualified President and Secretary of Astrophysics Research Corporation, herein called "said corporation", a corporation organized and existing under the laws of the State of California.

2. On October 12, 1987, the principal terms of the merger agreement in the form attached hereto were approved by said corporation by a vote of a number of shares of each class which equaled or exceeded the vote required, under the General Corporation Law of California, for approval of the principal terms of the merger described in the attached agreement by the outstanding shares of each class of said corporation.

3. The total number of outstanding shares of each class of said corporation entitled to vote on the merger was and is: 8,213,940 Common Shares.

4. The percentage vote required by each class, and the number and percentage of affirmative votes cast by each class is as follows:

CLASS	PERCENTAGE VOTES REQUIRED	AFFIRMATIVE VOTES CAST	PERCENTAGE VOTE OBTAINED
Common Shares	50% plus 1	7,852,393	95.6%

We declare under penalty of perjury that the foregoing matters stated in this certificate are true to our knowledge. Executed at Long Beach, Los Angeles County, California on October 14, 1987.

/s/ Albert J. Centofante

Albert J. Centofante, President

/s/ M. Carlene Davidson

M. Carlene Davidson, Secretary

CERTIFICATE OF AMENDMENT
OF ARTICLES OF INCORPORATION OF
ASTROPHYSICS RESEARCH CORPORATION

ALBERT J. CENTOFANTE and EDITH J. GILLIAT hereby certify:

1. That they are the President and the Secretary respectively of Astrophysics Research Corporation, a California corporation.

2. That the by-laws authorize the Directors to act by unanimous written consent without a meeting; and that on February 23, 1976, by unanimous written consent without a meeting, the Directors adopted a resolution, amending the Articles as follow.

RESOLVED, that so much of Article FIFTH of the Articles of Incorporation which now reads:

> "FIFTH: This corporation is authorized to issue two classes of shares to be designated respectively 7 3/4% Cumulative Convertible Preferred Stock (hereinafter called "Preferred") and Common Stock (hereinafter called "Common"). The total number of shares which this corporation shall have authority to issue is 2,420,000 and the aggregate par value of all the shares that are to have a par value shall be $788,000; the number of shares of Preferred shall be 420,000 and the par value of each share of Preferred shall be $1.40; the number of shares of Common shall be 2,000,000 and the par value of each share of Common shall be $0.10."

be amended to read:

> "FIFTH: This corporation is authorized to issue two classes of shares to be designated respectively 7 3/4% Cumulative Convertible Preferred Stock (hereinafter called "Preferred") and Common Stock (hereinafter called "Common"). The total

number of shares which this corporation shall have authority to issue is 8,920,000 and the aggregate par value of all the shares that are to have a par value shall be $1,438,000; the number of shares of Preferred shall be 420,000 and the par value of each share of Preferred shall be $1.40; the number of shares of Common shall be 8,500,000 and the par value of each share of Common shall be $0.10."

3. That the stockholders have adopted said amendment by resolution at a meeting held at Harbor City, California on March 22, 1976. That the wording of the amended article as set forth in the shareholder's resolution, is the same as that set forth in the director's resolution in Paragraph 2 above.

4. That the number of shares which voted affirmatively for the adoption of said resolution is 415,813 and that the total number of shares entitled to vote on or consent to said amendment is 823,094.

/s/ Albert J. Centofante

Albert J. Centofante, President

/s/ Edit J. Gilliat

Edith J. Gilliat, Secretary

Each of the undersigned declares under penalty of perjury that the matters set forth in the foregoing certificate are true and correct.

Executed at Harbor City, California, on March 23, 1976.

/s/ Albert J. Centofante

Albert J. Centofante

/s/ Edith J. Gilliat

Edith J. Gilliat

CERTIFICATE OF AMENDMENT
OF ARTICLES OF INCORPORATION OF
ASTROPHYSICS RESEARCH CORPORATION

ALBERT J. CENTOFANTE and LEE SOBEL hereby certify:

1. That they are the president and the secretary. respectively, of ASTROPHYSICS RESEARCH CORPORATION, a California corporation.

2. That the bylaws of said corporation authorize the directors to adopt resolutions amending the articles by unanimous written consent without a meeting; and that on March 12, 1971, by unanimous written consent without a meeting, the directors adopted a resolution amending the articles as follows:

RESOLVED, that Article FIFTH of the Articles of Incorporation of this corporation, be amended to read as follows:

"FIFTH: This corporation is authorized to issue two classes of shares to be designated respectively 7 3/4% Cumulative Convertible Preferred Stock (hereinafter called "Preferred") and Common Stock (hereinafter called "Common"). The total number of shares which this corporation shall have authority to issue is 2,420,000 and the aggregate par value of all the shares that are to have a par value shall be $788,000; the number of shares of Preferred shall be 420,000 and the par value of each share of Preferred shall be $1.40; the number of shares of Common shall be 2,000,000 and the par value of each share of Common shall be $0.10.

The corporation shall at all times reserve and keep available out of its authorized but unissued common shares, shall obtain and keep in force such permits or other authorizations as may be required, and shall comply with all requirements as to registration or other qualification, in order to enable the corporation lawfully to issue and deliver solely for the purpose of effecting the conversion of the Preferred and lawfully to issue and deliver solely for the purpose of effecting the exercise of the Warrant (as hereinafter defined), such number of shares of Common as shall from time to time be sufficient to effect such conversion and such exercise. The corporation shall from time to time in accordance with the laws of the State of California increase the authorized amount of its shares of Common if at any time the number of common shares remaining unissued and available for issuance shall not be sufficient to permit conversion of the Preferred and exercise of the Warrant.

A statement of the designations, relative rights, preferences, powers, qualifications, limitations and restrictions granted to or imposed upon the respective classes and series of the shares of capital stock or the holders thereof is as follows:

SECTION 1. Definitions--For the purposes of this Article FIFTH the following definitions shall apply:

(A) The term "Additional Shares of Common" shall mean all shares of Common issued by this corporation after March 10, 1971, except

(i) the shares of Common into which the Preferred is convertible and the shares into which the Preferred shall have been converted,

(ii) Warrant Stock, and

(iii) all shares of Common up to an aggregate of 810,000 shares, issuable upon (a) exercise of any warrants, options or stock purchase rights granted under or in connection with agreements of employment with employees of this corporation and its Subsidiaries and under agreements engaging the services of consultants to this corporation and its Subsidiaries, (b) any merger or consolidation approved in accordance with Section 8.F hereof, and (c) any acquisition of all or substantially all of the business of any Person made with the prior approval of the holders of not less than 66 ?% of the outstanding shares of the Preferred; and the shares which shall have been thereupon issued.

(B) The term "Board" shall mean the Board of Directors of this corporation;

(C) The term "Common" shall mean this corporation's common stock.

(D) The terms "Consolidated Excess of Current Assets over Current Liabilities" "Consolidated Junior Net Tangible Assets" and "Consolidated Net Income", shall mean the "Excess of Current Assets over Current Liabilities", "Junior Net Tangible Assets" and "Net Income" of this corporation and its Subsidiaries (whether or not ordinarily consolidated in consolidated financial statements of this corporation and its Subsidiaries), all consolidated in accordance with generally accepted accounting principles consistently applied.

(E) "Consolidated Net Income" shall mean the Net Income of this corporation and its Subsidiaries (whether or not ordinarily consolidated in consolidated financial statements of this corporation and its Subsidiaries) consolidated in accordance with generally accepted accounting principles consistently applied.

(F) "Conversion Price" shall mean the price per share of Common at which the Preferred may be converted to Common Stock (as provided in Section 7 hereof) and such other prices as shall result from adjustments to this sum pursuant to the provisions of Section 7 hereof.

(G) "Convertible Securities" shall mean evidences of indebtedness, shares of stock or other securities which are convertible into or exchangeable for Additional Shares of Common.

(H) The term "Current Assets" of any corporation shall include, at any date, all assets which would, in accordance with generally accepted accounting principles, be classified as current assets, but in any event not including

(iv) any shares of stock or any indebtedness of such corporation held in the treasury of such corporation;

(v) any shares of stock of a Subsidiary of such corporation; and

(vi) any franchises, licenses, permits, patents, patent application, copyrights, trademarks, trade names, good will, experimental or organizational expense, unamortized debt discount and expense, deferred charges, unamortized excess of cost over book value of assets acquired and all other items treated as intangibles.

Cash or other assets may be included in Current Assets notwithstanding the fact that they have been segregated or separately classified on the books of such corporation for the purpose of meeting current liabilities.

(I) "Current Market Price" per share of Common for the purposes of any provision of this Article at the date therein specified, shall be deemed to be the average of the daily market prices for 30 consecutive business days commencing 45 business days before such date. The market price for each such business day shall be the last sale price on such day on the New York Exchange, or, if the Common is not then listed or admitted to trading on the New York Stock Exchange, on such other stock exchange on which such stock is then listed or admitted to trading, or, if no sale takes place on such day on any such exchange, the average of the closing bid and asked prices on such day as officially quoted on any such exchange, or, if the Common is not then listed or admitted to trading on any stock exchange, the market price for each such business day shall be the average of the reported closing bid and asked price quotations on such day in the over-the-counter market, as furnished by the National Quotation Bureau, Inc., or, if such firm at the time is not engaged in the business of reporting such prices, as furnished by any similar firm then engaged in such business and selected by this corporation, or if there is no such firm, as furnished by any member of the National Association of Securities Dealers, Inc., selected by this corporation. If the Current Market Price per share of Common cannot be ascertained by any of the foregoing methods, the Current Market Price per share of Common shall be deemed to be fifteen times the Consolidated Net Income per share of Common of this corporation and its Subsidiaries for the most recent fiscal year, as determined by the audited financial statements of this corporation and its Subsidiaries, and after giving effect to any then outstanding conversion privileges, warrants, options and other similar rights.

(J) The term "Excess of Current Assets over Current Liabilities" of any corporation shall mean, at any date, the excess of the Current Assets of such corporation over all liabilities (including tax and other proper accruals) of such corporation which would, in accordance with generally accepted accounting principles, be classified as current liabilities, but in any event including

(i) all Indebtedness of such corporation payable on demand or maturing not more than one year after such date (except such Indebtedness as is, pursuant to the terms of a revolving credit agreement or otherwise, renewable or extendible at the option of such corporation for a period ending more than one year after such date), including any

fixed payments (whether installment, serial maturity or sinking fund payments or otherwise) required to be made by such corporation not more than one year after such date in respect of the principal of any of its Indebtedness.

(ii) all reserves in respect of liabilities or Indebtedness (payable on demand or not more than one year after such date) the validity of which is at such date contested by such corporation; and

(iii) all liabilities of such corporation (1) to any government or any subdivision or agency thereof for amounts collected by such corporation under any sales tax law or withheld from salaries or wages of persons in its employ under any income tax or any social security or similar law applicable to such persons, and (2) on account of amounts withheld or collected by such corporation from persons in its employ for the purpose of purchasing obligations of any government.

(K) "Funded Indebtedness" of any corporation shall include at any date, all Indebtedness of such corporation which would, in accordance with sound accounting practice, be classified a funded indebtedness, and all Indebtedness, whether secured or unsecured, of such corporation having a final maturity (or which, pursuant to the terms of a revolving credit agreement or otherwise, is renewable or extendible at the option of such corporation for a period ending) more than one year after the date of the creation thereof, notwithstanding the fact that payments in respect thereof (whether installment, serial maturity, or sinking fund payments or otherwise) are required to be made by such corporation less than one year after the date of the creation thereof and notwithstanding the fact that any amount thereof is at the time included also in current liabilities. Any Indebtedness which is extended or renewed shall be deemed to have been created at the date of such extension or renewal.

(L) The term "Indebtedness" of any corporation shall mean the principal of (and premium, if any) and unpaid interest on

(i) indebtedness which is for money borrowed from others;

(ii) indebtedness guaranteed, directly or indirectly, in any manner by such corporation, or in effect guaranteed, directly or indirectly, by such corporation through an agreement, contingent or otherwise, to supply funds to or in any other manner invest in the debtor, or to purchase indebtedness, or to purchase property or services primarily for the purpose of enabling the debtor to make payment of the indebtedness or of assuring the owner of the indebtedness against loss;

(iii) all indebtedness secured by any mortgage, lien, pledge, charge or other encumbrance upon property owned by such corporation, even though such corporation has not in any manner become liable for the payment of such indebtedness;

(iv) all indebtedness of such corporation created or arising under any conditional sale, lease or other title retention agreement with respect to property acquired by such corporation even though the rights and remedies of the seller, lessor or lender

under such agreement or lease in the event of default are limited to repossession or sale of such property; and

(v) renewals, extensions and refundings of any such indebtedness.

(M) The term "Junior Net Tangible Assets" of this corporation shall mean, at any date, the excess of its Net Tangible Assets over

(i) the par value of the Preferred outstanding at such date, plus

(ii) the greater of the par or stated value of, or consideration received in respect of, or the amount payable on the redemption of, any of its then outstanding stock having any priority as to dividends or assets superior to or on a parity with any such priority of the Preferred.

(N) The term "Junior Stock" shall mean all stock of this corporation other than the Preferred.

(O) The term "Majority Voting Right Event" shall mean any time when this corporation shall

(i) be in default (which default shall not have been cured) in whole or in part in the payment of four or more quarterly dividends (whether consecutive or not) on any share of the Preferred;

(ii) be in default (which default shall not have been cured) in whole or in part in any two years, whether consecutive or not in redeeming the Preferred as provided in Section 5 hereof; or

(iii) be in default in any of the provisions of Section 8 hereof.

(P) The term "Net Income" for any period shall mean the net income (or net loss) of any corporation for such period including gains or losses from sales or other dispositions of capital assets in the normal course of business, after deducting all charges which should be deducted before arriving at net income available for dividends after making proper provisions for minority interests in Subsidiaries, but before deduction for any taxes (or provision or reserve therefor) based on income, all as determined in accordance with generally accepted accounting principles consistently applied; provided, however, that

(i) gains or losses from sales or other dispositions of capital assets other than in the normal course of business shall be excluded in the determination of Net Income,

(ii) reserves (including reserves for contingencies, whether general or special) set aside out of income shall be deducted in the determination of Net Income,

(iii) all expenditures which have been capitalized and which, pursuant to generally accepted accounting principles, are classified as intangible assets (other than

expenses properly applicable to the organization of such corporation) shall be deducted in the determination of Net Income, and

(iv) any amounts set aside out of income as reserves and which in accordance with generally accepted accounting principles are subsequently transferred to surplus shall be added in the determination of Net Income.

(Q) The term "Net Tangible Assets" of any corporation shall mean at any date the excess of

(i) the aggregate of all assets of such corporation, at their net book values (after deducting related depreciation, amortization and other valuation reserves) as shown on a balance sheet of such corporation, prepared in accordance with generally accepted accounting principles, other than (a) intangible assets, such as good will, trademarks, brand names, and patents, (b) treasury stock, (c) unamortized debt discount and expense, and (d) capitalized development and marketing expenses and less all reserves other than those already deducted from related assets and other than reserves which, in effect, are appropriations of earned surplus as set forth on such balance sheet and after appropriate adjustments are made on account of minority interests, if any, in Subsidiaries,

over

(ii) the book value of all its liabilities.

(R) The term "Person" shall mean an individual, a corporation, a partnership, a trust, an unincorporated organization or a government organization or any agency or political subdivision thereof.

(S) The term "Subsidiary" shall mean any corporation at least 50% of whose outstanding voting stock shall at the time be owned directly or indirectly by this corporation or by one or more Subsidiaries or by this corporation and one or more Subsidiaries.

(T) The term "Warrant" shall mean the warrant for the purchase, initially, of 120,000 shares of Common, to be issued pursuant to a Purchase Agreement dated March 10, 1971 between this corporation and Allstate Insurance Company.

(U) The term "Warrant Stock" shall mean the shares of Common into which the Warrant is convertible and the shares into which the Warrant shall have been converted.

SECTION 2. Dividend Rights of Preferred--The holders of the Preferred shall be entitled to receive, out of any funds legally available therefor, dividends at the rate of seven and three-quarters per cent per annum of the par value thereof, and no more, payable in cash quarterly commencing on the 30th day of June, 1971, and on the 31st day of March, 30th day of June and September and 31st day of December in each year ("dividend payment dates") when and as declared by the Board. With respect to any share of Preferred issued within three months preceding any of such dates, the initial dividend thereon shall be prorated and paid for only such portion of said three-months period as shall precede such initial dividend payment date. Such

dividends, computed on the basis of a 360-day year, shall accrue on each such share from the date of its original issuance and shall accrue from day to day, whether or not earned or declared. Such dividends shall be cumulative so that if the full dividends in respect of any previous quarterly dividend period and for the current quarterly period, shall not have been paid on the Preferred at the time outstanding, the deficiency shall be fully paid on or declared and set apart for such shares before any dividend or other distribution shall be paid on or declared or set apart for any Junior Stock and before any redemption, retirement, purchase or other acquisition of any Junior Stock.

SECTION 3. Liquidation Rights of Preferred--In the event of any voluntary liquidation, dissolution or winding up of this corporation, the holders of each share of Preferred shall be entitled to receive, ratably, a preferential amount in cash equal to all accrued and unpaid dividends due thereon to the date that payment is available to said holders whether earned, legally available therefor or declared or not, and an amount for each share of Preferred determined according to the date of such voluntary liquidation, dissolution or winding up of this corporation as follows:

If before March 31, 1976--$1.48
If before March 31, 1977--$1.47
If before March 31, 1978--$1.45
If before March 31, 1979--$1.43
If before March 31, 1980--$1.41

In the event of any involuntary liquidation, dissolution or winding up of this corporation, the holders of each share of Preferred shall be entitled to receive a preferential amount equal to the par value thereof, and a further preferential amount in cash equal to all accrued and unpaid dividends thereon whether earned, legally available therefor or declared or not, to the date that payment is made available to the holders of each share of Preferred.

In the event of a voluntary or involuntary liquidation, dissolution or winding up, the holder of each share of Preferred shall share equally in any funds available for distribution under this Section 3.

All of the preferential amounts to be paid to the holders of Preferred as in this Section 3 provided shall be paid or set apart for payment before the payment or setting apart for payment of any amount for, or the distribution of any assets of this corporation to, the holders of any junior Stock in connection with such liquidation, dissolution or winding up.

After the payment or the setting apart for payment to the holder of Preferred of the preferential amounts so payable to them, the holders of Junior Stock shall be entitled to receive all remaining assets of this corporation. A liquidation, dissolution or winding up of this corporation, as such terms are used in this Section 3, shall not be deemed to be occasioned by or to include any consolidation or merger of this corporation with or into any other corporation or corporations or a reorganization within the meaning of Section 368(a)(1)(B) or (C) of the Internal Revenue Code of 1954, as amended.

SECTION 4. Redemption--This corporation may not redeem any Preferred prior to March 31, 1976. At and after March 31, 1976, this corporation may at its option, from time to time upon any Sinking Fund Payment Date (as hereinafter in Section S defined) redeem, in addition to the shares of Preferred redeemed through the application of funds in the Sinking Fund, as hereinafter provided, an equal or lesser number of shares of Preferred. The redemption price for each share of Preferred so redeemed shall be an amount in cash equal to all accrued and unpaid dividends thereon whether earned, legally available therefor or declared or not, to the date of redemption plus the amount which would be payable in accordance with Section 3 above on a voluntary liquidation if such liquidation took place on the date of redemption.

Redemption of less than all of the then outstanding shares of Preferred shall be pro rata among the holders of the Preferred.

At least sixty days previous notice by snail, postage prepaid, shall be given to the holders of record of the Preferred to be redeemed, such notice to be addressed to each such shareholder at his post office address as shown by the records of this corporation; if such redemption occurs after March 31, 1976, said notice shall be sent to the holders of record of all shares of outstanding Preferred. On or after the date fixed for redemption and stated in said notice, said holder of the Preferred shall surrender his certificate for such shares to this corporation at the place designated in such notice and shall thereupon be entitled to receive payment of the redemption price. In case less than all the shares represented by any such surrendered certificate are redeemed, a new certificate shall forthwith be issued representing the unredeemed shares. If such notice of redemption shall have been duly given, and if on the date fixed for redemption funds necessary for the redemption shall be available therefor, then notwithstanding that the certificates evidencing any shares of Preferred so called for redemption shall not have been surrendered, dividends shall cease to accrue on those shares of Preferred so called for redemption, and all rights with respect to said shares so called for redemption shall forthwith after such date cease and determine, except only the rights of the holders to receive the redemption price thereof, without interest, upon surrender of their certificates therefor.

The holder of shares to be redeemed may, any time after notice is given hereunder but before the date fixed for redemption, exercise his right under Section 7 hereof to convert into Common the shares of Preferred to be redeemed, and such conversion shall terminate or reduce pro tanto this corporation's right to redeem shares of Preferred on such Sinking Fund Payment Date.

SECTION 5. A. Sinking Fund--So long as any shares of Preferred shall be outstanding, this corporation shall, as a sinking fund for the purchase or redemption of the Preferred (herein called the "Sinking Fund") set aside annually in cash, for payment on March 31st of each year (hereinafter called "Sinking Fund Payment Date") commencing in the year 1976 and ending in the year 1980, a sum equal to the aggregate par value of the Preferred then outstanding divided by the number of remaining Sinking Fund Payment Dates, including the current such date, said cash to be set aside out of any monies legally available for the Sinking Fund, after full payment or provision for payment has been made for all unpaid and accumulated dividends on the Preferred and the dividends due on such date. If, on any Sinking Fund Payment Date, the funds of this corporation legally available therefor shall be insufficient to discharge the Sinking Fund requirements in full, funds to the extent legally available for such purpose shall be set aside on a

pro rata basis. Such Sinking Fund requirements shall be cumulative so that if, for any year or years, such requirements shall not be fully discharged as they become due, funds legally available therefor, as herein provided, after such payment or provision for dividends, for each fiscal year thereafter, shall be applied thereto until such requirements are fully discharged.

B. Redemption of Preferred from the Sinking Fund--On each Sinking Fund Payment Date, the money in the Sinking Fund shall be used to redeem, at par, on a pro rata basis among the holders thereof, Preferred of an aggregate par value equal to the amount of the Sinking Fund Payment Date requirement for each such Sinking Fund. Redemptions of Preferred, in accordance with this subsection B, shall be in accordance with the procedures provided in Section 4 hereof, at the redemption price of the par value of the shares to be redeemed plus in each case an amount in cash equal to accrued and unpaid dividends thereon to the date of redemption, whether earned, legally available therefor or declared or not, to the Sinking Fund Payment Date, to be paid from the general funds of this corporation and not from the respective Sinking Fund. Any remaining money in the Sinking Fund shall become a part of the general funds of this corporation.

SECTION 6. Contingent Voting Rights to Elect a Majority of Directors--Upon the occurrence of a Majority Voting Right Event, the holders of the Preferred, voting as a class, shall be entitled to elect the smallest number of directors which will constitute a majority of the authorized number of directors, and the holders of the Common and such other of this corporation's stock as shall then have the right to vote shall be entitled to elect the remaining members of the Board. At such time as (i) all dividends accumulated on the outstanding Preferred have been paid or declared and set part for payment. (ii) this corporation has set aside in the Sinking Fund and paid to holders of the Preferred all monies required by Section 5 hereof to be set aside and paid, and (iii) all other Majority Voting Right Events which gave rise to the exercise of voting rights provided for in this Section 5 shall have been cured and no other Majority Voting Right Event shall have occurred and remained uncured, the rights of the holders of the Preferred to vote as provided in this Section 6 shall erase, subject to renewal from time to time upon the same terms and conditions.

At any time after the voting power to elect a majority of the Board shall have become vested in the holders of the Preferred as provided in this Section 6, the President or any Vice-President of this corporation may, and upon the request of the record holders of at least ten per cent of the Preferred then outstanding, addressed to him at the principal office of this corporation shall, call a special meeting of the holders of the Preferred, the Common and such other of this corporation's stock as shall then have the right to vote for the election of directors, to be held at the place and upon the notice provided in the by-laws of this corporation for the holding of meetings. If such meeting shall not be so called within ten days after personal service of the request, or within fifteen days after mailing of the same by registered mail within the United States of America, then the record holders of at least ten per cent of the Preferred then outstanding may designate in writing one of their number to call such meeting, and the person so designated may call such meeting at the place and upon the notice above provided, and for that purpose shall have access to the stock books of this corporation. At any meeting so called or at any annual meeting held while the holders of the Preferred have the voting power to elect a majority of the Board, the holders of a majority of the then outstanding Preferred present in person or by proxy, shall be sufficient to constitute a quorum for the election of directors the holders of Preferred are entitled to elect, and the persons so elected as directors, together with

such persons, if any, as may be elected as directors by the holders of the Common shall constitute the duly elected directors of this corporation. In the event the holders of the Common fail to elect the number of authorized directors which they are entitled to elect at such meeting, such director or directors shall be elected by a majority vote of the holders of the Preferred. In the event that a director elected by the holders of Preferred shall die or otherwise be unable to serve, a new director or directors may be appointed by the directors elected by the holders of the Preferred who had elected the director who has died or is otherwise unable to serve.

When the rights of the holders of Preferred to vote as provided in this Section 6 have ceased, as hereinabove provided, the term of office of the persons elected by them as directors shall terminate and the vacancies shall be filled by the remaining directors then in office.

SECTION 7. Conversion.

(A) CONVERSION PRIVILEGE. The Preferred, valued for purposes of this Section 7 at $1.40 per share, shall at the option of the holder thereof be convertible into shares of Common at the price of $1.40 per share of Common subject to adjustment pursuant to the provisions of this Section 7. An amount equal to all accrued and unpaid dividends due on the Preferred being converted shall be paid in cash to the date of conversion whether earned, legally available therefor or declared or not.

(B) METHOD OF EXERCISE; PAYMENT, ISSUANCE OF NEW CERTIFICATE; TRANSFER AND EXCHANGE. The conversion right granted hereby may be exercised by the holder of any share of the Preferred, in whole or in part, by the surrender of the certificate representing such share at the principal office of the Company in Los Angeles, California, (or at such other place as the Company may designate in writing sent to the holder at his address shown on the books of the Company). In the event of any exercise of such right, certificates for the shares of Common so purchased shall be delivered to such holder within a reasonable time, not exceeding twenty days after conversion, and unless the certificate representing the shares of Preferred has been fully converted, a new certificate, representing the shares of Preferred not so converted, shall also be issued to the holder within said time.

(C) STOCK FULLY PAID; RESERVATION OF SHARES. This Corporation covenants that all shares which may be issued upon the exercise of the conversion rights will, upon issuance, be fully paid and nonassessable and free from all taxes, liens and charges with respect to the issue thereof. This corporation further covenants and agrees that during the period within which the conversion rights may be exercised, this corporation will at all times have authorized, and reserved for the purpose of the issue upon exercise of such conversion rights, a sufficient number of shares of Common to provide for the exercise of such conversion rights. Should the Conversion Price be at any time less than the par value of the Common, the Company also covenants to cause to be taken such action (whether by lowering the par value of the Common, the conversion of the Common from par value to no par value, or otherwise) as will permit the exercise of conversion rights, without any additional payment by the holders of the Preferred (other than payment of applicable transfer taxes, if any), and the issuance of the Common, which Common, upon issuance, will be fully paid and nonassessable.

(D) ADJUSTMENT OF PURCHASE PRICE AND NUMBER OF SHARES. The number and kind of securities purchasable upon the exercise of the conversion rights and the Conversion Price shall be subject to adjustment from time to time upon the happening of certain events, as follows:

(i) Reclassification. Consolidation or Merger. In case any reclassification or change of outstanding securities issuable upon conversion of the Preferred (other than a change in par value, or from par value to no par value, or from no par value to par value or as a result of a subdivision or combination), or in case of any consolidation or merger of this corporation with or into another corporation (other than a merger with another corporation in which this corporation is a continuing corporation and which does not result in any reclassification or change--other than a change in par value, or from par value to no par value, or from no par value to par value, or as a result of a subdivision or combination--of outstanding securities issuable upon conversion of the Preferred), or in case of any sale or transfer to another corporation of the property of this corporation as an entirety or substantially as an entirety (other than a sale for cash), this corporation, or such successor or purchasing corporation, as the case may be, shall, without payment of any additional consideration therefor, execute duly authorized certificates for preferred stock, providing that the holder of the Preferred shall have the right to convert such new Preferred and procure upon such conversion in lieu of each share of Common theretofore issuable upon conversion of the Preferred the kind and amount of shares of stock, other securities, money and property receivable upon such classification, change, consolidation, merger, sale or transfer by a holder of one share of Common issuable upon conversion of the Preferred had the Preferred been converted immediately prior to such classification, change, consolidation, merger, sale or transfer. Such new Preferred shall provide for adjustments which shall be as nearly equivalent as may be practicable to the adjustments provided for in this subsection D. The provisions of this subsection D(i) shall similarly apply to successive reclassifications, changes, consolidations, mergers, sales and transfers.

(ii) Subdivision or Combination of Shares. If this corporation at any time while the Preferred remains outstanding and unexpired, shall subdivide or combine its Common, the Conversion Price shall be proportionately reduced, in case of subdivision of shares, as at the effective date of such subdivision, or if this corporation shall take a record of holders of its Common for the purpose of so subdividing, as at such record date, whichever is earlier, or shall be proportionately increased, in the case of combination of shares, as at the effective date of such combination, or, if this corporation shall take a record of holders of its Common for the purpose of so combining, as at such record date, whichever is earlier.

(iii) Certain Dividends and Distributions. If this corporation at any time while the Preferred is outstanding and unexpired shall:

(a) Stock Dividends. Pay a dividend payable in, or make other distribution of, Common, then the Conversion Price shall be adjusted. as at the date this corporation shall take a record of the holders of Common, for the purpose of receiving such dividend or other distribution (or if no such record is taken, as at the date of such payment or other distribution), to that price determined by multiplying the Conversion Price in effect immediately prior to such record date (or if no such record is taken. then immediately prior to such payment or other distribution) by a fraction the numerator of which shall be the total number of shares of Common outstanding immediately prior to such dividend or distribution, and the denominator of which shall be the total number of shares of Common outstanding immediately after such dividend or distribution (plus in the event that this corporation paid cash for fractional shares, the number of additional shares which would have been outstanding had this corporation issued fractional shires in connection with said dividend); or

(b) Liquidating Dividends, etc. Make a distribution of its assets to the holders of Common as a dividend in liquidation or partial liquidation or by way of return of capital or other than as a dividend payable out of earnings or surplus legally available for dividends under the laws of the State of California, the holder of the Preferred shall, upon its conversion, be entitled to receive, in addition to the number of shares of Common receivable thereupon, and without payment of any additional consideration therefor, a sum equal to the amount of such assets as would have been payable to such holder as owner of that number of shares of Common of this corporation receivable by conversion of the Preferred had such holder been the holder of record of such Common on the record date for such distribution: and an appropriate provision therefor shall be made a part of any such distribution.

(iv) Issuance of Additional Shares of Common. If this corporation at any time while the Preferred remains outstanding and unexpired shall issue any Additional Shares of Common (otherwise than as provided in the foregoing subsections (i) through (iii) above) at a price per share less than the Current Market Price or less than the Conversion Price then in effect, or without consideration, then the Conversion Price upon each such issuance shall be adjusted to that price determined by multiplying the Conversion Price by a fraction:

(a) If issued for a price per share less than the Current Market Price:

(1) the numerator of which shall be the number of shares of Common outstanding immediately prior to the issuance of such Additional Shares of Common plus the number of shares of Common which the aggregate consideration for the total number of such Additional Shares of Common so issued would purchase at the Current Market Price, and

(2) the denominator of which shall be the number of shares of Common outstanding immediately prior to the issuance of such Additional Shares of Common plus the number of such Additional Shares of Common so issued.

(a) If issued for a consideration per share less than the Conversion Price:

(1) the numerator of which shall be the number of shares of Common outstanding immediately prior to the issuance of such Additional Shares of Common plus the number of shares of Common which the aggregate consideration for the total number of such Additional Shares of Common so issued would purchase at the Conversion Price, and

(2) the denominator of which shall be the number of shares of Common outstanding immediately prior to the issuance of such Additional Shares of Common plus the number of such Additional Shares of Common so issued.

If such Additional Shares of Common shall be issued at a price per share less than both the Conversion Price and the Current Market Price, the Conversion Price shall be adjusted in the manner provided in subparagraphs (a) or (b) of this subsection D(iv) which will result in the greater reduction in the amount of the Conversion Price. The provisions of this subsection D(iv) shall not apply under any of the circumstances for which an adjustment is provided in subsections D(i), D(ii) or D(iii). No adjustment of the Conversion Price shall be made under this subsection D(iv) upon the issuance of any Additional Shares of Common which are issued pursuant to the exercise of any warrants, options or other subscription or purchase rights or pursuant to the exercise of any conversion or exchange rights in any Convertible Securities if any such adjustments shall previously have been made upon the issuance of any such warrants, options or other rights or upon the issuance of any Convertible Securities (or upon the issuance of any warrants, options or any rights therefor) pursuant to subsections D(v) or D(vi) hereof. For the purposes of this subsection, the date as of which the Current Market Price shall be computed shall be the earlier of the date on which this corporation shall enter into a firm contract for the issuance of such Additional Shares of Common or the date of actual issuance of Additional Shares of Common.

(v) Issuance of Warrants, Options or Other Rights. In case this corporation shall issue any warrants, options or other rights to subscribe for or purchase any Additional Shares of Common or any Convertible Securities and the price per share for which Additional Shares of Common may at any time thereafter be issuable pursuant to such warrants, options or other rights or pursuant to the terms of such Convertible Securities shall be less than the Current Market Price or less than the Conversion Price per share of Common, then such Conversion Price shall he adjusted as provided in subsection D(iv) hereof on the basis that the maximum number of Additional Shares of Common issuable pursuant to all such warrants, options or other rights or necessary to effect the

conversion or exchange of all such Convertible Securities shall be deemed to have been issued as of the date for the determination of tine Current Market Price per share of Common as hereinafter provided and the aggregate consideration for such maximum number of Additional Shares of Common shall be deemed to be the minimum consideration received and receivable by this corporation for the issuance of such Additional Shares of Common pursuant to such warrants, options or other rights or pursuant to the terms of such Convertible Securities. For the purposes of this subsection, the date as of which the Current Market Price of Common shall be computed shall be the earlier of the date on which this corporation shall enter into a firm contract for the issuance of such warrants, options or other rights, or the date of actual issuance of such warrants, options or other rights.

(vi) Issuance of Convertible Securities. In case this corporation shall issue any Convertible Securities and the consideration per share for which Additional Shares of Common may at any time thereafter be issuable pursuant to the terms of such Convertible Securities shall be less than the Current Market Price or the Conversion. Price then such Conversion Price shall be adjusted as provided in subsection D(iv) hereof on the basis that the maximum number of Additional Shares of Common necessary to effect the conversion or exchange of all such Convertible Securities shall be deemed to have been issued as of the date for the determination of the Current Market Price as hereinafter provided, and the aggregate consideration for such maximum number of Additional Shares of Common shall be deemed to be the minimum sum of the consideration received and the consideration receivable by this corporation for the issuance of such Additional Shares of Common pursuant to the terms of such Convertible Securities. For the purposes of this subsection, the date as of which the Current Market Price of Common shall be computed shall be the earlier of the date on which this corporation shall enter into a firm contract for the issuance of such Convertible Securities., or the date of actual issuance of such Convertible Securities. No adjustment of the Conversion Price shall be made under this subsection upon the issuance of any Convertible Securities which are issued pursuant to the exercise of any warrants or other subscription or purchase rights therefor, if any such adjustment shall previously have been made upon the issuance of such warrants or other rights pursuant to subsection D(iv) hereof.

(vii) Adjustment of Number of Shares. Upon each adjustment in the Conversion Price pursuant to any provision of this subsection D, the number of shares of Common purchasable hereunder shall be adjusted, to the nearest one hundredth of a whole share, to the product obtained by multiplying such number of shares purchasable immediately prior to such adjustment in the Conversion Price by a fraction, the numerator of which shall be the Conversion Price immediately prior to such adjustment and the denominator of which shall be the Conversion Price immediately thereafter.

(viii) Other Provisions Applicable to Adjustments Under this Subsection. The following provisions shall be applicable to the making of adjustments in the Conversion Price hereinabove provided in this subsection:

(a) Computation of Consideration. To the extent that any Additional Shares of Common or any Convertible Securities or any warrants, options or other rights to subscribe for or purchase any Additional Shares of Common or any Convertible Securities shall be issued for a cash consideration, the consideration received by this corporation therefor shall be deemed to he the amount of the cash received by this corporation therefor, or, if such Additional Shares of Common or Convertible Securities are offered by this corporation for subscription, the subscription price, or, if such Additional Shares of Common or Convertible Securities are sold to underwriters or dealers for public offering without a subscription offering, the initial public offering price, in any such case excluding any amounts paid or receivable for accrued interest or accrued dividends and without deduction of any compensation, discounts or expenses paid or incurred by this corporation for and in the underwriting of, or otherwise in connection with, the issue thereof. To the extent that such issuance shall be for a consideration other than cash, then, except as herein otherwise expressly provided, the amount of such consideration shall he deemed to be the fair value of such consideration at the time of such issuance as determined in good faith by the Board. The consideration for any Additional Shares of Common issuable pursuant to any warrants, options or other rights to subscribe for or purchase the same shall be the consideration received by this corporation for issuing such warrants, options or other rights, plus the additional consideration payable to this corporation upon the exercise of such warrants, options or other rights. The consideration for any Additional Shares of Common issuable pursuant to the terms of any Convertible Securities shall be the consideration received by this corporation for issuing any warrants, options or other rights to subscribe for or purchase such Convertible Securities, plus the consideration paid or payable to this corporation in respect of the subscription for or purchase of such Convertible Securities, plus the additional consideration, if any, payable to this Corporation upon the exercise of the right of conversion or exchange in such Convertible Securities. In case of the issuance at any time of any Additional Shares of Common or Convertible Securities in payment or satisfaction of any dividend upon any class of stock other than Common, this corporation shall be deemed to have received for such Additional Shares of Common or Convertible Securities a consideration equal to the amount of such dividend so paid or satisfied;

(b) Readjustment of Conversion Price. Upon the expiration of the right to convert or exchange any Convertible Securities, or upon the expiration of any rights, options or warrants, the issuance of which Convertible Securities, rights, options or warrants effected an adjustment

in the Conversion Price, if any such Convertible Securities shall not have been converted or exchanged, or if any such rights, options or warrants shall not have been exercised, the number of shares of Common deemed to be issued and outstanding by reason of the fact that they were issuable upon conversion or exchange of any such Convertible Securities or upon exercise of any such rights, options or warrants shall no longer be computed as set forth above, and the Conversion Price shall forthwith be readjusted and thereafter be the price which it would have been (but reflecting any other adjustments in the Conversion Price made pursuant to the provisions of this subsection D after the issuance of such Convertible Securities, rights, options or warrants) had the adjustment of the Conversion Price made upon the issuance or sale of such Convertible Securities or issuance of rights, options or warrants been made on the basis of the issuance only of the number of Additional Shares of Common actually issued upon conversion or exchange of such Convertible Securities or upon the exercise of such rights, options or warrants, and thereupon only the number of Additional Shares of Common actually so issued shall be deemed to have been issued and only the consideration actually received by this corporation (computed as in paragraph (a) above of this subsection D(viii) shall be deemed to have been received by this corporation; and

(c) Treasury Shares. The number of shares of Common at any time outstanding shall not include any shares thereof then directly or indirectly owned or held by or for the account of this corporation or any of its Subsidiaries.

(ix) Other Action Affecting Common. In case after the date hereof this corporation shall take any action affecting its Common, other than an action described in any of the foregoing subsections D(i) through D(vi) here inclusive, which in the opinion of the Board would have a materially adverse effect upon the rights of the holder of the Preferred, the Conversion Price shall be adjusted in such manner and at such time as the Board may in good faith determine to be equitable in the circumstances.

(E) NOTICE OF ADJUSTMENTS, ETC. Whenever any Conversion Price shall be adjusted pursuant to subsection D hereof, this corporation shall promptly make a certificate signed by its President or a Vice President and by its Treasurer or Assistant Treasurer or Secretary or Assistant Secretary, setting forth, in reasonable detail, the event requiring the adjustment, the amount of the adjustment, the method by which such adjustment was calculated (including a description of the basis on which the Board made any determination hereunder), and the Conversion Price after giving effect to such adjustment, and shall promptly cause copies of such certificate to be mailed (by first class mail postage prepaid) to the holder of the Preferred. This corporation shall promptly give notice (by first class mail postage prepaid) to the holder of the Preferred of any commitment to make a sale or transfer to another corporation of the property of this

corporation as an entirety or substantially as an entirety, for cash, and shall give such notice not less than 30 days in advance of the transaction of sale or transfer.

(F) FRACTIONAL SHARES. No fractional shares of Common will be used in connection with any subscription hereunder but in lieu of such fractional shares, this corporation shall make a cash payment therefor equal in amount to the product of the applicable fraction multiplied by the Conversion Price then in effect.

SECTION 8. Covenants. So long as any Preferred shall be outstanding, this corporation shall not:

(A) permit Consolidated Excess of Current Assets over Current Liabilities to be an amount less than $250,000;

(B) amend or repeal any provision of, or add any provision to, this corporation's articles of incorporation or by-laws if such action would alter or change the preferences, rights, privileges or powers (including the par value) of, or the restrictions provided for the benefit of, any Preferred, without the prior approval of the holders of not less than 66 ?% of the outstanding shares of the Preferred;

(C) authorize, create or issue shares of any class of stock having any preference or priority as to dividends or assets superior to or on a parity with any such preference or priority of the Preferred, or authorize, create or issue shares of stock of any class or any bonds, debentures, notes or other obligations convertible into or exchangeable for, or having option rights to purchase, any shares of stock of this corporation having any such preference, without the prior approval of the holders of not less than 66 ?% of the outstanding shares of the Preferred;

(D) reclassify any junior Stock into shares having any preference or priority as to dividends or assets superior to or on a parity with any such preference or priority of the Preferred, without the prior approval of the holders of not less than 66 ?% of the outstanding shares of the Preferred;

(E) incur any Indebtedness or become lessee under any lease, or permit any Subsidiary so to do, if the holder of such Indebtedness or the lessor under such lease shall be entitled by any conversion privilege, warrant, option or similar right issued or granted in connection with the issuance of such Indebtedness or the making of such lease by whatever means evidenced, to obtain any stock or other securities of this corporation or any of its Subsidiaries, without the prior approval of the holders of not less than 66 ?% of the outstanding shares of the Preferred;

(F) merge or consolidate with any other corporation or sell, lease, transfer or otherwise dispose of all or a substantial part of its assets to any person, firm or corporation, or purchase all or a substantial part of the assets of any Person or permit any Subsidiary so to do (except that any Subsidiary may merge or consolidate with any other Subsidiary), or reclassify or in any manner change the Common, without the prior approval of the holders of not less than 66 ?% of the outstanding shares of the Preferred;

(G) without the prior approval of the holders of not less than 66 ?% of the outstanding shares of the Preferred, take any action prior to March 31, 1974 which would cause an adjustment to be made in the number of shares issuable upon exercise of the Warrant or upon conversion of the Preferred;

(H) without the prior approval of the holders of not less than 66 ?% of the outstanding shares of the Preferred, issue or agree to issue any Common or convertible securities or warrants or other rights to purchase shares of Common or convertible securities other than shares of Common, and securities convertible into shares of Common, which upon issuance shall not be Additional Shares of Common;

(I) without the prior approval of the holders of not less than 66 ?% of the outstanding shares of the Preferred, pay or declare any dividend on any class of stock of this corporation other than on the Preferred, or apply any of its assets to the redemption, retirement, purchase or other acquisition, directly or indirectly, through Subsidiaries or otherwise, of any class of stock of this corporation other than the Preferred unless, after giving effect thereto the aggregate amount of all such declarations, payments, redemptions, retirements, purchases and other acquisitions after March 10, 1971 does not exceed an amount equal to 50% of Net Income (after deducting therefrom all dividends and redemption premiums theretofore paid in respect of the Preferred and all payments of taxes based on income, or provision or reserve therefor) earned by this corporation after March 31, 1971;

(J) without the prior approval of the holders of not less than 66 ?% of the outstanding shares of the Preferred, pay or declare any dividend on any class of stock of this corporation other than on the Preferred, or apply any of its assets to the redemption, retirement, purchase or other acquisition, directly or indirectly through Subsidiaries or otherwise, of any class of stock of this corporation other than the Preferred, at any time that any dividend or Sinking Fund Payment due on the Preferred has not been paid or when the holders of the Preferred are entitled, pursuant to the provisions of this Article Fifth, to vote for the election of directors;

(K) create, incur, renew, extend or refund any Indebtedness of this corporation or of any Subsidiary, or permit any Subsidiary to do so, if after giving effect thereto the aggregate amount of all Indebtedness of this corporation and its Subsidiaries shall exceed an amount equal to two times the amount of Consolidated Junior Net Tangible Assets;

(L) lend or advance to, purchase or guarantee the obligations of, or in any other manner invest or engage in or permit any Subsidiary so to lend, advance, purchase, guarantee or invest or engage in any franchising business, any business of oil exploration, oil production or oil transportation, nor in any business of producing, selling, or marketing any product for sale to consumers at a price less than $15 or any product or line of products for which advertising and promotion expenses, in the aggregate, necessarily or usually exceed 20% of net sales, without the prior approval of the holders of not less than 66 ?% of the outstanding shares of the Preferred. Notwithstanding the foregoing, this corporation and its Subsidiaries may invest in evidences of Indebtedness issued by entities (including governmental bodies) engaged in a business other than that

engaged in by this corporation, if such evidences of Indebtedness are acquired in the ordinary course of business as a result of sales to such entities, or if such evidences of Indebtedness are issued by entities rated as "Prime" by financial institutions and are for a term not in excess of 180 days;

(M) without the prior approval of the holders of not less than 66 ?% of the outstanding shares of the Preferred purchase, retire or otherwise acquire, pursuant to the provision of any mandatory retirement fund or otherwise, any shares of the Preferred, except the redemption of Preferred as provided in Section 5 hereof, unless full cumulative dividends have been fully paid or declared and set apart for payment on the Preferred and this corporation shall have complied with the requirements of Section 5 hereof;

(N) without the prior approval of the holders of not less than 66 ?% of the outstanding shares of the Preferred, enter into any agreement, indenture or other instrument which, by its terms, prevents this corporation from making, or directly or indirectly restricts its right to make, the payments of the dividends on shares of the Preferred or the payments into the Sinking Fund, or the redemption of the Preferred therefrom, or permit any Subsidiary to enter into any agreement, indenture or other instrument which, by its terms, prevents such Subsidiary from making, or restricts its right to make payments of dividends on the stock of such Subsidiary owned by this corporation;

(O) without the prior approval of the holders of not less than 66 ?% of the outstanding shares of the Preferred, take any action immediately after which and as a reasonably foreseeable result of which this corporation is restricted under the terms of any agreement to which this corporation is then a party from making payments of dividends on the Preferred or payments into the Sinking Fund for the Preferred, or from redeeming the Preferred therefrom;

(P) without the prior approval of the holders of not less than 66 ?% of the outstanding shares of the Preferred, make or retain any investment in any Subsidiary unless all of the capital stock of such Subsidiary (other than directors' qualifying shares) shall be owned and held by this corporation; or

(Q) without the prior approval of the holders of not less than 66 ?% of the outstanding shares of the Preferred, lend or in any manner advance funds (other than advances of $5,000 or less per employee for the purpose of travel), or permit any Subsidiary so to do, to directors, officers or employees of this corporation or any Subsidiary in an amount at any time exceeding, in the aggregate, $25,000.

SECTION 9. Voting Rights of Common. Subject to the provisions hereof with regard to the voting rights of the holder of any share of Preferred and to the laws of California, the holders of the Common shall possess all the voting power for the election of this corporation's directors and for all other purposes."

1. That the shareholders have adopted said amendment by resolution at a meeting held at Los Angeles, California, on March 19, 1971. That the wording of the amended article, as

set forth in the shareholders' resolution, is the same as that set forth in the directors' resolution set forth in Paragraph 2 above.

2. That the number of shares of Common of this corporation voting in favor of such Amendment of the Articles of Incorporation is 519,435.

3. That the total number of shares of the corporation entitled to vote upon or consent to the adoption of such Amendment of the Articles of Incorporation is 650,000 shares of Common.

IN WITNESS WHEREOF, the undersigned have executed this Certificate of Amendment on this 24 day of March, 1971.

/s/ Albert J. Centofante

Albert J. Centofante

Lee Sobel

Each of the undersigned declares under penalty of perjury that the matters set forth in the foregoing Certificate are true and correct to their knowledge.

Executed at Los Angeles, California this 24 day of March, 1971.

/s/ Albert J. Centofante

Albert J. Centofante, President

Lee Sobel, Secretary

Aggregate par value chg from $50,000 to $200,000

CERTIFICATE OF AMENDMENT
OF
ARTICLES OF INCORPORATION
OF
ASTROPHYSICS RESEARCH CORPORATION

The undersigned, Alfred Reifman and Richard J. Riordan, hereby certify that they are now, and at all times herein mentioned have been, the President and the Secretary, respectively, of Astrophysics Research Corporation, a California corporation, and further certify that:

1. The following resolution was adopted by the Board of Directors of said corporation; said action was taken by the unanimous written consent of the Board of Directors without a meeting and the By-Laws of said corporation authorize the directors to so act.

RESOLVED, that Article FIFTH of the Articles of Incorporation of this corporation be amended to read in full as follows:

"FIFTH: This corporation shall have authority to issue only one class of shares of stock, to be designated common stock; the total number of said shares, as the same are constituted on the effective date of this amendment, shall be Two Million (2,000,000); the aggregate par value of all of said shares shall be Two Hundred Thousand Dollars ($200,000.00); and the par value of each of said shares shall be ten cents ($.10)."

2. Said amendment was adopted and approved by the written consent of the shareholders. The wording of amended Article FIFTH, as set forth in the shareholder's written consent, is the same as that set forth in the foregoing resolution of the Board of Directors.

3. The number of shares of said corporation consenting to such amendment was 500,000 shares.

4. The number of shares of said corporation entitled to vote on or consent to the adoption of such amendment is 500,000 shares.

IN WITNESS WHEREOF, the undersigned have executed this Certificate of Amendment of Articles of Incorporation on October 25 1968 at Los Angeles, California.

/s/ / Alfred Reifman

Alfred Reifman, President

/s/ Richard J. Riordan

Richard J. Riordan, Secretary

DECLARATION UNDER PENALTY OF PERJURY

The undersigned, Alfred Reifman and Richard J. Riordan, the President and Secretary, respectively, of the corporation named in the foregoing Certificate of Amendment of Articles of Incorporation, hereby declare under penalty of perjury that said Certificate is true and correct of their own knowledge.

IN WITNESS WHEREOF, the undersigned have executed this Declaration Under Penalty of Perjury on October 25, 1968 at Los Angles, California.

/s/ / Alfred Reifman

Alfred Reifman

/s/ Richard J. Riordan

Richard J. Riordan

CERTIFICATE OF AMENDMENT OF
ARTICLES OF INCORPORATION OF
ASTROPHYSICS RESEARCH CORPORATION

The undersigned, Albert J. Centofante and Richard J. Riordan, hereby certify that they are now, and at all times herein mentioned have been, the Executive Vice President and Secretary, respectively, of Astrophysics Research Corporation, a California corporation, and further certify that:

1. At a special meeting of the Board of Directors of the corporation duly held on the 26th day of June, 1969, at 9:30 a.m. P.D.T. at 445 South Figueroa Street, 30th Floor, Los Angeles, California, the following resolution was adopted:

RESOLVED, that Article FOURTH (a) of the Articles of Incorporation be amended to read as follows:

"FOURTH: (a) The number of directors of the corporation shall be not less than five (5) nor more than eight (8), the exact number of which shall be fixed by a By-Law adopted by the Board of Directors or by the shareholders."

2. At a regular shareholders meeting duly held on the 19th day of August, 1969, at 10:00 o'clock a.m. P.D.T. at the International Hotel, 6211 West Century Boulevard, Los Angeles, California, the foregoing amendment of the Articles of Incorporation was approved by a resolution of the shareholders identical in form to the Directors' resolution set forth above. The total number of shares of the corporation entitled to vote on the adoption of the foregoing amendment is 600,000 shares. The total number of shares of the corporation voting in favor of the foregoing amendment was 600,000 shares.

IN WITNESS WHEREOF, the undersigned have executed this Certificate of Amendment of Articles of Incorporation on June 30, 1970, at Los Angeles, California.

/s/ Albert J.. Centofante

Albert J. Centofante
Executive Vice President

/s/ Richard J. Riordan

Richard J. Riordan, Secretary

DECLARATION UNDER PENALTY OF PERJURY

The undersigned, Albert J. Centofante and Richard J. Riordan, Executive Vice President and Secretary, respectively, of the corporation named in the foregoing Certificate of Amendment of Articles of Incorporation, hereby declare under penalty of perjury that said Certificate is true and correct of their own knowledge.

IN WITNESS WHEREOF, the undersigned have executed this Declaration Under Penalty of Perjury on June 30, 1970 at Los Angeles, California.

/s/ Albert J.. Centofante

Albert J. Centofante

/s/ Richard J. Riordan

Richard J. Riordan

Cap. structure chg. from $25,000 to $50,000.

CERTIFICATE OF AMENDMENT
OF
ARTICLES OF INCORPORATION
OF
ASTROPHYSICS RESEARCH CORPORATION

The undersigned, Alfred Reifman, and Richard J. Riordan, hereby certify that they now are, and at all times herein mentioned have been, the President and Secretary, respectively, of Astrophysics Research Corporation, a California corporation, and further certify that:

5. At a special meeting of the Board of Directors of said corporation held at its principal office for the transaction of business, 10889 Wilshire Boulevard, Los Angeles, California, at 2:00 o'clock P.M. on the 30th day of July, 1965, the following resolutions were duly adopted:

RESOLVED, that Article FIFTH of the Articles of Incorporation of this corporation be amended to read in full as follows:

"FIFTH: This corporation shall have authority to issue only one class of shares of stock, to be designated common stock; the total number of said shares shall be Five Hundred Thousand (500,000); the aggregate par value of all of said shares shall be Fifty Thousand Dollars ($50,000); and the par value of each of said shares shall be ten cents ($.10). Upon the filing with the Secretary of State of the State of California of the Certificate of Amendment by which this Article FIFTH is amended to read as herein set forth, each issued and outstanding share of capital stock, par value $1 per share, of this corporation shall be subdivided, split and changed into and shall become ten (10) shares of common stock par value $.10 per share, of this corporation, and the holder of each such share of capital stock, par value $1 per share, in lieu thereof shall immediately become the holder of ten (10) shares of common stock, par value $.10 per share, of this corporation."

RESOLVED FURTHER, that the President or Vice President and the Secretary or Assistant Secretary of this corporation be and they hereby are authorized and directed to procure the adoption and approval of the foregoing amendment by the written consent of shareholders of this corporation holding at

least a majority of the voting power, and thereafter to sign and verify by their oath and file a certificate in the form and manner required by Section 3672 of the California Corporations Code, and in general to do any and all things necessary to effect said amendment in accordance with Section 3672.

6. Said amendment was adopted and approved by the written consent of the shareholders, and a copy of the form of such written consent is as follows:

"ASTROPHYSICS RESEARCH CORPORATION

Written Consent of Shareholders to
Amendment of Articles of Incorporation

The undersigned shareholders of Astrophysics Research Corporation, a California corporation, do hereby approve, adopt and consent to the amendment of the Articles of Incorporation of said corporation as set forth in the following resolution adopted by the Board of Directors of said corporation at a special meeting duly held at 2:00 o'clock P.M. on July 30, 1965, at 10889 Wilshire Boulevard, Los Angeles, California:

[At this point in said form of written consent there appeared a complete copy of the resolution of the Board of Directors first set forth under Paragraph 1 above.]

IN WITNESS WHEREOF, each of the undersigned stockholders has hereunto signed his name and, following his name, the date of signing and the number of shares of said corporation held by him of record on said date entitled to vote upon amendments of said Articles of Incorporation.

Name	Date	Number of Shares"

7. The number of shares of said corporation consenting to such amendment was 25,000 shares.

8. The number of shares of said corporation entitled to vote on or consent to the adoption of such amendment is 25,000 shares.

IN WITNESS WHEREOF, the undersigned have executed this Certificate of Amendment of Articles of Incorporation this 14th day of September, 1965.

/s/ / Alfred Reifman

Alfred Reifman, President

/s/ Richard J. Riordan

Richard J. Riordan, Secretary

DECLARATION UNDER PENALTY OF PERJURY

The undersigned, Alfred Reifman and Richard J. Riordan, the President and Secretary, respectively, of the corporation named in the foregoing Certificate of Amendment of Articles of Incorporation, each do hereby declare under penalty of perjury that said Certificate is true and correct of their own knowledge.

EXECUTED this 14th day o(pound) September, 1965, at Los Angeles, California.

/s/ / Alfred Reifman

Alfred Reifman

/s/ Richard J. Riordan

Richard J. Riordan

ARTICLES OF INCORPORATION

OF

ASTROPHYSICS RESEARCH CORPORATION

KNOW ALL MEN BY THESE PRESENTS:

That we, the undersigned, have this day voluntarily associated ourselves together for the purpose of forming a corporation under the laws of the State of California AND WE HEREBY CERTIFY:

FIRST: The name of this corporation is: ASTROPHYSICS RESEARCH CORPORATION.

SECOND: The corporation's purposes are:

(a) Primarily and initially to engage in the business of conducting studies of detailed scientific problems connected with defense and space efforts.

(b) To manufacture, buy, sell, assemble, distribute, and otherwise acquire, or to own, hold, use, sell, assign, transfer, exchange, lease, license or otherwise dispose of, and to invest, trade, deal in and with goods, wares, merchandise, building materials, supplies, and all other personal property of every class and description.

(c) To purchase, acquire, own, hold, use, lease either as lessor or lessee, rent, sublet, grant, sell, exchange, subdivide, mortgage, deed in trust, manage, improve, cultivate, develop, maintain, construct, operate, and generally deal in, any and all real estate, improved or unimproved, stores, office buildings, dwelling houses, boarding houses, apartment houses, hotels, business blocks, garages, warehouses, manufacturing plants, and other buildings of any kind or description, and any and all other property of every kind or description, real, personal and mixed, and any interest or right therein, including water and water rights, wheresoever

situated, either in California, other states of the United States, the District of Columbia, territories and colonies of the United States and foreign countries,

(d) To purchase, acquire, take, hold, own, use and enjoy, and to sell, lease, transfer, pledge, mortgage, convey, grant, assign, or otherwise dispose of, and generally to invest, trade, deal in and with oil royalties, mineral rights of all kinds, mineral bearing land and hydrocarbon products of all kinds, oil, gas and mineral leases, and all rights and interests therein, and in general products of the earth and deposits, both subsoil and surface, of every nature and description.

(e) To enter into, make, perform and carry out contracts of every kind for any lawful purpose without limit as to amount, with any person, firm, association or corporation, municipality, county, parish, state, territory, government (foreign or domestic) or other municipal or governmental subdivision.

(f) To become a partner (either general or limited or both) or joint venturer, and to enter into agreements of partnership, or joint venture agreements, with one or more other persons or corporations, for the purpose of carrying on any business whatsoever which this corporation may deem proper or convenient in connection with any of the purposes herein set forth or otherwise, or which may be calculated, directly or indirectly, to promote the interests of this corporation or to enhance the value of its property or business.

(g) To acquire, by purchase or otherwise, the goodwill, business, property rights, franchises and assets of every kind, with or without undertaking, either wholly or in part, the liabilities of any person, firm, association or corporation; and to acquire any property or business as a going concern or otherwise, (a) by purchase of the assets thereof wholly or in part, (b) by acquisition of the shares of any part thereof, or (c) in any other manner; and to pay for the

same in cash or in the shares or bonds or other evidences of indebtedness of this corporation, or otherwise; to hold, maintain and operate, or in any manner dispose of the whole or any part of the goodwill, business, rights and property so acquired, and to conduct in any lawful manner the whole or any part of the goodwill, business, rights and property so acquired, and to conduct in any lawful manner the whole or any part of any business so acquired; and to exercise all the powers necessary or convenient in and about the management of such business.

(h) To take, purchase, and otherwise acquire, own, hold, use, sell, assign, transfer, exchange, lease, mortgage, convey in trust, pledge, hypothecate, grant licenses in respect of and otherwise dispose of letters patent of the United States or any foreign country, patent rights, licenses and privileges, inventions, improvements and processes, copyrights, trademarks and trade names, and government, state, territorial, county and municipal grants and concessions of every character which this corporation may deem advantageous in the prosecution of its business or in the maintenance, operation, development or extension of its properties.

(i) From time to time to apply for, purchase, acquire by assignment, transfer or otherwise exercise, carry out and enjoy any benefit, right, privilege, prerogative or power conferred by, acquired under or granted by any statute, ordinance, order, license, power, authority, franchise, commission, right or privilege which any government or authority or governmental agency or corporation or other public body may be empowered to enact, make or grant; to pay for, aid in, and contribute toward carrying the same into effect; and to appropriate any of this corporation's shares, bonds and/or assets to defray the costs, charges and expenses thereof.

(j) To subscribe or cause to be subscribed for, and to take, purchase and otherwise acquire, own, hold, use, sell, assign, transfer, exchange, distribute and otherwise

dispose of, the whole or any part of the shares of the capital stock, bonds, coupons, mortgages, deeds of trust, debentures, securities, obligations, evidences of indebtedness, notes, goodwill, rights, assets and property of any and every kind, or any part thereof, of any other corporation or corporations, association or associations, firm or firms, or person or persons, together with shares, rights, units or interests in or in respect of any trust estate, now or hereafter existing, and whether created by the laws of the State of California or of any other state, territory or country; and to operate, manage and control such properties, or any of them, either in the name of such other corporation or corporations or in the name of this corporation, and, while the owner of any of said shares of capital stock, to exercise all of the rights, powers and privileges of ownership of every kind and description, including the right to vote thereon, with power to designate some person or persons for that purpose from time to time, and to the same extent as natural persons might or should do.

(k) To promote or to aid in any manner, financially or otherwise, any person, firm, corporation or association of which any shares of stock, bonds, notes, debentures or other securities or evidences of indebtedness are held directly or indirectly by this corporation; and for this purpose to guarantee the contracts, dividends, shares, bonds, debentures, notes and other obligations of such other persons, firms, corporations or associations; and to do any other acts or things designed to protect, preserve, improve or enhance the value of such shares, bonds, notes, debentures or other securities or evidences of indebtedness.

(l) To borrow and lend money, but nothing herein contained shall be construed as authorizing the business of banking, or as including the business purposes of a bank, savings bank or trust company.

(m) To issue bonds, notes, debentures or other obligations of this corporation from time to time for any of the objects or purposes of this corporation, and to secure the same by mortgage, deed of trust, pledge or otherwise or to issue the same unsecured; to purchase or otherwise acquire its own bonds, debentures or other evidences of its indebtedness or obligations; to purchase, hold, sell, and transfer the shares of its own capital stock to the extent and in the manner provided by the laws of the State of California as the same are now in force or may be hereafter amended.

(n) To conduct and carry on, directly or indirectly, research, development and promotional or experimental activities and to promote or aid, financially or otherwise, any person, firm or corporation engaged in such activities, or any of them.

(o) To carry on any business whatsoever, either as principal, agent, partner or joint venturer, which this corporation may deem proper or convenient in connection with any of the foregoing purposes or otherwise, or which may be calculated directly or indirectly to promote the interests of this corporation or to enhance the value of its property or business; and to conduct its business in this state, in other states, in the District of Columbia, in the territories and colonies of the United States, and in foreign countries.

(p) To have and to exercise all the powers conferred by the laws of California upon corporations formed under the laws pursuant to and under which this corporation is formed, as such laws are now in effect or may at any time hereafter be amended.

The foregoing statement of purposes shall be construed as a statement of both purposes and powers, and the purposes and powers stated in each clause shall, except where otherwise expressed, be in nowise limited or restricted by any reference to or inference from the terms or provisions of any other clause, but shall be regarded as independent purposes and powers.

THIRD: The County in the State of California where the principal office for transaction of the business of this corporation is to be located is Los Angeles County.

FOURTH: (a) The number of directors of the of the corporation is three.

(b) The names and address of the persons who are appointed to act as first directors are:

(1) William E. Guthner, Jr.
611 Wilshire Boulevard
Los Angeles 17, California

(2) V.E. Stockfield
611 Wilshire Boulevard
Los Angeles 17, California

(2) J.W. McDonald
611 Wilshire Boulevard
Los Angeles 17, California

FIFTH: The total number of shares which the corporation is authorized to issue is Twenty-Five Thousand (25,000) shares. The aggregate par value of said shares is Twenty-five Thousand Dollars ($25,000.00) and the par value of each share is One Dollar ($1.00). No distinction shall exist between the shares of the corporation or the holders thereof.

IN WITNESS WHEREOF, for the purpose of forming this corporation under the laws of the State of California, we, the undersigned, who are the incorporators of this corporation and the persons named hereinabove as the first directors of this corporation, have executed these Articles of Incorporation this 7th day of May, 1962.

/s/ William E. Guthner, Jr.

William E. Guthner, Jr.

/s/ V.E. Stockfield

V.E. Stockfield

/s/ J.W. McDonald

J.W. McDonald

STATE OF CALIFORNIA)
) ss.
COUNTY OF LOS ANGELES)

On this 7th day of May, 1962, before me, the undersigned, a Notary Public in and for said County and State, residing therein, duly commissioned and sworn, personally appeared WILLIAM E. GUTHNER, JR., V.E. STOCKFIELD and J.W. McDONALD, known to me to be the persons whose names are subscribed to the foregoing Articles of Incorporation, and acknowledged to me that they executed the same.

/s/ Hattie R. Michalis

Notary Public in and for said
County and State

HATTIE R. MICHALIS
MY COMMISSION EXPIRES JUNE 12, 1962

Exhibit 3.80

BYLAWS

Bylaws for the regulation, except as otherwise provided by statute or its Articles of Incorporation ("Articles"), of ESSEX PLACE ASTROPHYSICS, INC. (A California Corporation)

ARTICLE I

MEETINGS OF SHAREHOLDERS

Section 1. Annual Meetings. All meetings of shareholders shall be held in Wellesley, Commonwealth of Massachusetts, at such place as may be fixed from time to time by the Board of Directors, or at such other place either within or without the State of California as shall be designated from time to time by the Board of Directors and stated in the notice of meeting. At such meeting, directors shall be elected by a plurality vote, reports of the affairs of the corporation shall be considered, and any other business may be transacted which is within the powers of the shareholders. Annual meetings of shareholders, commencing with the year 1990, shall be held on the third Thursday in May if not a legal holiday, and if a legal holiday, then on the next secular day following at 10:00 a.m., or at such other date and time as shall be designated from time to time by the Board of Directors and stated in the notice of the meeting.

Section 2. Special Meetings. Special meetings of the shareholders, for any purpose or purposes whatsoever, may be called at any time by the Board, the Chairman of the Board, the President, or by the holders of shares entitled to cast not less than 10% of the votes at the meeting or by such other persons as may be provided in the Articles or in these Bylaws.

Section 3. Notice. Written notice of each meeting shall be given to each shareholder entitled to vote, either personally or by mail or other means of written communication, charges prepaid, addressed to such shareholder at his address appearing on the books of the corporation or given by him to the corporation for the purpose of notice. If no such address appears or is given, notice shall be deemed to have been given to him if sent by mail or other means of written communication addressed to the place where the principal executive office of the corporation is situated, or by publication of notice at least once in some newspaper of general circulation in the county in which said office is located. All such notices shall be sent to each shareholder entitled thereto not less than 10 (or if sent by third-class mail, 30) nor more than 60 days before such meeting. Such notice shall specify the place, the date and the hour of such meeting.

In the case of a special meeting, the notice shall state the general nature of business to be transacted and no other business shall be transacted at such meeting.

In the case of an annual meeting, the notice shall state those matters which the Board, at the time of the mailing of the notice, intends to present for action by the shareholders. However, any proper matter may be presented at the meeting for action but action on the following matters shall be valid only if the general nature of the proposal so approved was stated

in the notice of the meeting or in a written notice, unless the matter was unanimously approved by those entitled to vote:

(a) the approval of a contract or other transaction between the corporation and one or more of its directors or with any corporation, firm or association in which one or more of its directors has a material financial interest;

(b) an amendment to the Articles;

(c) a reorganization (as defined in (ss.)181 of the General Corporation Law) required to be approved by (ss.)1201 of the General Corporation Law;

(d) the voluntary winding up and dissolution of the corporation; or

(e) a plan of distribution under (ss.)2007 of the General Corporation Law in respect of a corporation in the process of winding up.

The notice of any meeting at which directors are to be elected shall include the names of the nominees intended at the time of the notice to be presented by management for election.

The notice shall state such other matters, if any, as may be expressly required by statute.

Section 4. Adjourned Meeting and Notice Thereof. When a shareholders' meeting is adjourned to another time or place, notice need not be given of the adjourned meeting if the time and place thereof are announced at the meeting at which the adjournment is taken. At the adjourned meeting, the corporation may transact any business which might have been transacted at the original meeting. If the adjournment is for more than 45 days or if after the adjournment a new record date is fixed for the adjourned meeting, a notice of the adjourned meeting shall be given to each shareholder of record entitled to vote at the meeting.

Section 5. Quorum. Unless otherwise provided in the Articles, the presence in person or by proxy of the persons entitled to vote a majority of the voting shares at any meeting shall constitute a quorum for the transaction of business. The shareholders present at a duly called or held meeting at which a quorum is present may continue to transact business until adjournment notwithstanding the withdrawal of enough shareholders to leave less than a quorum, if any action taken (other than adjournment) is approved by at least a majority of the shares required to constitute a quorum. In the absence of a quorum, any meeting of shareholders may be adjourned from time to time by the vote of a majority of the shares represented either in person or by proxy, but no other business may be transacted, except as provided above.

Section 6. Consent of Absentees. The transactions of any meeting of shareholders, however called and noticed and wherever held are as valid as though had at a meeting duly held after regular call and notice, if a quorum is present either in person or by proxy, and if, either before or after the meeting, each of the persons entitled to vote, not present in person or by proxy, signs a written waiver of notice, or a consent to the holding of the

meeting, or an approval of the minutes thereof. All such waivers, consents and approvals shall be filed with the corporate records or made a part of the minutes of the meeting.

Section 7. Action without Meeting. Unless otherwise provided in the Articles, any action which may be taken at any annual or special meeting of shareholders may be taken without a meeting and without prior notice, if a consent in writing, setting forth the action so taken, shall be signed by the holders of outstanding shares having not less than the minimum number of votes that would be necessary to authorize or take such action at a meeting at which all shares entitled to vote thereon were present and voted; provided, however, that:

(a) unless the consents of all shareholders entitled to vote have been solicited in writing, notice of any shareholder approval:

(1) of a contract or other transaction between the corporation and one or more of its directors or with any corporation, firm or association in which one or more of its directors has a material financial interest;

(2) of an indemnity pursuant to (ss.)317 of the General Corporation Law;

(3) of a reorganization (as defined in (ss.)181 of the General Corporation Law) required to be approved by (ss.)1201 of the General Corporation Law; or

(4) of a plan of distribution under (ss.)2007 of the General Corporation Law in respect of a corporation in the process of winding up, which approval was obtained without a meeting by less than unanimous written consent,

shall be given at least 10 days before the consummation of the action authorized by such approval; and

(b) prompt notice shall be given of the taking of any other corporate action approved by shareholders without a meeting by less than unanimous written consent, to those shareholders entitled to vote who have not consented in writing. Notice of such approval shall be given in the same manner as required by Article I, Section 3 of these Bylaws.

Any shareholder giving a written consent, or the shareholder's proxyholder or proxyholders, or a transferee of the shares, or a personal representative of the shareholder, or their respective proxyholder or proxyholders, may revoke the consent by a writing received by the corporation prior to the time that written consents of the number of shares required to authorize the proposed action have been filed with the Secretary of the corporation, but may not do so thereafter. Such revocation is effective upon its receipt by the Secretary of the corporation.

Notwithstanding the above provisions, directors may not be elected by written consent except by unanimous written consent of all shares entitled to vote for the election of directors.

Section 8. Record Dates. For purposes of determining the shareholders entitled to notice of any meeting or to vote or entitled to exercise any other rights, the Board may fix, in

advance, a record date, which shall not be more than 60 nor less than 10 days prior to the date of such meeting nor more than 60 days prior to any other action. If no record date is fixed by the Board:

(a) the record date for determining shareholders entitled to notice of or to vote at a meeting of shareholders shall be at the close of business on the business day next preceding the day on which notice is given or, if notice is waived, at the close of business on the business day next preceding the day on which the meeting is held;

(b) the record date for determining shareholders entitled to give consent to corporate action in writing without a meeting, when no prior action by the Board is necessary, shall be the day on which the first written consent is given; and

(c) the record date for determining shareholders for any other purpose shall be at the close of business on the day on which the Board adopts the resolution relating thereto, or the 60th day prior to the date of such other action, whichever is later. A determination of shareholders of record entitled to notice of or to vote at a meeting of shareholders shall apply to any adjournment of the meeting unless the Board fixes a new record date for the adjourned meeting, but the Board shall fix a new record date if the meeting is adjourned for more than 45 days.

Section 9. Proxies. Every person entitled to vote shares may authorize another person or persons to act by proxy with respect to such shares. No proxy shall be valid after the expiration of 11 months from the date thereof unless otherwise provided in the proxy. Every proxy continues in full force and effect until revoked as specified in (ss.)705(b) of the General Corporation Law or unless it states that it is irrevocable. A proxy which states that it is irrevocable is irrevocable for the period specified therein when it is held by a person specified in (ss.)705(e) of the General Corporation Law.

Section 10. Voting; Cumulative Voting and Notice Thereof. Votes on any matter may be viva voce but shall be by ballot upon demand made by a shareholder at any election and before the voting begins. No shareholder shall be entitled to cumulate votes for election of directors (i.e., cast for any candidate for election as directors a number of votes greater than the number of votes which such shareholder normally is entitled to cast) unless such candidate or candidates' names have been placed in nomination prior to the voting and the shareholder has given notice at the meeting prior to the voting of the shareholder's intention to cumulate the shareholder's votes. If any one shareholder has given such notice, all shareholders may cumulate their votes for candidates in nomination. If cumulative voting is proper, every shareholder entitled to vote at any election of directors may cumulate such shareholder's votes and give one candidate a number of votes equal to the number of directors to be elected multiplied by the number of votes to which the shareholder's shares are normally entitled, or distribute the shareholder's votes on the same principle among as many candidates as the shareholder thinks fit. In any election of directors, the candidates receiving the highest number of votes of the shares entitled to be voted for them up to the number of directors to be elected by such shares are elected.

Except for election of directors, provided above, votes on other substantive and procedural matters shall be taken on the basis of one vote for each shares represented at the meeting.

Fractional shares shall not be entitled to any voting rights.

Section 11. Chairman of Meeting. The Board may select any person to preside as Chairman of any meeting of shareholders, and if such person shall be absent from the meeting, or fail or be unable to preside, the Board may name any other person in substitution therefor as Chairman. In the absence of an express selection by the Board of a Chairman or substitute therefor, the Chairman of the Board shall preside as Chairman. If the Chairman of the Board shall be absent, fail or be unable to preside, the President shall preside. If the President shall be absent, fail or be unable to preside the Vice President or Vice Presidents in order of their rank as fixed by the Board, the Secretary, or the Chief Financial Officer, shall preside as Chairman, in that order. The Chairman of the meeting shall designate a secretary for such meeting, who shall take and keep or cause to be taken and kept minutes of the proceedings thereof.

The conduct of all shareholders' meetings shall at all times be within the discretion of the Chairman of the meeting and shall be conducted under such rules as he may prescribe. The Chairman shall have the right and power to adjourn any meeting at any time, without a vote of the shares present in person or represented by proxy, if the Chairman shall determine such action to be in the best interests of the corporation and its shareholders.

Section 12. Inspectors of Election. In advance of any meeting of shareholders, the Board may appoint any persons other than nominees for office as inspectors of election to act at the meeting and any adjournment thereof. If inspectors of election are not so appointed, or if any such persons fail to appear or refuse to act, the Chairman of any such meeting may, and on the request of any shareholder or his proxy shall, make such appointment at the meeting. The number of inspectors shall be either one or three. If appointed at a meeting on the request of one or more shareholders or proxies, the majority of shares present in person or by proxy shall determine whether one or three inspectors are to be appointed.

The inspectors of election shall determine the number of shares outstanding and the voting power of each, the shares represented at the meeting, the existence of a quorum, the authenticity, validity and effect of proxies, receive votes, ballots or consents, hear and determine all challenges and questions in any way arising in connection with the right to vote, count and tabulate all votes or consents, determine when the polls shall close, determine the result and do such acts as may be proper to conduct the election or vote with fairness to all shareholders.

If there are three inspectors of election, the decision, act or certificate of a majority is effective in all respects as the decision, act or certificate of all.

ARTICLE II

DIRECTORS

Section 1. Powers. Subject to any limitations in the Articles or these Bylaws and to any provision of the General Corporation Law relating to action required to be approved by the shareholders or by the outstanding shares, the business and affairs of the corporation shall be managed and all corporate powers shall be exercised by or under the direction of the Board. The Board may delegate the management of the day-to-day operation of the business of the corporation to a management company or other person provided that the business and affairs of the corporation shall be managed and all corporate powers shall be exercised under the ultimate direction of the Board.

Section 2. Number. The number of directors of the corporation shall be three (3). Directors need not be residents of the State of California nor shareholders of the corporation.

Section 3. Election and Term of Office. The directors shall be elected at each annual meeting of shareholders, and the directors may be elected at any special meeting of shareholders held for that purpose. Each director, including a director elected to fill a vacancy, shall hold office until the expiration of the term for which elected and until a successor has been elected and qualified.

Section 4. Organization Meeting. Immediately following each annual meeting of shareholders the Board shall hold a regular meeting for the purpose of organization, election of officers and the transaction of other business.

Section 5. Regular Meetings. Regular meetings of the Board shall be held at such times and places within or without the state as may be designated in the notice of the meeting of which are designated by resolution of the Board. In the absence of designation of place, regular meetings shall be held at the principal office of the corporation.

Section 6. Special Meetings. Special meetings of the Board for any purpose or purposes may be called at any time by the Chairman of the Board, the President, or by any Vice President or the Secretary or any two directors. Special meetings of the Board may be held at such times and places within or without the state as may be designated in the notice of the meeting or which are designated by resolution of the Board.

Section 7. Notice of Meetings. When notice of a meeting of the Board is required, at least four days notice by mail or 48 hours notice delivered personally or by telephone or telegraph shall be given to each director. Such notice need not specify the purpose of the meeting. Notice of a meeting need not be given to any director who signs a waiver of notice or consent to holding the meeting or an approval of the minutes thereof, whether before or after the meeting, or who attends the meeting without protesting, prior thereto or at its commencement, the lack of notice to such director. All such waivers, consents and approvals shall be filed with the corporate records or made a part of the minutes of the meeting.

Section 8. Participation by Telephone. Members of the Board may participate in a meeting through use of conference telephone or similar communications equipment, so long as

all members participating in such meeting can hear one another. Participation in a meeting pursuant to this Section constitutes presence in person at such meeting.

Section 9. Quorum. A majority of the authorized number of directors constitutes a quorum of the Board for the transaction of business. A meeting at which a quorum is initially present may continue to transact business notwithstanding the withdrawal of directors, if any action taken is approved by at least a majority of the required quorum for such meeting. A majority of the directors present, whether or not a quorum is present, may adjourn any meeting to another time and place.

Section 10. Voting. Every act or decision done or made by a majority of the directors present at a meeting duly held at which a quorum is present is the act of the Board, subject to Section 9 of this Article and to:

(a) the provisions of (ss.)310 of the General Corporation Law regarding votes in respect of a contract or other transaction between the corporation and one or more of its directors or with any corporation, firm or association in which one or more of its directors has a material financial interest, and

(b) the provisions of (ss.)317 of the General Corporation Law regarding votes in respect of indemnification of agents of the corporation who are members of the Board.

Section 11. Action without Meeting. Any action required or permitted to be taken by the Board may be taken without a meeting if all members of the Board shall individually or collectively consent in writing to such action. Such written consent or consents shall be filed with the minutes of the proceedings of the Board. Such action by written consent shall have the same force and effect as a unanimous vote of such directors.

Section 12. Resignation. Any director may resign effective upon giving written notice to the Chairman of the Board, the President, the Secretary or the Board of the corporation, unless the notice specifies a later time for the effectiveness of such resignation. If the resignation is effective at a future time, a successor may be elected to take office when the resignation becomes effective.

Section 13. Vacancies. Except for a vacancy created by the removal of a director, vacancies on the Board may be filled by a majority of the directors then in office, whether or not less than a quorum, or by a sole remaining director. Vacancies occurring in the Board by reason of the removal of directors may be filled only by approval of the shareholders. The shareholders may elect a director at any time to fill any vacancy not filled by the directors. Any such election by written consent other than to fill a vacancy created by removal requires the consent of a majority of the outstanding shares entitled to vote.

No reduction of the authorized number of directors shall have the effect of removing any director prior to the expiration of his term of office.

Section 14. Adjournment. A majority of the directors present, whether or not a quorum is present, may adjourn any meeting to another time and place. If the meeting is adjourned for more than 24 hours, notice of any adjournment to another time or place shall be

given prior to the time of the adjourned meeting to the directors who were not present at the time of the adjournment. Such notice need not comply with the time in which notice must be given prior to a meeting as required by Section 7 of Article II of the Bylaws, but should be given as far in advance as is reasonably practicable under all the circumstances existing at the time of adjournment.

Section 15. Visitors. No person other than a director may attend any meeting of the Board without the consent of a majority of the directors present; provided, however, that a representative of legal counsel for the corporation and a representative of the independent certified public accountant for the corporation may attend any such meeting upon the invitation of any director.

Section 16. Fees and Compensation. Directors and members of committees may receive such compensation for their services and such reimbursement for expenses as may be fixed or determined by resolution of the Board.

Section 17. Committees. The Board may, by resolution adopted by a majority of the authorized number of directors, designate one or more committees, each consisting of two or more directors, to serve at the pleasure of the Board. The Board may designate one or more directors as alternate members of any committee, who may replace any absent member at any meeting of the committee. The appointment of members or alternate members of a committee requires the vote of a majority of the authorized directors. Any such committee, to the extent provided in the resolution of the Board or in the Bylaws, shall have all the authority of the Board, except with respect to:

(a) the approval of any action for which the General Corporation Law also requires shareholders' approval or approval of the outstanding shares;

(b) the filling of vacancies on the Board or in any committee;

(c) the fixing of compensation of the directors for serving on the Board or on any committee;

(d) the amendment or repeal of Bylaws or the adoption of new Bylaws;

(e) the amendment or repeal of any resolution of the Board which by its express terms is not so amendable or repealable;

(f) a distribution to the shareholders of the corporation (as defined in (ss.)166 of the General Corporation Law), except at a rate or in the periodic amount or within a price range determined by the Board; and

(g) the appointment of other committees of the Board or the members thereof.

ARTICLE III

OFFICERS

Section 1. Officers. The officers of the corporation shall be a Chairman of the Board or a President, or both, a Secretary and a Chief Financial Officer. The corporation may also have, at the discretion of the Board, one or more Vice Presidents, one or more Assistant Secretaries and Assistant Financial Officers, and such other officers as may be appointed in accordance with the provisions of Section 3 of this Article. One person may hold two or more offices.

Section 2. Election. The officers of the corporation, except such officers as may be appointed in accordance with the provisions of Section 3 or Section 5 of this Article, shall be chosen annually by the Board, and each shall hold office until resignation or removal or other disqualification to serve, or the election of a successor.

Section 3. Subordinate Officers. The Board may appoint, and may empower the Chairman of the Board or President to appoint, such other officers as the business of the corporation may require, each of whom shall hold office for such period, have such authority and perform such duties as are provided in the Bylaws or as the Board may from time to time determine.

Section 4. Removal and Resignation. Any officer may be removed, either with or without cause, by action of the Board duly taken, or, except in case of an officer chosen by the Board, by any officer upon whom such power of removal may be conferred by the Board.

Any officer may resign at any time by giving written notice to the corporation, to the attention of the Secretary. Any such resignation shall take effect at the date of the receipt of such notice or at any later time specified therein; and, unless otherwise specified therein, the acceptance of such resignation shall not be necessary to make it effective.

Section 5. Vacancies. A vacancy in any office shall be filled in the manner prescribed in the Bylaws for regular appointments to such office.

Section 6. Chairman of the Board. The Chairman of the Board, if there shall be such an officer, shall, if present, preside at all meetings of the Board, cause minutes thereof to be taken, and exercise and perform such other powers and duties as may be from time to time assigned to him by the Board or prescribed by the Bylaws. In the event the corporation shall not have an elected President, the Chairman of the Board shall also have the authority and perform the duties as provided for the President in the following Section of this Article.

Section 7. President. Subject to such supervisory powers, if any, as may be given by the Board to the Chairman of the Board, if there is such an officer, the President shall be the Chief Executive Officer of the corporation and shall, subject to the control of the Board, have general supervision, direction and control of the business and affairs of the corporation. In the absence of the Chairman of the Board, or if there is none, the President shall preside at all meetings of the Board. He shall be ex officio a member of all the standing committees, including the Executive Committee, if any, and shall have the general powers and duties of

management usually vested in the office of President of a corporation, and shall have such other powers and duties as may be prescribed by the Board or the Bylaws.

Section 8. Vice President. In the absence or disability of the President, the Vice Presidents in order of their rank as fixed by the Board or, if not ranked, the Vice President designated by the Board, shall perform all the duties of the President, or, if there be none, the Chairman of the Board, and when so acting shall have all the powers of, and be subject to all the restrictions upon, the President or Chairman of the Board. The Vice Presidents shall have such other powers and perform such other duties as from time to time may be prescribed for each of them by the Board or the Bylaws.

Section 9. Secretary. The Secretary shall keep or cause to be kept at the principal executive office a book of minutes of all meetings and consents to action without a meeting of directors, committees and shareholders, with the time and place of holding, whether regular or special, and, if special, how authorized, the notice thereof given, the names of those present at directors' and committee meetings, the number of shares present or represented at shareholders' meetings, and the proceedings thereof.

The Secretary shall keep, or cause to be kept, at the principal executive office or at the office of the corporation's transfer agent or registrar, a record of its shareholders showing the names of the shareholders and their addresses, the number and classes of shares held by each, the number and date of certificates issued for the same, and the number and date of cancellation of every certificate surrendered for cancellation.

The Secretary shall give, or cause to be given, notice of all the meetings of the shareholders and of the Board required by the Bylaws or by law to be given.

The Secretary shall keep the seal of the corporation in safe custody, and shall have such other powers and perform such other duties as may be prescribed by the Board or by the Bylaws.

Section 10. Chief Financial Officer. The Chief Financial Officer shall keep and maintain, or cause to be kept and maintained, adequate and correct accounts of the properties and business transactions of the corporation, including changes in financial position, accounts of its assets, liabilities, receipts, disbursements, gains, losses, capital, surplus and shares. Any surplus shall be classified according to source and shown in a separate account.

The Chief Financial Officer shall deposit all monies and other valuables in the name and to the credit of the corporation with such depositaries as may be designated by the Board. He shall disburse the funds of the corporation as may be ordered by the Board or by any officer having authority therefor, shall render to the President and directors, whenever they request it, an account of all of his transactions and of the financial condition of the corporation, and shall have such other powers and perform such other duties as may be prescribed by the Board or the Bylaws.

ARTICLE IV

MISCELLANEOUS

Section 1. Loans to or Guaranties for the Benefit of Officers or Directors; Loans upon the Security of Shares of the Corporation.

(a) Except as expressly provided in subsection (b) hereof, the corporation shall not make any loan of money or property to or guarantee the obligation of:

(1) any director or officer of the corporation or of its parent or any subsidiary, or

(2) any person upon the security of shares of the corporation or of its parent, unless the loan or guaranty is otherwise adequately secured, except by the vote of the holders of a majority of the shares of all classes, regardless of limitations or restrictions on voting rights, other than shares held by the benefited director, officer or shareholder.

(b) The corporation may lend money to, or guarantee any obligation of or otherwise assist any officer or other employee of the corporation or of any subsidiary, including any officer or employee who is also a director, pursuant to an employee benefit plan (including, without limitation, any stock purchase or stock option plan) available to executives or other employees, whenever the Board determines that such loan or guaranty may reasonably be expected to benefit the corporation. If such plan includes officers or directors, it shall be approved by the shareholders after disclosure of the right under such plan to include officers or directors thereunder. Such loan or guaranty or other assistance may be with or without interest and may be unsecured or secured in such manner as the Board shall approve, including, without limitation, a pledge of shares of the corporation. The corporation may advance money to a director or officer of the corporation or of its parent or any subsidiary for expenses reasonably anticipated to be incurred in the performance of the duties of such director or officer, provided that in the absence of such advance such director or officer would be entitled to be reimbursed for such expenses by such corporation, its parent or any subsidiary.

Section 2. Record Date and Closing Stock Books. When a record date is fixed, only shareholders of record on that date are entitled to notice of and to vote at the meeting or to receive a dividend, distribution, or allotment of rights, or to exercise the rights, as the case may be, notwithstanding any transfer of any shares on the books of the corporation after the record date.

The Board may close the books of the corporation against transfers of shares during the whole or any part of a period not more than 60 days prior to the date of a shareholders' meeting, the date when the right to any dividend, distribution, or allotment of rights vests, or the effective date of any change, conversion or exchange of shares.

Section 3. Inspection of Corporate Records. The record of shareholders, the accounting books and records of the corporation, and minutes of proceedings of the shareholders,

the Board and committees of the Board shall be open to inspection upon the written demand of any shareholder or holder of a voting trust certificate, at any time during usual business hours for a purpose reasonably related to his interests as a shareholder or as the holder of a voting trust certificate. Such inspection may be made in person or by an agent or attorney, and shall include the right to copy and make extracts. Demand of inspection shall be made in writing upon the corporation to the attention of the Secretary.

A shareholder or shareholders holding at least five percent in the aggregate of the outstanding voting shares of the corporation or who hold at least one percent of such voting shares and have filed a Schedule 14-B with the United States Securities and Exchange Commission relating to the election of directors of the corporation shall have an absolute right to access to a list of shareholders as provided in (ss.)1600(a) of the General Corporation Law.

Section 4. Waiver of Annual Report. The annual report to shareholders referred to in Section 1501 of the General Corporation Law is expressly waived, but nothing herein shall be interpreted as prohibiting the Board from issuing annual or other periodic reports to the shareholders of the corporation as they deem appropriate.

Section 5. Execution of Contracts. Any contract or other instrument in writing entered into by the corporation, when signed by the Chairman of the Board, the President or any Vice President and the Secretary, any Assistant Secretary, the Chief Financial Officer or any Assistant Financial Officer is not invalidated as to the corporation by any lack of authority of the signing officers in the absence of actual knowledge on the part of the other party to the contract or other instrument that the signing officers had no authority to execute the same. Contracts or other instruments in writing made in the name of the corporation which are authorized or ratified by the Board, or are done within the scope of authority, actual or apparent, conferred by the Board or within the agency power of the officer executing it, bind the corporation.

Section 6. Share Certificates. A certificate or certificates for shares of the capital stock of the corporation shall be issued to each shareholder when any such shares are fully paid. Every shareholder in the corporation shall be entitled to have a certificate signed in the name of the corporation by the Chairman of the Board or the President or a Vice President and by the Chief Financial Officer or an Assistant Financial Officer or the Secretary or any Assistant Secretary, certifying the number of shares and the class or series of shares owned by the shareholders. Any or all of the signatures on the certificate may be facsimile.

The corporation may issue the whole or any part of its shares as partly paid and subject to call for the remainder of the consideration to be paid therefor. On the certificates issued to represent any partly paid shares the total amount of the consideration to be paid therefor and the amount paid thereon shall be stated.

No new certificate for shares shall be issued in lieu of an old certificate unless the latter is surrendered and cancelled at the same time; provided, however, that a new certificate may be issued without the surrender and cancellation of the old certificate if:

(a) the old certificate is lost, stolen or destroyed;

(b) the request for the issuance of the new certificate is made within a reasonable time after the owner of the old certificate has notice of its loss, destruction, or theft;

(c) the request for the issuance of a new certificate is made prior to the receipt of notice by the corporation that the old certificate has been acquired by a bona fide purchaser; and

(d) the owner satisfies any other reasonable requirements imposed by the corporation including, at the election of the Board, the filing of sufficient indemnity bond or undertaking with the corporation or its transfer agent. In the event of the issuance of a new certificate, the rights and liabilities of the corporation, and of the holders of the old and new certificates, shall be governed by the provisions of (ss.)(ss.)8104 and 8405 of the California Commercial Code.

Section 7. Representation of Securities of Others. Unless otherwise determined by the Board or the Executive Committee, the President, or any other officer of the corporation designated in writing by the President, is authorized to vote, represent and exercise on behalf of the corporation all rights incident to any and all securities of any other person or entity standing in the name of the corporation. The authority herein granted may be exercised either in person, or by proxy.

Section 8. Inspection of Bylaws. The corporation shall keep in its principal executive or business office in this state, the original or a copy of its Bylaws as amended to date, which shall be open to inspection by the shareholders at all reasonable times during office hours.

Section 9. Employee Stock Purchase and Option Plans. The corporation may adopt and carry out a stock purchase plan or agreement or stock option plan or agreement providing for the issue and sale for such consideration as may be fixed of its unissued shares, or of issued shares acquired or to be acquired, to one or more of the employees or directors of the corporation or of a subsidiary or to a trustee on their behalf and for the payment for such shares in installments or at one time, and may provide for aiding any such persons in paying for such shares by compensation for services rendered, promissory notes or otherwise.

A stock purchase plan or agreement or stock option plan or agreement may include, among other features, the fixing of eligibility for participation therein, the class and price of shares to be issued or sold under the plan or agreement, the number of shares which may be subscribed for, the method of payment therefor, the reservation of title until full payment therefor, the effect of the termination of employment, an option or obligation on the part of the corporation to repurchase the shares upon termination of employment, subject to the provisions of Chapter 5 of the California Corporations Code, restrictions upon transfer of the shares and the time limits of and termination of the plan.

Section 10. Construction and Definitions. Unless the context otherwise requires, the general provisions, rules of construction and definitions contained in the California General Corporation Law shall govern the construction of these Bylaws. Without limiting the generality of the foregoing, the masculine gender includes the feminine and neuter, the singular number

includes the plural and the plural number includes the singular, and the term "person" includes a corporation as well as a natural person.

Section 11. Indemnification of Corporate Agents. The corporation shall have power to indemnify any person who is or was an agent of the corporation as provided in (ss.)317 of the California General Corporation Law.

Section 12. Annual Statement of General Information. The corporation shall, during the period commencing in August and ending in January of each year, file with the Secretary of State of the State of California, on the prescribed form, a statement setting forth the number of vacancies on the Board, if any, the names and complete business or residence addresses of all incumbent directors, the Chief Executive Officer, Secretary and Chief Financial Officer, the street address of its principal executive office or principal business office in this state and the general type of business constituting the principal business activity of the corporation, together with a designation of the agent of the corporation for the purpose of service of process, all in compliance with Section 1502 of the Corporations Code of California.

ARTICLE V

AMENDMENTS TO BYLAWS

Section 1. Power of Shareholders. New Bylaws may be adopted or these Bylaws may be amended or repealed by the vote or written consent of shareholders entitled to exercise a majority of the voting power of the corporation.

Section 2. Power of Directors. Subject to the right of shareholders as provided in Section 1 of this Article to adopt, amend or repeal Bylaws, Bylaws may be adopted, amended or repealed by the Board provided, however, that after the issuance of shares a Bylaw specifying or changing a fixed number of directors or the maximum or minimum number or changing from a fixed to a variable Board or vice versa may only be adopted by the vote or written consent of shareholders entitled to exercise a majority of the voting power of the corporation.

Exhibit 3.81

COMMONWEALTH OF VIRGINIA
STATE CORPORATION COMMISSION

ARTICLES OF AMENDMENT

CHANGING THE NAME OF A CORPORATION
BY UNANIMOUS CONSENT OF THE SHAREHOLDERS

The undersigned, pursuant to (ss.) 13.1-710 of the Code of Virginia, executes these articles and states as follows:

ONE

The name of the corporation is Technology, Management and Analysis Corporation

TWO

The name of the corporation is changed to L-3 Communications TMA Corporation.

THREE

The foregoing amendment was adopted by unanimous consent of the shareholders on February 11. 2003.

The undersigned declares that the facts herein stated are true as of February 11, 2003

Technology, Management and Analysis Corporation

(Name of corporation)

By: /s/ Christopher C. Cambria

(Signature)

Christopher C. Cambria, Vice President & Secretary

(Printed Name and Corporate Title)

See instructions on the reverse.

ARTICLES OF RESTATEMENT
OF THE
ARTICLES OF INCORPORATION
OF
TECHNOLOGY, MANAGEMENT & ANALYSIS CORPORATION

ARTICLE I: The name of the corporation (which is hereinafter referred to as the "Corporation") is: Technology, Management & Analysis Corporation.

ARTICLE II: The aggregate number of shares which the Corporation shall have authority to issue is one million three hundred thousand (1,300,000) shares, all with a par value of One Cent ($0.01) per share, of which one million one hundred thousand (1,100,000) shares shall be designated as Class A Common Stock and two hundred thousand (200,000) shares shall be designated as Class B Common Stock.

The Class A Common Stock and the Class B Common Stock shall have equal and identical rights and privileges for all purposes and in all respects except the Class B Common Stock shall have no voting rights or authority with respect to any matter, except as may be otherwise required by law.

ARTICLE III: The purposes for which the Corporation is organized are as follows: To engage in, promote, conduct and carry on any lawful acts or activities for which corporations may be organized under the Virginia Stock Corporation Act.

ARTICLE IV: The registered office shall be located at Prince Street Plaza, Suite 320, 2421 Prince Street, Alexandria, Virginia, in the County of Alexandria. The registered agent will be Samuel N. Klewans, whose business address is the same as the address of the registered office, and who is a resident of Virginia and a member of the Virginia State Bar.

ARTICLE V: No director or officer of the Corporation shall be liable for monetary damages arising out of a single transaction, occurrence or course of conduct in any proceeding brought by a stockholder in the right of the Corporation or brought by or on behalf of the stockholders of the Corporation, provided, however, that nothing in this ARTICLE V shall eliminate or limit the liability of any director or officer of the Corporation to the extent that such elimination or limitation of liability is expressly prohibited by the Virginia Stock Corporation Act.

ARTICLE VI: Notwithstanding any provision of the Virginia Stock Corporation Act requiring a proportion greater than a simple majority of the votes of all voting groups of the Corporation in order to take or authorize any action, any such action may be taken or authorized and shall be effective and valid upon the vote or concurrence of a majority of the aggregate number of votes of each voting group entitled to be cast thereon.

ARTICLE VII: No holder of shares of stock of the Corporation of any class, now or hereafter authorized, shall have any preferential or preemptive right to subscribe for purchase or receive (i) any shares of stock of the Corporation of any class, now authorized or hereafter issued or authorized, (ii) any options or warrants for such shares, (iii) any rights to subscribe to or purchase such shares, or (iv) any securities convertible into or exchangeable for such shares,

which may at any time or from time to time be issued, sold or offered for sale by the Corporation.

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Exhibit 3.81

COMMONWEALTH OF VIRGINIA
STATE CORPORATION COMMISSION

January 22, 1998

The State Corporation Commission has found the accompanying articles submitted on behalf of TECHNOLOGY, MANAGEMENT AND ANALYSIS CORPORATION to comply with the requirements of law, and confirms payment of all related fees.

Therefore, it is ORDERED that this CERTIFICATE OF AMENDMENT AND RESTATEMENT be issued and admitted to record with the articles of amendment in the Office of the Clerk of the Commission, effective January 22, 1998 at 11:57 AM.

The corporation is granted the authority conferred on it by law in accordance with the articles, subject to the conditions and restrictions imposed by law.

STATE CORPORATION COMMISSION

By /s/

Commissioner

CERTIFICATE

OF

TECHNOLOGY, MANAGEMENT & ANALYSIS CORPORATION

Technology, Management & Analysis Corporation (the "Corporation"), a corporation duly organized and validly existing under the Virginia Stock Corporation Act of the Commonwealth of Virginia, does, by Jay Dor, its President, hereby certify that:

I. The original Articles of Incorporation were filed with the State Corporation Commission of the Commonwealth of Virginia on January 7, 1983, as amended on December 31, 1985.

II. The foregoing Articles of Restatement of the Articles of Incorporation restate and amend the Articles of Incorporation by deleting all of the provisions of the Articles of Incorporation, as amended, and substituting in lieu thereof the text of the Articles of Restatement of the Articles of Incorporation set forth above.

III. The restatement of the Articles of Incorporation of the Corporation amends and renumbers Articles III and IV, deletes Article V and replaces it with a new Article VI, add new Articles VI and VII, and pursuant to Section 13.1-711 of the Code of Virginia such amendments, replacements and additions require stockholder approval.

IV. Pursuant to Sections 13.1-707, 13.1-710 and 13.1-711 of the Code of Virginia, by unanimous written consent in lieu of a Special Meeting of the Board of Directors of the Corporation dated January 13, 1998, the Board of Directors of the Corporation deemed it advisable and in the best interests of the Corporation to amend and restate the Articles of Incorporation of the Corporation (in its entirety) as set forth in these Articles of Restatement of the Articles of Incorporation and directed that those Articles of Restatement of the Articles of Incorporation be submitted for consideration and action thereon by the Stockholders of the Corporation.

V. By unanimous written consent in lieu of a Special Meeting of the Stockholders dated January 13, 1998, the Stockholders being the holders of all of the outstanding shares of capital stock of the Corporation entitled to vote thereon, voted in favor of, approved and adopted these Articles of Restatement of the Articles of Incorporation.

IN WITNESS WHEREOF, the Corporation has caused this Certificate to be signed and executed in its corporate name by Jay Dor, its President, as of the 13th day of January 1998.

By: /s/ Jay Dor

Jay Dor, President

Exhibit 3.82

TECHNOLOGY, MANAGEMENT & ANALYSIS CORPORATION
(a Virginia corporation)

BYLAWS

As adopted by the Board of Directors as of December 17, 1997

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BYLAWS

ARTICLE I

OFFICES

Section 1. Registered Office. The registered office of the Corporation in the Commonwealth of Virginia shall be as designated by the Corporation's President from time to time.

Section 2. Additional Offices. The Corporation may also have offices at such other places, both within and without the Commonwealth of Virginia, as the Board of Directors may from time to time determine or as the business of the Corporation may require.

ARTICLE II

MEETINGS OF STOCKHOLDERS

Section 1. Time and Place. A meeting of stockholders for any purpose may be held at such time and place, within or without the Commonwealth of Virginia, as the Board of Directors may fix from time to time and as shall be stated in the notice of the meeting or in a duly executed waiver of notice thereof.

Section 2. Annual Meeting. Annual meetings of stockholders, commencing with the year 1998, shall be held on _____, if not a legal holiday, or, if a legal holiday, then on the next secular day following, at 2:00 p.m., or at such other date and time as shall, from time to time, be designated by the Board of Directors and stated in the notice of the meeting. At such annual meeting, the stockholders shall elect a Board of Directors and transact such other business as may properly be brought before the meeting.

Section 3. Special Meetings. Special meetings of the stockholders, for any purpose or purposes, unless otherwise prescribed by statute or by the Articles of Incorporation, may be called by the Chairman of the Board, if any, or the President and shall be called by the President or Secretary at the request in writing of a majority of the Board of Directors, or if the holders of at least twenty percent (20%) of all votes entitled to be cast on any issue proposed to be considered at any such meeting sign, date and deliver to the Secretary of the Corporation one or more written demands for such meeting describing the purpose or purposes for which it is to be held.

Section 4. Notices of Annual and Special Meetings.

(a) Except as otherwise provided by law, the Articles of Incorporation or as otherwise set forth herein, written notice of any annual or special meeting of stockholders, stating the place, date and time thereof and, in the case of a special meeting, the purpose or

purposes for which the meeting is called, shall be given to each stockholder entitled to vote at such meeting not less than 10 nor more than 60 days prior to the meeting.

(b) Notice of any meeting of stockholders (whether annual or special) to act on an amendment of the Articles of Incorporation, a plan of merger or share exchange, a proposed sale, lease, exchange or other disposition of all or substantially all of the Corporation's property otherwise than in the usual and regular course of business or the dissolution of the Corporation shall be given to each stockholder entitled to vote at such meeting not less than 25 nor more than 60 days before the date of such meeting. Any such notice shall be accompanied by a copy of the proposed amendment or plan of reduction or merger or consolidation.

Section 5. List of Stockholders. The officer or transfer agent in charge of the stock transfer books of the Corporation shall prepare and make, at least 10 days before any meeting of stockholders, a complete list of the stockholders entitled to vote at such meeting, arranged in alphabetical order, and showing the address of each stockholder and the number of shares registered in the name of each stockholder. Such list shall be open to inspection by any stockholder, for any purpose germane to the meeting, during ordinary business hours, for a period of at least 10 days prior to the meeting, at the registered office of the Corporation or at its principal place of business or at the office of its transfer agent. The list shall also be produced and kept open at the time and place of the meeting during the whole time thereof and, except as otherwise provided by law, may be inspected by any stockholder who is present in person thereat for the purposes thereof.

Section 6. Presiding Officer; Order of Business.

(a) Meetings of stockholders shall be presided over by the Chairman of the Board, if any, or, if he is not present (or, if there is none), by the President, or, if he is not present, by a Vice President, or, if he is not present, by such person who may have been chosen by the Board of Directors, or, if none of such persons is present, by a chairman to be chosen by the stockholders owning a majority of the shares of capital stock of the Corporation issued and outstanding and entitled to be cast at the meeting and who are present in person or represented by proxy. The Secretary of the Corporation, or, if he is not present, an Assistant Secretary, or, if he is not present, such person as may be chosen by the Board of Directors, shall act as secretary of meetings of stockholders, or, if none of such persons is present, the stockholders owning a majority of the shares of capital stock of the Corporation issued and outstanding and entitled to be cast at the meeting and who are present in person or represented by proxy shall choose any person present to act as secretary of the meeting.

(b) The following order of business, unless otherwise ordered at the meeting by the chairman thereof, shall be observed as far as practicable and consistent with the purposes of the meeting:

1. Call of the meeting to order.

2. Presentation of proof of mailing of the notice of the meeting and, if the meeting is a special meeting, the call thereof.

3. Presentation of proxies.

4. Announcement that a quorum is present.

5. Reading and approval of the minutes of the previous meeting.

6. Reports, if any, of officers.

7. Election of directors, if the meeting is an annual meeting or a meeting called for that purpose.

8. Consideration of the specific purpose or purposes for which the meeting has been called (other than the election of directors), if the meeting is a special meeting.

9. Transaction of such other business as may properly come before the meeting.

10. Adjournment.

Section 7. Quorum; Adjournments. The holders of a majority of the votes entitled to be cast on a matter, present in person or represented by proxy, shall be necessary to, and shall constitute a quorum for, action on that matter, except as otherwise provided by statute or in the Articles of Incorporation. Shares entitled to vote as a separate voting group may take action on a matter at a meeting only if a quorum of those shares exists with respect to that matter. If, however, a quorum shall not be present or represented at any meeting of the stockholders, unless the Board of Directors fixes a new record date, the stockholders entitled to vote thereat, present in person or represented by proxy, shall have the power to adjourn the meeting for a period not in excess of 120 days after the date fixed for the meeting, without notice of the adjourned meeting if the time and place thereof are announced at the meeting at which the adjournment is taken, until a quorum shall be present or represented. Even if a quorum shall be present or represented at any meeting of the stockholders, unless the Board of Directors fixes a new record date, the stockholders entitled to vote thereat, present in person or represented by proxy, shall have the power to adjourn the meeting for a period not in excess of 120 days after the date fixed for the meeting, without notice of the adjourned meeting if the time and place thereof are announced at the meeting at which the adjournment is taken. At any such adjourned meeting, at which a quorum shall be present in person or represented by proxy, any business may be transacted which might have been transacted at the meeting as originally called.

Section 8. Voting.

(a) At any meeting of stockholders, every stockholder having the right to vote shall be entitled to vote in person or by proxy. Except as otherwise provided by law or the Articles of Incorporation, each stockholder of record shall be entitled to one vote on each matter submitted to a vote for each share of capital stock registered in his name on the books of the Corporation.

(b) All elections shall be determined by a plurality vote, and, except as otherwise provided by law or the Articles of Incorporation, all other matters shall be determined

by a vote of a majority of the shares present in person or represented by proxy and voting on such other matters.

Section 9. Action by Consent. Action required or permitted to be taken at a meeting of stockholders may be taken without a meeting and without action by the Board of Directors if the action is taken by all the stockholders entitled to vote on the action. The action shall be evidenced by one or more written consents describing the action taken, signed by all the stockholders entitled to vote on the action, and delivered to the Secretary of the Corporation for inclusion in the minutes or filing with the corporate records. Any action taken by unanimous written consent shall be effective according to its terms when all consents are in possession of the Corporation. A stockholder may withdraw consent only by delivering a written notice of withdrawal to the Corporation prior to the time that all consents are in the possession of the Corporation. Action so taken shall be effective as of the date specified therein provided the consent states the date of execution by each stockholder.

ARTICLE III

DIRECTORS

Section 1. General Powers; Number; Tenure. The business and affairs of the Corporation shall be managed by its Board of Directors, which may exercise all powers of the Corporation and perform all lawful acts and things which are not by law, the Articles of Incorporation or these Bylaws directed or required to be exercised or performed by the stockholders. Within the limits specified in this Section 1, the number of directors of the Corporation shall be determined by the Board of Directors, except that if no such determination is made, the number of directors shall never be less than the number otherwise permitted by law. The directors shall be elected at the annual meeting of the stockholders, except as provided in Section 2 of this Article, and each director elected shall hold office until the next succeeding annual meeting of the stockholders or until his successor shall have been elected and shall qualify. Directors need not be stockholders or residents of the Commonwealth of Virginia.

Section 2. Vacancies. Any vacancy occurring in the Board of Directors, including a vacancy resulting from an increase in the number of directors, may be filled by the stockholders or a majority of the directors then in office, although less than a quorum, or by a sole remaining director. Each director so chosen shall hold office until the next annual meeting of stockholders or until his successor shall have been elected and shall qualify. If there are no directors in office, any officer or stockholder may call a special meeting of stockholders in accordance with the provisions of the Articles of Incorporation or these Bylaws, at which meeting such vacancies shall be filled.

Section 3. Removal; Resignation.

(a) Except as otherwise provided by law or the Articles of Incorporation, at a meeting of stockholders called expressly for that purpose, any director may be removed, with or without cause, by a vote of stockholders holding a majority of the shares entitled to be cast at an election of directors.

(b) Any director may resign at any time by giving written notice to the Board of Directors, the Chairman of the Board, the President or the Secretary of the Corporation. Unless otherwise specified in such written notice, a resignation shall take effect upon delivery thereof to the Board of Directors or the designated officer. It shall not be necessary for a resignation to be accepted before it becomes effective.

Section 4. Place of Meetings. The Board of Directors may hold meetings, both regular and special, either within or without the Commonwealth of Virginia.

Section 5. Annual Meeting. The annual meeting of each newly elected Board of Directors shall be held immediately following the annual meeting of stockholders, and no notice of such meeting shall be necessary to the newly elected directors in order legally to constitute the meeting, provided a quorum shall be present.

Section 6. Regular Meetings. Additional regular meetings of the Board of Directors may be held without notice at such time and at such place as may from time to time be determined by the Board of Directors.

Section 7. Special Meetings. Special meetings of the Board of Directors may be called by the Chairman of the Board or President on at least 2 days' notice to each director, if such notice is delivered personally or sent by telegram, or on at least 3 days' notice if sent by mail. Special meetings shall be called by the Chairman of the Board, President or Secretary in like manner and on like notice on the written request of note less than one-half of the number of directors then in office. Any such notice need not state the purpose or purposes of such meeting except as provided in Article XI

Section 8. Quorum; Adjournments. At all meetings of the Board of Directors, a majority of the number of directors fixed by these Bylaws shall constitute a quorum for the transaction of business, and the act of a majority of the directors present at any meeting at which there is a quorum shall be the act of the Board of Directors, except as may be otherwise specifically provided by law or the Articles of Incorporation. If a quorum is not present at any meeting of the Board of Directors, the directors present may adjourn the meeting, from time to time, without notice other than announcement at the meeting, until a quorum shall be present.

Section 9. Compensation. Directors shall be entitled to such compensation for their services as directors and to such reimbursement for any reasonable expenses incurred in attending directors' meetings as may from time to time be fixed by the Board of Directors. The compensation of directors may be on such basis as is determined by the Board of Directors. Any director may waive compensation for any meeting. Any director receiving compensation under these provisions shall not be barred from serving the Corporation in any other capacity and receiving compensation and reimbursement for reasonable expenses for such other services.

Section 10. Action by Consent. Any action required or permitted to be taken at any meeting of the Board of Directors may be taken without a meeting if a written consent setting forth the action so to be taken shall be signed by all members of the Board of Directors. Action taken under this Section 10 is effective when the last director signs the consent unless the consent specifies a different effective date, in which event the action taken is effective as of the

date specified therein provided the consent states the date of execution by each director. Such written consent shall be filed with the minutes of its proceedings.

ARTICLE IV

COMMITTEES

Section 1. Executive Committee. The Board of Directors may, by resolution adopted by a majority of the number of directors fixed by these Bylaws, designate 2 or more directors to constitute an Executive Committee, one of whom shall be designated as Chairman of the Executive Committee. Each member of the Executive Committee shall continue as a member thereof until the expiration of his term as a director, or his earlier resignation, unless sooner removed as a member or as a director.

Section 2. Powers. The Executive Committee shall have and may exercise all of the rights, powers and authority of the Board of Directors except to approve or recommend to stockholders action that requires stockholder approval, fill vacancies on the Board of Directors or on any of its committees, amend the Articles of Incorporation, adopt, amend, or repeal the Bylaws, approve a plan of merger not requiring stockholder approval, authorize or approve a distribution, except according to a general formula or method prescribed by the Board of Directors, or authorize or approve the issuance or sale or contract for sale of stock, or determine the designation and relative rights, preferences, and limitations of a class or series of shares, except that the Board of Directors may authorize a committee, or a senior executive officer of the Corporation, to do so within limits specifically prescribed by the Board of Directors.

Section 3. Procedure; Meetings. The Executive Committee shall fix its own rules of procedure and shall meet at such times and at such place or places as may be provided by such rules or as the members of the Executive Committee shall provide. The Executive Committee shall keep regular minutes of its meetings and deliver such minutes to the Board of Directors.

The Chairman of the Executive Committee, or, in his absence, a member of the Executive Committee chosen by a majority of the members present, shall preside at meetings of the Executive Committee, and another member thereof chosen by the Executive Committee shall act as Secretary of the Executive Committee.

Section 4. Quorum. A majority of the Executive Committee shall constitute a quorum for the transaction of business, and the affirmative vote of a majority of the members thereof shall be required for any action of the Executive Committee.

Section 5. Other Committees. The Board of Directors, by resolutions adopted by a majority of the directors at a meeting at which a quorum is present, may appoint such other committee or committees as it shall deem advisable. Two or more directors shall be designated as the members of each such committee. Such other committee or committees, to the extent provided in the resolution of the Board of Directors, shall have and may exercise the powers and authority of the Board of Directors in the management of the business and affairs of the

Corporation, except that in no event may such other committee or committees exercise any of the powers denied to the Executive Committee in Section 2 of this Article IV.

Section 6. Vacancies; Changes; Discharge. The Board of Directors shall have the power at any time to fill vacancies in, to change the membership of, and to discharge any committee.

Section 7. Compensation. Members of any committee shall be entitled to such compensation for their services as members of any such committee and to such reimbursement for any reasonable expenses incurred in attending committee meetings as may from time to time be fixed by the Board of Directors. Any member may waive compensation for any meeting. Any committee member receiving compensation under these provisions shall not be barred from serving the Corporation in any other capacity and from receiving compensation and reimbursement of reasonable expenses for such other services.

Section 8. Action by Consent. Any action required or permitted to be taken at any meeting of any committee of the Board of Directors may be taken without a meeting if a written consent setting forth the action so to be taken shall be signed before such action by all members of such committee. Such written consent shall be filed with the minutes of its proceedings.

ARTICLE V

NOTICES

Section 1. Form; Delivery. Whenever, under the provisions of law, the Articles of Incorporation or these Bylaws, notice is required to be given to any director or stockholder, it shall not be construed to mean personal notice unless otherwise specifically provided, but such notice may be given in written form, by mail (with postage thereon prepaid) or private carrier, or by telegraph, teletype or other form of wire or wireless communication addressed to such director or stockholder, at his address as it appears on the records of the Corporation. Such notices, if mailed, shall be deemed to be given at the time they are deposited in the United States mail.

Section 2. Waiver; Effect of Attendance. Whenever any notice is required to be given under the provisions of law, the Articles of Incorporation or these Bylaws, a written waiver thereof, signed by the person or persons entitled to such notice, whether before or after the time stated therein, shall be equivalent to the giving of such notice. In addition, any stockholder who attends a meeting of stockholders in person, or any director who attends a meeting of the Board of Directors, shall be deemed to have had timely and proper notice of the meeting, unless such stockholder or director at the beginning of the meeting objects to holding the meeting or transacting business at the meeting. Any stockholder or director who attends a meeting waives objection to consideration of a particular matter at the meeting that is not within the purpose or purposes described in the meeting notice, unless the stockholder or director objects to considering the matter when it is presented.

ARTICLE VI

OFFICERS

Section 1. Designations. The officers of the Corporation shall be chosen by the Board of Directors and shall consist of a President, a Secretary and a Treasurer. The Board of Directors may also choose a Chairman of the Board, a Vice President or Vice Presidents, one or more Assistant Secretaries and/or Assistant Treasurers and other officers and/or agents as it shall deem necessary or appropriate. The Board of Directors may delegate to the President of the Corporation the authority to appoint any officer or agent of the Corporation. The election or appointment of any officer of the Corporation shall not of itself create contract rights for any such officer. All officers of the Corporation shall exercise such powers and perform such duties as shall from time to time be determined by the Board of Directors. Any 2 or more offices may be held by the same person.

Section 2. Term of Office; Removal. The Board of Directors at its annual meeting after each annual meeting of stockholders shall choose a President, a Secretary and a Treasurer. The Board of Directors may also choose a Chairman of the Board, a Vice President or Vice Presidents, one or more Assistant Secretaries and/or Assistant Treasurers, and such other officers and agents as it shall deem necessary or appropriate. Each officer of the Corporation shall hold office until his successor is chosen and shall qualify. Any officer or agent elected or appointed by the Board of Directors may be removed, with or without cause, at any time by the affirmative vote of a majority of the directors then in office. Any officer or agent appointed by the President pursuant to authority delegated to the President by the Board of Directors may be removed with or without cause at any time whenever the President in his absolute discretion shall consider that the best interests of the Corporation shall be served thereby. Such removal shall not prejudice the contract rights, if any, of the person so removed. Any vacancy occurring in any office of the Corporation may be filled for the unexpired portion of the term by the Board of Directors or by the President in the case of a vacancy occurring in an office as to which the President has been delegated the authority to make appointments.

Section 3. Compensation. The salaries of all officers of the Corporation shall be fixed from time to time by the Board of Directors and no officer shall be prevented from receiving such salary by reason of the fact that he is also a director of the Corporation.

Section 4. The Chairman of the Board. The Chairman of the Board (if the Board of Directors so deems advisable and selects one) shall be an officer of the Corporation and, subject to the direction of the Board of Directors, shall perform such executive, supervisory and management functions and duties as may be assigned to him from time to time by the Board. He shall, if present, preside at all meetings of stockholders and of the Board of Directors.

Section 5. The President.

(a) The President shall be the chief executive officer of the Corporation and, subject to the direction of the Board of Directors, shall have general charge of the business, affairs and property of the Corporation and general supervision over its other officers and agents. In addition to and not in limitation of the foregoing, the President shall be empowered to

authorize any change of the registered office or registered agent (or both) of the Corporation in the Commonwealth of Virginia. In general, he shall perform all duties incident to the office of President and shall see that all orders and resolutions of the Board of Directors are carried into effect.

(b) Unless otherwise prescribed by the Board of Directors, the President shall have full power and authority on behalf of the Corporation to attend, act and vote at any meeting of security holders of other corporations in which the Corporation may hold securities. At such meeting the President shall possess and may exercise any and all rights and powers incident to the ownership of such securities which the Corporation might have possessed and exercised if it had been present. The Board of Directors may from time to time confer like powers upon any other person or persons.

Section 6. The Vice Presidents. The Vice President, if any (or in the event there be more than one, the Vice Presidents in the order designated, or in the absence of any designation, in the order of their election), shall, in the absence of the President or in the event of his disability, perform the duties and exercise the powers of the President and shall generally assist the President and perform such other duties and have such other powers as may from time to time be prescribed by the Board of Directors.

Section 7. The Secretary. The Secretary shall attend all meetings of the Board of Directors and all meetings of stockholders and record all votes and the proceedings of the meetings in a book to be kept for that purpose and shall perform like duties for the Executive Committee or other committees, if required. He shall give, or cause to be given, notice of all meetings of stockholders and special meetings of the Board of Directors, and shall perform such other duties as may from time to time be prescribed by the Board of Directors, the Chairman of the Board or the President, under whose supervision he shall act. He shall have custody of the seal of the Corporation, and he, or an Assistant Secretary, shall have authority to affix the same to any instrument requiring it, and, when so affixed, the seal may be attested by his signature or by the signature of such Assistant Secretary. The Board of Directors may give general authority to any other officer to affix the seal of the Corporation and to attest the affixing thereof by his signature.

Section 8. The Assistant Secretary. The Assistant Secretary, if any (or in the event there be more than one, the Assistant Secretaries in the order designated, or in the absence of any designation, in the order of their election), shall, in the absence of the Secretary or in the event of his disability, perform the duties and exercise the powers of the Secretary and shall perform such other duties and have such other powers as may from time to time be prescribed by the Board of Directors.

Section 9. The Treasurer. The Treasurer shall have the custody of the corporate funds and other valuable effects, including securities, and shall keep full and accurate accounts of receipts and disbursements in books belonging to the Corporation and shall deposit all moneys and other valuable effects in the name and to the credit of the Corporation in such depositories as may from time to time be designated by the Board of Directors. He shall disburse the funds of the Corporation as may be ordered by the Board of Directors, taking proper vouchers for such disbursements, and shall render to the Chairman of the Board, if any, the President and the Board

of Directors, at regular meetings of the Board, or whenever they may require it, an account of all his transactions as Treasurer and of the financial condition of the Corporation.

Section 10. The Assistant Treasurer. The Assistant Treasurer, if any (or in the event there shall be more than one, the Assistant Treasurers in the order designated, or in the absence of any designation, in the order of their election), shall, in the absence of the Treasurer or in the event of his disability, perform the duties and exercise the powers of the Treasurer and shall perform such other duties and have such other powers as may from time to time be prescribed by the Board of Directors.

ARTICLE VII

INDEMNIFICATION OF DIRECTORS, OFFICERS AND OTHERS

Reference is made to Section 697 (and any other relevant provisions) of the Virginia Stock Corporation Act. Particular reference is made to the class of persons (hereinafter called "Indemnitees") who may be indemnified by a Virginia stock corporation pursuant to such Act. The Corporation shall (and is hereby obligated to) indemnify the Indemnitees, and each of them, in each and every situation where the Corporation is obligated to make such indemnification pursuant to such Act. The Corporation shall indemnify the Indemnitees, and each of them, in each and every situation where, under the aforesaid statutory provisions, the Corporation is not obligated, but is nevertheless permitted or empowered, to make such indemnification, it being understood, that, before making such indemnification with respect to any situation covered under this sentence, (i) the Corporation shall promptly make or cause to be made, by any of the methods referred to in such Act, a determination as to whether each Indemnitee met the applicable standard of conduct set forth in such Act and (ii) no such indemnification shall be made unless it is determined that such Indemnitee met the applicable standard of conduct set forth in such Act.

ARTICLE VIII

AFFILIATED TRANSACTIONS AND INTERESTED DIRECTORS

Section 1. Affiliated Transactions. No contract or transaction between the Corporation and one or more of its directors or officers, or between the Corporation and any other corporation, partnership, association or other organization in which one or more of its directors or officers are directors or officers, or have a financial interest, shall be void or voidable solely for this reason, or solely because the director or officer is present at or participates in the meeting of the Board of Directors or committee thereof which authorizes the contract or transaction or solely because his or their votes are counted for such purpose, if:

(a) The material facts as to his relationship or interest and as to the contract or transaction are disclosed or are known to the Board of Directors or the committee, and the Board of Directors or committee in good faith authorizes the contract or transaction by the affirmative

vote of a majority of the disinterested directors, even though the disinterested directors be less than a quorum; or

(b) The material facts as to his relationship or interest and as to the contract. or transaction are disclosed or are known to the stockholders entitled to vote thereon, and the contract or transaction is specifically approved in good faith by vote of the stockholders; or

(c) The contract or transaction is fair as to the Corporation as of the time it is authorized, approved or ratified by the Board of Directors, a committee thereof, or the stockholders.

Section 2. Determining Quorum. Common or interested directors may be counted in determining the presence of a quorum at a meeting of the Board of Directors or of a committee thereof which authorizes the contract or transaction.

ARTICLE IX

STOCK CERTIFICATES

Section 1. Form; Signatures.

(a) Every holder of stock in the Corporation, when such stock is fully paid, shall be entitled to have a certificate, signed by the President or a Vice President and the Secretary or an Assistant Secretary or the Treasurer or an Assistant Treasurer of the Corporation or any other officer authorized by a resolution of the Board of Directors, exhibiting on the face thereof the number and class (and series, if any) of shares owned by him. Such signatures may be facsimile if the certificate is countersigned by a transfer agent, or registered by a registrar, other than the Corporation itself, or an employee of the Corporation. Each certificate representing stock in the Corporation shall also state upon the face thereof the name of the person to whom it is issued and that the Corporation is organized under the laws of the Commonwealth of Virginia. Each such certificate may (but need not) be sealed with the seal of the Corporation or facsimile thereof. In case any officer who has signed or whose facsimile signature was placed on a certificate shall have ceased to be such officer before such certificate is issued, it may nevertheless be issued by the Corporation with the same effect as if he were such officer at the date of its issue.

(b) All stock certificates representing shares of capital stock which are subject to restrictions on transfer or to other restrictions may have imprinted thereon such notation to such effect as may be determined by the Board of Directors.

Section 2. Registration of Transfer. Upon surrender to the Corporation or any transfer agent of the Corporation of a certificate for shares duly endorsed or accompanied by proper evidence of succession, assignment or authority to transfer, it shall be the duty of the Corporation or its transfer agent to issue a new certificate to the person entitled thereto, to cancel the old certificate and to record the transaction upon its books.

Section 3. Registered Stockholders.

(a) Except as otherwise provided by law, the Corporation shall be entitled to recognize the exclusive right of a person who is registered on its books as the owner of shares of its capital stock to receive dividends or other distributions, to vote as such owner, and to hold liable for calls and assessments a person who is registered on its books as the owner of shares of its capital stock. The Corporation shall not be bound to recognize any equitable or legal claim to or interest in such shares on the part of any other person.

(b) If a stockholder desires that notices and/or dividends shall be sent to a name or address other than the name or address appearing on the stock ledger maintained by the Corporation (or by the transfer agent or registrar, if any), such stockholder shall have the duty to notify the Corporation (or the transfer agent or registrar, if any), in writing, of such desire. Such written notice shall specify the alternate name or address to be used.

Section 4. Record Date. In order that the Corporation may determine the stockholders of record who are entitled to notice of or to vote at any meeting of stockholders or any adjournment thereof, or entitled to receive payment of any dividend or other distribution, or to make a determination of the stockholders of record for any other proper purpose, the Board of Directors may, in advance, fix a date as the record date for any such determination. Such date shall not be more than 70 days before the date of such meeting, nor more than 70 days prior to the date of any other action. A determination of stockholders of record entitled to notice of or to vote at a meeting of stockholders shall apply to any adjournment of the meeting taken pursuant to Section 7 of Article II; provided, however, that the Board of Directors may fix a new record date for the adjourned meeting.

Section 5. Lost Stolen or Destroyed Certificates. The Board of Directors may direct a new certificate to be issued in place of any certificate theretofore issued by the Corporation which is claimed to have been lost, stolen or destroyed, upon the making of an affidavit of that fact by the person claiming the certificate of stock to be lost, stolen or destroyed. When authorizing such issue of a new certificate, the Board of Directors may, in its discretion and as a condition precedent to the issuance thereof, require the owner of such lost, stolen or destroyed certificate, or his legal representative, to advertise the same in such manner as it shall require and/or to give the Corporation a bond in such sum, or other security in such form, as it may direct as indemnity against any claim that may be made against the Corporation with respect to the certificate claimed to have been lost, stolen or destroyed.

ARTICLE X

GENERAL PROVISIONS

Section 1. Dividends. Subject to the provisions of the Articles of Incorporation, dividends upon the outstanding capital stock of the Corporation may be declared by the Board of Directors at any annual, regular or special meeting, pursuant to law, and may be paid in cash, in property or in shares of the Corporation's capital stock.

Section 2. Reserves. The Board of Directors shall have full power, subject to the provisions of law and the Articles of Incorporation, to determine whether any, and, if so, what part, of the funds legally available for the payment of dividends shall be declared as dividends and paid to the stockholders of the Corporation. The Board of Directors, in its sole discretion, may fix a sum which may be set aside or reserved over and above the paid-in capital of the Corporation for working capital or as a reserve for any proper purpose, and may, from time to time, increase, diminish or vary such fund or funds.

Section 3. Fiscal Year. The fiscal year of the Corporation shall be as determined from time to time by the Board of Directors.

Section 4. Seal. The corporate seal shall have inscribed thereon the name of the Corporation, the year of its incorporation and the words "Corporate Seal" and "Commonwealth of Virginia".

ARTICLE XI

AMENDMENTS

The Board of Directors shall have the power to make, amend, alter and repeal these Bylaws, and to adopt new bylaws, by an affirmative vote of a majority of the whole Board, provided that notice of the proposal to make, amend, alter or repeal these Bylaws, or to adopt new bylaws, must be included in the notice of the meeting of the Board of Directors at which such action takes place.

ARTICLE XII

OFFICERS

Section 1. Designations. The officers of the Corporation shall be chosen by the Board of Directors and shall consist of a Chief Executive Officer, a President, a Secretary and a Treasurer. The Board of Directors may also choose a Chairman of the Board, a Vice President or Vice Presidents, one or more Assistant Secretaries and/or Assistant Treasurers and other officers and/or agents as it shall deem necessary or appropriate. The Board of Directors may delegate to the President of the Corporation the authority to appoint any officer or agent of the Corporation. The election or appointment of any officer of the Corporation shall not of itself create contract rights for any such officer. All officers of the Corporation shall exercise such powers and perform such duties as shall from time to time be determined by the Board of Directors. Any 2 or more offices may be held by the same person.

Section 2. Term of Office; Removal. The Board of Directors at its annual meeting after each annual meeting of stockholders shall choose a Chief Executive Officer, a President, a Secretary and a Treasurer. The Board of Directors may also choose a Chairman of the Board, a Vice President or Vice Presidents, one or more Assistant Secretaries and/or Assistant Treasurers, and such other officers and agents as it shall deem necessary or appropriate. Each officer of the

Corporation shall hold office until his successor is chosen and shall qualify. Any officer or agent elected or appointed by the Board of Directors may be removed, with or without cause, at any time by the affirmative vote of a majority of the directors then in office. Any officer or agent appointed by the Chief Executive Officer or President pursuant to authority delegated to the Chief Executive Officer or President by the Board of Directors may be removed with or without cause at any time whenever the Chief Executive Officer in his absolute discretion shall consider that the best interests of the Corporation shall be served thereby. Such removal shall not prejudice the contract rights, if any, of the person so removed. Any vacancy occurring in any office of the Corporation may be filled for the unexpired portion of the term by the Board of Directors or by the Chief Executive Officer or President in the case of a vacancy occurring in an office as to which the Chief Executive Officer or President has been delegated the authority to make appointments. In cases where both the Chief Executive Officer and the President have and exercise such authority, the appointment by the Chief Executive Officer shall prevail.

Section 3. Compensation. The salaries of all officers of the Corporation shall be fixed from time to time by the Board of Directors and no officer shall be prevented from receiving such salary by reason of the fact that he is also a director of the Corporation.

Section 4. The Chairman of the Board. The Chairman of the Board (if the Board of Directors so deems advisable and selects one) shall be an officer of the Corporation and subject to the direction of the Board of Directors, shall perform such executive, supervisory and management functions and duties as may be assigned to him from time to time by the Board. He shall, if present, preside at all meetings of stockholders and of the Board of Directors.

Section 5. Chief Executive Officer.

(a) The Chief Executive Officer, subject to the direction of the Board of Directors, shall have ultimate authority of the affairs of the business and property of the Corporation and ultimate authority over its other officers and agents. In addition to and not in limitation of the foregoing, the Chief Executive Officer shall be empowered to authorize any change of the registered office or registered agent (or both) of the Corporation in the Commonwealth of Virginia. In general, he shall perform all duties incident to the office of Chief Executive Officer and shall see that all orders and resolutions of the Board of Directors are carried into effect.

(b) Unless otherwise prescribed by the Board of Directors, the Chief Executive Officer shall have full power and authority on behalf of the Corporation to attend, act and vote at any meeting of security holders of other corporations in which the Corporation may hold securities. At such meeting the Chief Executive Officer shall possess and may exercise any and all rights and powers incident to the ownership of such securities which the Corporation might have possessed and exercised if it had been present. The Board of Directors may from time to time confer like powers upon any other person or persons.

Section 6. The President.

(a) The President, subject to the direction of the Board of Directors and the authority of the Chief Executive Officer, shall have general charge of the day to day business and

affairs of the Corporation and general supervision over its other officers and agents (except for the Chief Executive Officer). In general, he shall perform all duties incident to the office of President, subject to the supervision and authority of the Chief Executive Officer, and shall see that all orders and resolutions of the Board of Directors are carried into effect.

(b) Unless otherwise prescribed by the Board of Directors, in the absence of the Chief Executive Officer, the President shall have full power and authority on behalf of the Corporation to attend, act and vote at any meeting of security holders of other corporations in which the Corporation may hold securities. At such meeting the President shall possess and may exercise any and all rights and powers incident to the ownership of such securities which the Corporation might have possessed and exercised if it had been present. The Board of Directors may from time to time confer like powers upon any other person or persons.

(c) The President shall, in the absence of the Chief Executive Officer, or in the event of his disability, perform the duties and exercise the powers of the Chief Executive Officer.

Section 7. The Vice Presidents. The Vice President, if any (or in the event there be more than one, the Vice Presidents in the order designated, or in the absence of any designation, in the order of their election), shall, in the absence of the President and the Chief Executive Officer or in the event of their disability, perform the duties and exercise the powers of the President and shall generally assist the President and perform such other duties and have such other powers as may from time to time be prescribed by the Board of Directors.

Section 8. The Secretary. The Secretary shall attend all meetings of the Board of Directors and all meetings of stockholders and record all votes and the proceedings of the meetings in a book to be kept for that purpose and shall perform like duties for the Executive Committee or other committees, if required. He shall give, or cause to be given, notice of all meetings of stockholders and special meetings of the Board of Directors, and shall perform such other duties as may from time to time be prescribed by the Board of Directors, the Chief Executive Officer, the Chairman of the Board or the President, under whose supervision he shall act. He shall have custody of the seal of the Corporation, and he, or an Assistant Secretary, shall have authority to affix the same to any instrument requiring it, and, when so affixed, the seal may be attested by his signature or by the signature of such Assistant Secretary. The Board of Directors may give general authority to any other officer to affix the seal of the Corporation and to attest the affixing thereof by his signature.

Section 9. The Assistant Secretary. The Assistant Secretary, if any (or in the event there be more than one, the Assistant Secretaries in the order designated, or in the absence of any designation, in the order of their election), shall, in the absence of the Secretary or in the event of his disability, perform the duties and exercise the powers of the Secretary and shall perform such other duties and have such other powers as may from time to time be prescribed by the Board of Directors.

Section 10. The Treasurer. The Treasurer shall have the custody of the corporate funds and other valuable effects, including securities, and shall keep full and accurate accounts of receipts and disbursements in books belonging to the Corporation and shall deposit all moneys

and other valuable effects in the name and to the credit of the Corporation in such depositories as may from time to time be designated by the Board of Directors. He shall disburse the funds of the Corporation as may be ordered by the Board of Directors, taking proper vouchers for such disbursements, and shall render to the Chairman of the Board, if any, the Chief Executive Officer, the President and the Board of Directors, at regular meetings of the Board, or whenever they may require it, an account of all his transactions as Treasurer and of the financial condition of the Corporation.

Section 11. The Assistant Treasurer. The Assistant Treasurer, if any (or in the event there shall be more than one, the Assistant Treasurers in the order designated, or in the absence of any designation, in the order of their election), shall, in the absence of the Treasurer or in the event of his disability, perform the duties and exercise the powers of the Treasurer and shall perform such other duties and have such other powers as may from time to time be prescribed by the Board of Directors.

Exhibit 3.83

ARTICLES OF MERGER
OF
NMP CORP.
AND
TANO CORP.
AND
MC II ELECTRIC COMPANY, INC.
AND
ROFLAN ASSOCIATES, INC.
INTO
WESTWOOD CORPORATION

FIRST: Westwood Corporation (hereinafter referred to as the "parent entity"), an entity of the jurisdiction of Nevada, owns all of the outstanding shares of each class of the subsidiary corporations as follows:

NAME OF CORPORATION	JURISDICTION
NMP Corp.	Oklahoma
TANO Corp.	Louisiana
MC II Electric Company, Inc.	Texas
Roflan Associates, Inc.	Massachusetts

These subsidiary corporations are hereinafter referred to as the "subsidiary entities." The laws of the jurisdictions of each of the subsidiary entities permit the merger.

SECOND: An Agreement of Merger was adopted by each constituent entity, whereby the subsidiary entities are to be merged into the parent entity.

THIRD: Approval of the owners of the parent and subsidiary entities was not required.

FOURTH: The complete executed Agreement of Merger is on file at the place of business of the parent entity located at 12402 East 60th Street, Tulsa, Oklahoma 74146, and a copy of the Agreement of Merger will be furnished by the parent entity, on request and without cost, to any owner or any entity which is a party to this merger.

FIFTH: The name of the surviving entity, Westwood Corporation, is changed by changing Article I of the Restated and Amended Articles of Incorporation to read as follows:

"Article I: The name of the corporation is L-3 Communications Westwood Corporation."

SIXTH: The merger shall be effective on December 30, 2002 at 5:00 p.m. Eastern Standard Time.

SEVENTH: Anything herein or elsewhere to the contrary notwithstanding, this merger may be amended, or terminated and abandoned by the board of directors of Westwood Corporation at any time prior to December 30, 2002 at 5:00 p.m. Eastern Standard Time.

WESTWOOD CORPORATION
(NOW KNOWN AS L-3 COMMUNICATIONS WESTWOOD CORPORATION)

/s/ Ernest H. McKee

Ernest H. McKee, President

/s/ Christopher C. Cambria

Christopher C. Cambria, Secretary

NMP CORP.

/s/ Ernest H. McKee

Ernest H. McKee, President

/s/ Christopher C. Cambria

Christopher C. Cambria, Secretary

TANO CORP.

/s/ Ernest H. McKee

Ernest H. McKee, President

/s/ Christopher C. Cambria

Christopher C. Cambria, Secretary

MC II ELECTRIC COMPANY, INC.

/s/ Ernest H. McKee

Ernest H. McKee, President

/s/ Christopher C. Cambria

Christopher C. Cambria, Secretary

ROFLAN ASSOCIATES, INC.

/s/ Ernest H. McKee

Ernest H. McKee, President

/s/ Christopher C. Cambria

Christopher C. Cambria, Clerk

STATE OF OKLAHOMA)
) SS.
COUNTY OF TULSA)

On December 26, 2002, personally appeared before me, a Notary Public, Ernest H. McKee who acknowledged that he executed the above instrument.

/s/ Deborah A. Calico
- ---
Notary Public

My Commission expires on: 7/21/2004

(Notary Seal)

STATE OF NEW YORK)
) SS.
COUNTY OF NEW YORK)

On December 20, 2002, personally appeared before me, a Notary Public, Christopher C. Cambria who acknowledged that he executed the above instrument.

/s/ Tara M. Nasta
- ----------
Notary Public

My Commission expires on: 4/30/03

(Notary Seal)

ARTICLES OF MERGER
OF
BLUE ACQUISITION CORP.
INTO
WESTWOOD CORPORATION

Westwood Corporation, the surviving entity of a merger, delivers these Articles of Merger to the Nevada Secretary of State for filing pursuant to the provisions of Chapter 92A of the Nevada Revised Statutes.

ARTICLE I
CONSTITUENT ENTITIES

The name and jurisdiction of organization of each constituent entity is as follows:

A. Westwood Corporation, a corporation organized under and governed by the laws of the State of Nevada (the "Surviving Corporation").

B. Blue Acquisition Corp., a corporation organized under and governed by the laws of the State of Nevada (the "Disappearing Corporation").

ARTICLE II
ADOPTION OF THE AGREEMENT AND PLAN OF MERGER

The respective Boards of Directors of the Surviving Corporation and the Disappearing Corporation have adopted an Agreement and Plan of Merger dated as of August 8, 2002 (the "Agreement and Plan of Merger"), among L-3 Communications Corporation, a Delaware corporation, the Surviving Corporation and the Disappearing Corporation.

ARTICLE III
APPROVAL OF THE AGREEMENT AND PLAN OF MERGER BY THE STOCKHOLDERS

A. Surviving Corporation. The Agreement and Plan of Merger was submitted to the stockholders of the Surviving Corporation pursuant to Chapter 92A of the Nevada Revised Statutes. The ownership interests of the Surviving Corporation are as follows:

	Designation of Stockholders' Interests	Percentage of Total Votes
Surviving Corporation	Common Stock $0.003 par value per share	100%

ARTICLES OF MERGER
OF
NMP CORP.
AND
TANO CORP
AND
MC II ELECTRIC COMPANY, INC.
AND
ROFLAN ASSOCIATES, INC.
INTO
WESTWOOD CORPORATION

FIRST: Westwood Corporation (hereinafter referred to as the "parent entity"), an entity of the jurisdiction of Nevada, owns all of the outstanding shares of each class of the subsidiary corporations as follows:

NAME OF CORPORATION	JURISDICTION
NMP Corp.	Oklahoma
TANO Corp.	Louisiana
MC II Electric Company, Inc.	Texas
Roflan Associates, Inc.	Massachusetts

These subsidiary corporations are hereinafter referred to as the "subsidiary entities." The laws of the jurisdictions of each of the subsidiary entities permit the merger.

SECOND: An Agreement of Merger was adopted by each constituent entity, whereby the subsidiary entities are to be merged into the parent entity.

THIRD: Approval of the owners of the parent and subsidiary entities was not required.

FOURTH: The complete executed Agreement of Merger is on file at the place of business of the parent entity located at 12402 East 60th Street, Tulsa, Oklahoma 74146, and a copy of the Agreement of Merger will be furnished by the parent entity, on request and without cost, to any owner or any entity which is a party to this merger.

FIFTH: The name of the surviving entity, Westwood Corporation, is changed by changing Article I of the Restated and Amended Articles of Incorporation to read as follows:

"Article I: The name of the corporation is L-3 Communications Westwood Corporation."

SIXTH: The merger shall be effective on December 30, 2002 at 5:00 p.m. Eastern Standard Time.

SEVENTH: Anything herein or elsewhere to the contrary notwithstanding, this merger may be amended, or terminated and abandoned by the board of directors of Westwood Corporation at any time prior to December 30, 2002 at 5:00 p.m. Eastern Standard Time.

WESTWOOD CORPORATION
(NOW KNOWN AS L-3 COMMUNICATIONS
WESTWOOD CORPORATION)

/s/ Ernest H. McKee

Ernest H. McKee, President

/s/ Christopher C. Cambria

Christopher C. Cambria, Secretary

NMP CORP.

/s/ Ernest H. McKee

Ernest H. McKee, President

/s/ Christopher C. Cambria

Christopher C. Cambria, Secretary

TANO CORP.

/s/ Ernest H. McKee

Ernest H. McKee, President

/s/ Christopher C. Cambria

Christopher C. Cambria, Secretary

MC II ELECTRIC COMPANY, INC.

/s/ Ernest H. McKee

Ernest H. McKee, President

/s/ Christopher C. Cambria

Christopher C. Cambria, Secretary

ROFLAN ASSOCIATES, INC.

/s/ Ernest H. McKee

Ernest H. McKee, President

/s/ Christopher C. Cambria

Christopher C. Cambria, Secretary

STATE OF OKLAHOMA)
) SS.
COUNTY OF TULSA)

On December 26, 2002, personally appeared before me, a Notary Public, Ernest H. McKee who acknowledged that he executed the above instrument.

/s/ Deborah A. Calico

Notary Public

My Commission expires: 7/21/2004

(Notary Seal)

STATE OF NEW YORK)
) SS.
COUNTY OF NEW YORK)

On December 20, 2002, personally appeared before me, a Notary Public, Christopher C. Cambria who acknowledged that he executed the above instrument.

/s/ Tara M. Nasta
- ----------
Notary Public

My Commission expires: 4/30/03

(Notary Seal)

ARTICLES OF MERGER
OF
BLUE ACQUISITION CORP.
INTO
WESTWOOD CORPORATION

Westwood Corporation, the surviving entity of a merger, delivers these Articles of Merger to the Nevada Secretary of State for filing pursuant to the provisions of Chapter 92A of the Nevada Revised Statutes.

ARTICLE I
CONSTITUENT ENTITIES

The name and jurisdiction of organization of each constituent entity is as follows:

A. Westwood Corporation, a corporation organized under and governed by the laws of the State of Nevada (the "Surviving Corporation").

B. Blue Acquisition Corp., a corporation organized under and governed by the laws of the State of Nevada (the "Disappearing Corporation").

ARTICLE II
ADOPTION OF THE AGREEMENT AND PLAN OF MERGER

The respective Boards of Directors of the Surviving Corporation and the Disappearing Corporation have adopted an Agreement and Plan of Merger dated as of August 8, 2002 (the "Agreement and Plan of Merger"), among L-3 Communications Corporation, a Delaware corporation, the Surviving Corporation and the Disappearing Corporation.

ARTICLE III
APPROVAL OF THE AGREEMENT AND PLAN OF MERGER BY THE STOCKHOLDERS

A. Surviving Corporation. The Agreement and Plan of Merger was submitted to the stockholders of the Surviving Corporation pursuant to Chapter 92A of the Nevada Revised Statutes. The ownership interests of the Surviving Corporation are as follows:

	Designation of Stockholders' Interests	Percentage of Total Votes
Surviving Corporation	Common Stock $0.003 par value per share	100%

The undisputed percentage of stockholders' interests cast in favor of the Agreement and Plan of Merger by the stockholders of the Surviving Corporation was as follows:

	Designation of Stockholders' Interests	Undisputed Percentage of Stockholders' Interests Cast in Favor
Surviving Corporation	Common Stock $0.003 par value per share	72.15%

The undisputed percentage of stockholders' interests cast in favor of the Agreement and Plan of Merger was sufficient for the approval of the Agreement and Plan of Merger by the stockholders of the Surviving Corporation.

B. Disappearing Corporation. The Agreement and Plan of Merger was approved by the written consent of the sole stockholder of the Disappearing Corporation.

ARTICLE IV
ARTICLES OF INCORPORATION AND BYLAWS OF THE SURVIVING CORPORATION

The Articles of Incorporation and Bylaws of the Disappearing Corporation in effect immediately prior to the time the merger of the Disappearing Corporation with and into the Surviving Corporation becomes effective shall be the Articles of Incorporation and Bylaws, respectively, of the Surviving Corporation until thereafter changed or amended.

ARTICLE V
COPIES OF THE AGREEMENT AND PLAN OF MERGER

A. The complete executed Agreement and Plan of Merger is on file at the Surviving Corporation's registered office.

B. A copy of the Agreement and Plan of Merger shall be furnished, on request and without cost, to any stockholder of any entity which is a party to the merger.

ARTICLE VI
EFFECTIVE DATE OF MERGER

The merger of the Disappearing Corporation with and into the Surviving Corporation shall take effect upon the filing of these Articles of Merger (the "Effective Date"). On the Effective Date, stockholders in the Surviving Corporation and Disappearing Corporation are entitled to only the rights provided in the Agreement and Plan of Merger and any created under applicable law.

Pursuant to Nevada Revised Statutes ss. 92A.230, these Articles of Merger have been executed by the Vice President of the Disappearing Corporation as of November 13, 2002.

Disappearing Corporation: BLUE ACQUISITION CORP.

By: /s/ Christopher C. Cambria

Name: Christopher C. Cambria
Title: Vice President

Pursuant to Nevada Revised Statutes ss. 92A.230, these Articles of Merger have been executed by the President of the Surviving Corporation as of November 13, 2002.

Surviving Corporation:

WESTWOOD CORPORATION

By: /s/ Ernest H. McKee

Name: Ernest H. McKee
Title: President

ARTICLES OF INCORPORATION
OF
BLUE ACQUISITION CORP.

The undersigned adopts the following Articles of Incorporation under the provisions of Chapter 78 of the Nevada Revised Statutes.

ARTICLE I
NAME

The name of the Corporation is: Blue Acquisition Corp.

ARTICLE II
REGISTERED OFFICE AND RESIDENT AGENT

The address of the Corporation's registered office is 6100 Neil Road, Suite 500, Reno, Nevada, 89511. The name of the resident agent at this address is The Corporation Trust Company of Nevada.

ARTICLE III
CAPITAL

A. Number and Par Value of Shares. The Corporation is authorized to issue one thousand (1,000) shares of capital stock having a par value of $0.003 per share. All of the shares of stock shall be designated Common Stock, without preference or distinction.

B. Assessment of Shares. The capital stock of the Corporation, after the amount of the par value has been paid, is not subject to assessment to pay the debts of the Corporation and no stock issued as fully paid up may ever be assessed, and the Articles of Incorporation cannot be amended in this respect.

C. Distributions on Partially Paid Shares. Unless otherwise expressly provided by resolution of the Board of Directors, no distribution shall be made with respect to any shares of Common Stock which are not fully paid on or before the date on which such distribution is declared.

D. Preemptive Rights. No shareholder shall, by reason of holding shares of any class of stock, have any preemptive or preferential right to purchase or subscribe for any shares of any class of stock now or hereafter authorized or any notes, debentures or bonds convertible into or carrying options or warrants to purchase shares of any class of stock now or hereafter authorized, whether or not the issuance of any shares, notes, debentures or bonds would adversely affect the dividend or voting rights of the shareholder.

E. Cumulative Voting. Cumulative voting for the election of directors is denied and no shareholder shall have the right to request cumulative voting.

ARTICLE IV
GOVERNING BOARD

The members of the governing board of the Corporation are designated as Directors. The initial Board of Directors shall consist of one (1) member. The name and post office box or street address, either residence or business, of the sole member of the initial Board of Directors is as follows:

NAME	ADDRESS
Christopher C. Cambria	c/o L-3 Communications Corporation 600 Third Avenue New York, NY 10016

The sole member of the initial Board of Directors will serve as the sole director until the first meeting of the shareholders, or until his successor or successors are elected and qualified. Thereafter, the number of directors, whether a fixed number of directors or a variable number of directors with a fixed minimum and maximum, and the manner in which the number of directors may increased or decreased, shall be as provided in the bylaws of the Corporation. Elections of Directors need not be by written ballot except and to the extent required by the bylaws of the Corporation. The Board of Directors is expressly authorized to adopt, amend or repeal the bylaws of the Corporation.

ARTICLE V
DIRECTORS' AND OFFICERS' LIABILITY

A. Elimination of Liability. No director or officer of the Corporation will be liable for damages to the Corporation or its stockholders, unless such damages are proven to result from acts or omissions which involve (a) breach of fiduciary duty as a director or officer and (b) such breach of fiduciary duty involves intentional misconduct, fraud or a knowing violation of law. In the event that Nevada law is amended to authorize the further elimination or limitation of liability of directors or officers, then this Article V shall also be deemed amended to provide for the elimination or limitation of liability to the fullest extent permitted by Nevada law, as so amended.

B. Indemnification of Directors and Officers. The Corporation shall indemnify any and all persons who may serve or who have served at any time as directors or officers or who at the request of the Board of Directors of the Corporation, may serve or any time have served as directors or officers of another corporation in which the Corporation at such time owned or may own shares of stock or of which it was or may be a creditor, and their respective heirs, administrators, successors and assigns, against any and all expenses, including amounts paid upon judgments, counsel fees and amounts paid in settlement (before or after such suit is commenced), actually and necessarily incurred by such persons in connection with the defense or settlement of any claim, action, suit or proceeding in which they, or any of them, are made parties, or a party, or which may be asserted against them or any of them, by reason of being or having been directors or officers of the Corporation, or of such other corporation, to the extent and in the manner permitted by the Corporate laws of the State of Nevada. Such indemnification

shall be in addition to any other rights to which those indemnified may be entitled under any law, bylaw, agreement, vote of shareholders or otherwise.

C. Mandatory Payment of Expenses. The Corporation shall pay the expenses incurred by a director or officer in defending any civil, criminal, administrative, or investigative action, suit or proceeding in advance of the final disposition of such action, suit or proceeding upon receipt of an undertaking by or on behalf of such director or officer to repay such amount if it should be ultimately determined that the director or officer is not entitled to be indemnified by the Corporation as authorized by Nevada law.

D. Effect of Amendment or Repeal. Any amendment to or repeal of any of the provisions in this Article V shall not adversely affect any right or protection of a director or officer of the Corporation for or with respect to any act or omission of such director or officer occurring prior to such amendment or repeal.

ARTICLE VI
SALE OF CORPORATION'S ASSETS

The Corporation may sell, lease or exchange all of the Corporation's property and assets, including the Corporation's good will and corporate franchises, upon the affirmative vote of a majority of the Board of Directors and no vote of the shareholders shall be required.

ARTICLE VII
AMENDMENT OR REPEAL

The Corporation reserves the right to amend, alter, change or repeal any provisions of these Articles of Incorporation in the manner now or hereafter prescribed by statutes and all rights, except to the extent specifically provided for in Article V above, conferred by these Articles are granted subject to this reservation.

ARTICLE VIII
INCORPORATOR

The name and post office address of the Incorporator signing these Articles of Incorporation is as follows:

NAME	ADDRESS
Matthew R. Silver	c/o Winston & Strawn 200 Park Avenue New York, NY 10166

DATED this 16th day of July, 2002.

/s/ Matthew R. Silver

Matthew R. Silver
Incorporator

CERTIFICATE OF

RESTATED AND AMENDED ARTICLES OF INCORPORATION
OF
WESTWOOD CORPORATION

ARTICLE I

NAME

The name of the Corporation hereby created shall be:

WESTWOOD CORPORATION

ARTICLE II

DURATION

The Corporation shall continue in existence perpetually unless sooner dissolved according to law.

ARTICLE III

PURPOSE

The purpose for which the Corporation is organized are:

(a) To acquire by purchase or otherwise, own, hold, lease, rent, mortgage or otherwise, to trade with and deal in real estate, lands and interests in lands and all other property of every kind and nature;

(b) To manufacture, use, work, sell and deal in chemicals, biologicals, pharmaceuticals, electronics and products of all types owned or hereafter owned by it for manufacturing, using and vending any device or devices, machine or machines for manufacturing, working or producing any or all products;

(c) To borrow money and to execute notes and obligations and security contracts therefore, to lend any of the monies or funds of the Corporation and to take evidence of indebtedness therefore; and to negotiate loans; to carry on a general mercantile and merchandise business and to purchase, sell and deal in such goods, supplies and merchandise of every kind and nature;

(d) To guarantee the payment of dividends or interest on any other contract or obligation of any corporation whenever proper or necessary for the business of the Corporation in the judgment of its directors;

(e) To do all and everything necessary, suitable, convenient, or proper for the accomplishment of any of the purposes or the attainment of any one or more of the

objects herein enumerated or incidental to the powers therein named or which shall at any time appear conclusive or expedient for the protection or benefit of the Corporation with all the powers hereafter conferred by the laws under which this Corporation is organized; and

(f) To engage in any and all other lawful purposes, activities and pursuits, whether similar or dissimilar to the foregoing, and the Corporation shall have all the powers allowed or permitted by the laws of the State of Nevada.

ARTICLE IV

CAPITAL STOCK

The total number of shares of all classes of stock which the Corporation will have authority to issue is 25,000,000 shares, consisting of 5,000,000 shares of preferred stock, par value $.001 per share (hereinafter the "Preferred Stock"), and 20,000,000 shares of common stock, par value $.003 per share (hereinafter the "Common Stock"). The Common Stock should be non-assessable and shall not have cumulative voting rights.

(a) Preferred Stock. Shares of Preferred Stock may be issued from time to time in one or more series as may from time to time be determined by the Board of Directors. Each series shall be distinctly designated. All shares of any one series of the Preferred Stock shall be alike in every particular, except that there may be different dates from which dividends thereon, if any, shall be cumulative, if made cumulative. The powers, preferences and relative, participating, optional and other rights of each such series, and the qualifications, limitations or restrictions thereof, if any, may differ from those of any and all other series at any time outstanding. Except as hereinafter provided, the Board of Directors of this Corporation are hereby expressly granted authority to fix, by resolution or resolutions adopted prior to the issuance of any shares of each particular series or Preferred Stock, the designation, powers, preferences and relative, participating, optional and other rights, and the qualifications, limitations and restrictions thereof, if any, of such series, including but without limiting the generality of the foregoing, the follows:

(i) the distinctive designation of, and the number of shares of Preferred Stock which shall constitute the series, which number may be increased (except as otherwise fixed by the Board of Directors) or decreased (but not below the number of shares thereof then outstanding) from time to time by action of the Board of directors;

(ii) the rate and times at which, and the terms and conditions upon which, dividends, if any, on shares of the series shall be paid, the extend of preferences or relations, if any, of such dividends to the dividends payable on any other class or classes of stock of this Corporation, or on any series of Preferred Stock or of any other class or classes of stock of this Corporation, and whether such dividends shall be cumulative or non-cumulative.

(iii) the right, if any, of the holders of shares of the series to convert the same into, or exchange the same for, shares of any other class or classes of stock of this Corporation, or of any series of Preferred Stock or of any other class or classes of stock of this Corporation, and the terms and conditions of such conversion or exchange;

(iv) whether shares of the series shall be subject to redemption, and the redemption price or prices including, without limitation, a redemption price or prices payable in shares of the Common Stock and the time or times at which, and the terms and conditions upon which, shares of the series may be redeemed;

(v) the rights, if any, of the holders of shares of the series upon voluntary or involuntary liquidation, merger, consolidation, distribution or sale of assets, dissolution or winding-up of this Corporation;

(vi) the terms of the sinking fund or redemption or purchase account, if any, to be provided for shares of the series; and

(vii) the voting power, if any, of the holders of shares of the series which may, without limiting the generality of the foregoing, include the right to more or less than one vote per share of any or all matters voted upon by the Shareholders and the right to vote, as a series by itself or together with other series of Preferred Stock as a class, upon such matters, under such circumstances and upon such conditions as the Board of directors may fix, including, without limitation, the right, voting as a series by itself or together with other series of Preferred Stock or together with all series of Preferred Stock as a class, to elect one or more directors of this Corporation in the event there shall have been a default in the payment of dividends on any one or more series of Preferred Stock or under such other circumstances and upon such condition as the Board may determine.

(b) Common Stock

(i) after the requirements with respect to preferential dividends on Preferred Stock (fixed in (a)(ii) of this Article, if any, shall have been met and after this Corporation shall have complied with all the requirements, if any, with respect to the setting aside of sums as sinking funds or redemption or purchase accounts as sinking funds or redemption or purchase accounts (fixed in accordance with the provisions of subparagraph (a)(ii) of this Article) and subject further to any other conditions which may be fixed in accordance with the provisions of paragraph (a) of this Article, then, but not otherwise, the holders of Common Stock shall be entitled to receive such dividends, if any, as may be declared from time to time by the Board of Directors;

(ii) after distribution in full of the preferential amount (fixed in accordance with the provisions of paragraph (a) of this Article), if any, to be distributed to the holders of Preferred Stock in the event of voluntary or

involuntary liquidation, distribution or sale of assets, dissolution or winding-up of the Corporation, the holders of the Common Stock shall be entitled to receive all the remaining assets of this Corporation, tangible and intangible, of whatever kind available for distribution to Stockholders, ratably in proportion to the number of shares of the Common Stock held by each; and

(iii) no holder of any of the shares of any class or series of stock or of options, warrants or other rights to purchase shares of any class or series of stock or of other securities of the Corporation shall have any pre-emptive right to purchase or subscribe for any unissued stock of any class or series or any additional shares of any class or series to be issued by reason of any increase of the authorized capital stock of the Corporation of any class or series, or bonds, certificates of indebtedness, debentures or other securities convertible into or exchangeable for stock of the Corporation or any class or series, or carrying any right to purchase stock of any class or series, but any such unissued stock, additional authorized issue of shares of any class or series of stock or securities convertible into or exchangeable for stock, or carrying any right to purchase stock, may be issued and disposed of pursuant to resolution of the Board of Directors to such persons, firms, corporation or association, whether such holders or others, and upon such terms as may be deemed advisable by the Board of Directors in the exercise of its sole discretion.

ARTICLE V

DENIAL OF PRE-EMPTIVE RIGHTS

No holder of any shares of the Corporation, whether now or hereafter authorized, shall have any pre-emptive or preferential rights to acquire shares or securities of the Corporation.

ARTICLE VI

PAID IN CAPITAL

The Corporation will not commence business until the consideration of the value of at least $1,000.00 has been received by it as consideration for the issuance of the shares.

ARTICLE VII

INDEMNIFICATION OF DIRECTORS AND OFFICERS

The Corporation shall indemnify any and all persons who may serve or who have served at any time as directors or officers or who at the request of the Board of Directors of the Corporation, may serve or any time have served as directors or officers of another corporation in which the Corporation at such time owned or may own shares of stock or of which it was or may be a creditor, and their respective heirs, administrators, successors and assigns, against any and all expenses, including amounts paid upon judgments, counsel fees and amounts paid in

settlement (before or after such suit is commenced), actually and necessarily incurred by such persons in connection with the defense or settlement of any claim, action, suit or proceeding in which they, or any of them, are made parties, or a party, or which may be asserted against them or any of them, by reason of being or having been directors or officers of the Corporation, or of such other corporation, to the extent and in the manner permitted by the Corporate laws of the State of Nevada. Such indemnification shall be in addition to any other rights to which those indemnified may be entitled under any law, bylaw, agreement, vote of shareholders or otherwise.

ARTICLE VIII

OFFICERS' AND DIRECTORS' CONTRACTS

No contract or other transaction between this Corporation and any other firm or corporation shall be affected by the fact that a director or officer of this Corporation has an interest in, or is the director or officer of this Corporation or any other corporation. Any officer or director, individually or with others, may be a party to, or may have an interest in, any transaction of this Corporation or any transaction in which this Corporation is a party or has an interest. Each person who is now or may become an officer or director of this Corporation is hereby relieved from liability that he might otherwise obtain in the event such officer or director contracts with this Corporation for the benefit of himself or any firm or other corporation in which he may have an interest, provided such officer or director acts in good faith.

ARTICLE IX

ADOPTION AND AMENDMENT OF BY-LAW

The initial By-Laws of the Corporation shall be adopted by its Board of Directors. The power to alter or amend or repeal the By-Laws or adopt new By-Laws shall be vested in the Board of Directors, but the holders of Common Stock of the Corporation may also alter, amend, or repeal the By-Laws or adopt new By-Laws. The By-Laws may contain any provisions for the regulation and management of the affairs of the Corporation not inconsistent with law or these Articles of Incorporation.

ARTICLE X

REGISTERED OFFICE AND AGENT

The address of the initial registered office of the Corporation and its initial registered agent at such address is:

The Corporation Trust Company of Nevada
One East First Street
Reno, Nevada 89501

ARTICLE XI

DIRECTORS

The Corporation shall not have fewer directors than the number of Shareholders who own an equity interest in the Corporation. At such time as the Corporation has three (3) or more Shareholders, it shall not have less than three (3) nor more than nine (9) directors. The permissible number of directors may be increased or decreased from time to time by the Board of Directors in accordance with ss.78.330 of the Nevada Revised Statutes or any amendment or success or statute. The original Board of Directors shall be comprised of one (1) person. The name and address of the person who is to serve as director until the first annual meeting of Shareholders and until his successor is duly elected and shall qualify is:

Michael S. Done
1325 South Main Street
Salt Lake City, Utah 84115

ARTICLE XII

INCORPORATOR

The name and address of the incorporator is:

Michael S. Done
1325 South Main Street
Salt Lake City, Utah 84115

TO THE SECRETARY OF STATE OF THE STATE OF NEVADA:

1. Westwood Corporation, a Nevada corporation, for the purposes of restating and amending its Articles of Incorporation pursuant to Section 78:403 of the Nevada Business Corporation Act (the "Act"), hereby certifies:

A. Article VII of the Articles of Incorporation as filed on February 11, 1986, is hereby amended as specifically set forth on the Resolution attached as Exhibit A hereto.

B. All other Articles, as originally filed on February 11, 1986, or as previously amended by the Certificate of Amendment filed on February 3, 1992, remain in their current form and in full force and effect.

2. This amendment to, and restatement of, the Articles of Incorporation was duly adopted in accordance with Section 78:390 of the Act, after being proposed by the directors and approved by the shareholders in the manner and by the majority vote prescribed in Section 78:390 of the Act, by a vote of the shareholders at the Annual Meeting of Shareholders, duly noticed and held on October 19, 1995 as follows:

3,619,923 shares in FAVOR
735,765 shares AGAINST
18,855 shares ABSTAINED

IN WITNESS WHEREOF, Westwood Corporation has caused this Certificate of Restated and Amended Articles of Incorporation to be executed by its President and attested by its Secretary this 30th day of November, 1995.

ATTEST:

WESTWOOD CORPORATION,
a Nevada Corporation

/s/ Paul R. Carolus
- ----------
Paul R. Carolus, Secretary

By: /s/ Ernest H. McKee

Ernest H. McKee, President

(Acknowledgments on following page)

STATE OF OKLAHOMA)
) SS.
COUNTY OF TULSA)

BEFORE ME, the undersigned, a Notary Public, in and for said County and State, on this 30th day of November, 1995, personally appeared Ernest H. McKee, to me known to be the identical person who subscribed his name to the foregoing instrument as President of Westwood Corporation, and acknowledged to me that he executed the same as his free and voluntary act and deed and as the free and voluntary act and deed of such corporation, for the uses and purposes therein set forth.

IN WITNESS WHEREOF, I have hereunto set my hand and official seal the day and year last above written.

/s/ Paula L. Skidmore

Notary Public

My Commission Expires:

May 26, 1996

[SEAL]

STATE OF OKLAHOMA)
) SS.
COUNTY OF TULSA)

BEFORE ME, the undersigned, a Notary Public, in and for said County and State, on this 30th day of November, 1995, personally appeared Paul R. Carolus, to me known to be the identical person who subscribed his name to the foregoing instrument as Secretary of Westwood Corporation, and acknowledged to me that he executed the same as his free and voluntary act and deed and as the free and voluntary act and deed of such corporation, for the uses and purposes therein set forth.

IN WITNESS WHEREOF, I have hereunto set my hand and official seal the day and year last above written.

/s/ Paula L. Skidmore

Notary Public

My Commission Expires:

May 26, 1996

[SEAL]

EXHIBIT A

RESOLUTION

Article VII, "Indemnification of Directors and Officers," of the Articles of Incorporation of Westwood Corporation, as filed with the Office of the Secretary of State of the State of Nevada on February 11, 1986, is amended by the Certificate of Restated and Amended Articles of Incorporation of Westwood Corporation, dated November 30, 1995, by deleting the following language contained at the end of the first sentence:

> "except in relation to matters as to which any such director or officer of the Corporation, or of such other corporation or former director or officer or person shall be adjudged in any action, suit or proceeding to be liable for his own negligence or misconduct in the performance of his duty."

and by inserting in lieu thereof the following language:

> "to the extent and in the manner permitted by the Corporate laws of the State of Nevada."

so that Article VII now reads as follows:

> "The Corporate shall indemnify any and all persons who may serve or who have served at any time as directors or officers or who at the request of the Board of Directors of the Corporation, may serve or any time have served as directors or officers of another corporation in which the Corporation at such time owned or may own shares of stock or of which it was or may be a creditor, and their respective heirs, administrators, successors and assigns, against any and all expenses, including amounts paid upon judgments, counsel fees and amounts paid in settlement (before or after such suit is commenced), actually and necessarily incurred by such persons in connection with the defense or settlement of any claim, action, suit or proceeding in which they, or any of them, are made parties, or a party, or which may be asserted against them or any of them, by reason of being or having been directors or officers of the Corporation, or of such other corporation, to the extent and in the manner permitted by the Corporate laws of the State of Nevada. Such indemnification shall be in addition to any other rights to which those indemnified may be entitled under any law, bylaw, agreement, vote of shareholders or otherwise."

(New language underlined.)

Exhibit 3.84

BYLAWS

OF

BLUE ACQUISITION CORP.

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OF THE BYLAWS OF
BLUE ACQUISITION CORP.

BYLAWS

OF

BLUE ACQUISITION CORP.

ARTICLE 1
IDENTIFICATION

Section 1.01 Name. The name of the Corporation is Blue Acquisition Corp.

Section 1.02 Registered Office and Resident Agent. The address of the registered office of the Corporation is 6100 Neil Road, Suite 500, Reno, Nevada. The name of the resident agent at such address is The Corporation Trust Company of Nevada. The registered office and resident agent may be changed at any time by the Board of Directors.

Section 1.03 Other Offices. The principal business office of the Corporation shall be established by the Board of Directors and branch or subordinate offices may be established by the Board of Directors.

Section 1.04 Fiscal Year. The fiscal year of the Corporation will be determined by resolution of the Board of Directors.

ARTICLE 2
CAPITAL STOCK

Section 2.01 Consideration for Shares. The capital stock may be issued for such consideration as shall be fixed from time to time by the Board of Directors. Treasury shares may be disposed of by the Corporation for such consideration as may be fixed from time to time by the Board of Directors.

Section 2.02 Certificates Representing Shares. Each stockholder is entitled to a certificate in such form as may be required by applicable law signed by the Chief Executive Officer, President or a Vice President, and the Secretary (or an Assistant Secretary), certifying the number of shares owned by the stockholder in the Corporation.

In case any officer or officers who shall have signed, or whose facsimile signature or signatures shall have been used on, any certificate or certificates shall cease to be an officer or officers of the Corporation, whether because of death, resignation or otherwise, before the certificate or certificates shall have been delivered by the Corporation, the certificate or certificates may nevertheless be adopted by the Corporation and be issued and delivered as though the person or persons who signed the certificate or certificates, or whose facsimile signature or signatures shall have been used thereon, had not ceased to be an officer or officers of the Corporation.

Section 2.03 Transfer of Stock. Transfers of stock shall be made only upon the transfer books of the Corporation kept in an office of the Corporation or by transfer agents designated to transfer shares of the stock of the Corporation.

Section 2.04 Regulations. The issue, transfer, conversion and registration of certificates of stock shall be governed by such other regulations as the Board of Directors may establish.

ARTICLE 3
THE STOCKHOLDERS

Section 3.01 Place of Stockholder Meetings. Meetings of the stockholders shall be held at the principal executive offices of the Corporation, or at such other place as may be designated by the Chairman of the Board, Chief Executive Officer, President or the Board of Directors.

Section 3.02 Annual Stockholder Meeting. The annual meeting of the stockholders shall be held on such date and at such time as the Board of Directors shall fix for the purposes of electing Directors and transacting such other business as may properly be brought before the meeting.

Section 3.03 Special Stockholder Meetings. Subject to any restrictions or limitations expressed in the Articles of Incorporation, any special stockholders' meetings may be called only by the Board of Directors, and shall be held on such date and at such time as shall be fixed by resolution. Written notice of a special meeting of stockholders stating the time and place and object thereof shall be given to each stockholder entitled to vote at such meeting not less then ten (10) days nor more than sixty (60) days before such meeting, unless a greater period of notice is required by statute. Such notice and/or the timing of notice requirement may be waived.

Section 3.04 Business at Meetings of Stockholders. Except as otherwise provided by law (including but not limited to Rule 14a-8 of the Securities Exchange Act of 1934, as amended, or any successor provision thereto, if applicable) or in these Bylaws, the business which shall be conducted at any meeting of the stockholders shall (a) have been specified in the written notice of the meeting (or any supplement thereto) given by the Corporation, (b) be brought before the meeting at the direction of the Board of Directors or the presiding officer of the meeting, or (c) have been specified in a written notice given to the Secretary of the Corporation by or on behalf of any stockholder who shall have been a stockholder of record on the record date for such meeting and who shall continue to be entitled to vote thereat (the "Stockholders Notice"), in accordance with all of the following requirements:

(1) Each Stockholder Notice must be delivered to, or mailed and received at, the principal executive offices of the Corporation:

(i) in the case of an annual meeting that is called for a date that is within thirty (30) days before or after the anniversary date of the immediately preceding annual meeting of stockholders, not less than sixty (60) days nor more than ninety (90) days prior to such anniversary date; and

(ii) in the case of an annual meeting that is called for a date that is not within thirty (30) days before or after the anniversary date of the immediately preceding annual meeting, not later than the close of business on the tenth day

following the day on which notice of the date of the meeting was mailed or public disclosure of the date of the meeting was made, whichever occurs first; and

(2) Each such Stockholder Notice must set forth each of the following:

(i) the name and address of the stockholder who intends to bring the business before the meeting;

(ii) the general nature of the business which he or she seeks to bring before the meeting; and

(iii) a representation that the stockholder is a holder of record of the stock of the Corporation entitled to vote at such meeting and intends to appear in person or by proxy at the meeting to bring the business specified in the notice before the meeting.

The presiding officer of the meeting may, in his or her sole discretion, refuse to acknowledge any business proposed by a stockholder not made in compliance with the foregoing procedure.

Section 3.05 Notice of Stockholder Meetings. Written notice stating the place, day and hour of a stockholders' meeting must be delivered not less than ten (10) days, nor more than sixty (60) days before the date of the meeting, either personally, or by mail, or by other means of written communication, charges prepaid, by or at the direction of the Chairman of the Board, Chief Executive Officer, President, or Secretary, to each stockholder of record entitled to vote at the meeting. If mailed, the notice shall be considered to be delivered when deposited in the United States mail addressed to the stockholder at the stockholder's address as it appears on the stock transfer books of the Corporation, with postage prepaid. If a stockholder gives no address, notice shall be deemed to have been given to the stockholder if sent by mail or other written communication addressed to the place where the Corporation's registered office is located, or if published at least once in some newspaper of general circulation in the county in which the Corporation's registered office is located. Waiver by a stockholder in writing of notice of a meeting is equivalent to giving notice. Attendance by a stockholder, without objection to the notice, whether in person or by proxy, at a meeting is a waiver of notice of the meeting. An entry in the minutes of any meeting of stockholders, whether annual or special, to the effect that notice has been duly given shall be conclusive and incontrovertible evidence that due notice of the meeting was given to all stockholders as required by law and these Bylaws.

Section 3.06 Record Date and Closing Stock Books. The Board of Directors may fix a time in the future, as a record date for the determination of the stockholders entitled to notice of and to vote at any meeting of stockholders, or entitled to receive any dividend or distribution, or any allotment of rights, or to exercise rights in respect to any change, conversion or exchange of shares. The record date so fixed shall not be more than sixty (60) days prior to the date of the meeting or event for the purposes of which it is fixed. When a record date is so fixed, only stockholders of record on that date shall be entitled to notice of and to vote at the meeting, or to receive the dividend, distribution or allotment of rights, or to exercise the rights, as the case may be, notwithstanding any transfer of any shares on the books of the Corporation after

the record date. The Board of Directors may close the books of the Corporation against transfers of shares during the whole or any part of the sixty (60) day period.

Section 3.07 Stock List. A complete list of all stockholders entitled to vote at any meeting of stockholders, arranged in alphabetical order for each class of stock and showing the address of each such stockholder and the number of shares registered in his or her name, shall be open to the examination of any such stockholder, for any purpose germane to the meeting, during ordinary business hours for period of at least ten (10) days prior to the meeting, either at a place within the city where the meeting is to be held, which place shall be specified in the notice of the meeting, or if not so specified, at the place where the meeting is to be held.

Section 3.08 Stockholder Quorum. A majority of the shares entitled to vote on any matter, represented in person or by proxy, is a quorum at a stockholders' meeting, unless or except to the extent that the presence of a larger number may be required by law. Where separate vote by a class or classes is required, a majority of the shares of such class or classes present in person or represented by proxy shall constitute a quorum entitled to take action with respect to that vote on that matter. The stockholders present at a duly organized meeting may continue to do business until adjournment, notwithstanding the withdrawal of enough stockholders to leave less than a quorum.

Section 3.09 Adjourned Stockholder Meetings. Any stockholders' meeting, whether annual or special, whether or not a quorum is present, may be adjourned from time to time by the vote of a majority of the shares, the holders of which are either present in person or represented by proxy, but in the absence of a quorum no other business may be transacted at any stockholders' meeting.

When any stockholders' meeting, either annual or special, is adjourned for thirty (30) days or more, notice of the adjourned meeting shall be given as in the case of an original meeting. As to any adjournment of less than thirty (30) days, it shall not be necessary to give any notice of the time and place of the adjourned meeting or of the business to be transacted, other than by announcement at the meeting at which the adjournment is taken.

Section 3.10 Voting. Except as otherwise provided by law, only persons in whose names shares entitled to vote stand on the stock registry of the Corporation on the day prior to any stockholders' meeting, or, if a record date for voting purposes is fixed as provided in Section 3.06 of these Bylaws, then on that record date, shall be entitled to vote at the meeting. Unless otherwise directed by the presiding officer, voting shall be by ballots, each of which shall state the name of the stockholder or the stockholder's proxy voting the shares and such other information as may be required under the procedure established for the meeting. The Corporation may, and to the extent required by law shall, in advance of any meeting of stockholders, appoint one or more inspectors to act at the meeting and make written report thereof. Each vote taken by ballots shall be counted by an inspector or inspectors appointed by the chairman of the meeting.

Except as otherwise provided by law or by an express provision in the Articles of Incorporation, or of any Certificate of Designation for a series of Preferred Stock, each full share is entitled to one vote and, when a quorum is present at the commencement of any stockholders'

meeting, a matter is approved if the votes cast, in person or by proxy, favoring the action exceed the votes cast against the action. Fractional shares shall not be entitled to any voting rights whatsoever.

Section 3.11 Action Without Meeting. Subject to any restrictions or limitations expressed in the Articles of Incorporation and under applicable law, any action which, under applicable provisions of law, may be taken or ratified at a meeting of the stockholders, may be taken or ratified without a meeting if approved by the written consent of stockholders holding at least a majority of the voting power of the Corporation, except that if a different proportion of voting power is required for such an action at a meeting, then that proportion of written consents is required. If voting by a class or series of stockholders is permitted or required, an act by the stockholders of each class or series is approved if a majority of the voting power of a quorum of the class or series votes for the action by written consent. In no instance where action is taken by such written consent need a meeting of the stockholders be called or noticed. The Board of Directors may fix a record date to determine the stockholders entitled to sign the written consent. If no record date has been fixed by the Board of Directors, the record date for determining stockholders entitled to consent to corporate action in writing without a meeting, when no prior action by the Board of Directors is required by the Nevada General Corporation Law, shall be the earliest date that a stockholder signed the written consent. All written consents shall be filed with the minutes of the proceeding of the stockholders.

Section 3.12 Proxies. Every person entitled to vote or execute consents shall have the right to do so either in person or by an agent or agents authorized by a written proxy executed by the person or by the person's duly authorized agent and filed with the Secretary of the Corporation; provided, that no proxy shall be valid after the expiration of six (6) months from the date of its execution unless the person executing it specified therein the length of time for which the proxy is to continue in force, which in no event shall exceed seven (7) years from the date of its execution.

Section 3.13 Definition of "Stockholder". As used in these Bylaws, the term "stockholder", and any term of like import, shall include all persons entitled to vote the shares held by a stockholder, unless the context in which the term is used indicates that a different meaning is intended.

ARTICLE 4
THE BOARD OF DIRECTORS

Section 4.01 Number; Term; Election. The number, term and classes (if any) of Directors shall be fixed from time to time exclusively by the Board of Directors pursuant to a resolution adopted by a majority of the total number of authorized Directors (whether or not there exists any vacancies in previously authorized directorships at the time any such resolution is presented to the Board for adoption). Notwithstanding any stated term, all directors shall continue in office until the election and qualification of their respective successors in office or the expiration of the term of the directorship held by the director. No decrease in the number of Directors shall have the effect of shortening the terms of any incumbent director. Election of Directors need not be by written ballot.

Section 4.02 Vacancies. Any vacancy occurring in the Board of Directors may be filled by the affirmative vote of a majority of the remaining Directors though less than a quorum of the Board of Directors was present, or by a sole remaining Director. A Director elected to fill a vacancy shall be elected for the unexpired term of the Director's predecessor in office.

A vacancy or vacancies in the Board of Directors shall be deemed to exist in case of the death, resignation or removal of any Director, or if the authorized number of Directors be increased, or if the stockholders fail at any annual or special meeting of stockholders at which any Director or Directors are elected to elect the full authorized number of Directors to be voted for at that meeting, or if a vacancy is declared by the Board of Directors for any reason permitted by law.

The stockholders may elect a Director or Directors at any time to fill any vacancy or vacancies not filled by the Board of Directors. If the Board of Directors accepts the resignation of a Director tendered to take effect at a future time, the Board of Directors shall have power to elect a successor to take office when the resignation is to become effective.

Section 4.03 Annual Meeting. Immediately after the annual meeting of the stockholders, at the same place as the meeting of the stockholders or such other place as may be provided in a notice thereof, the Board of Directors shall meet each year for the purpose of organization, election of officers, and consideration of any other business that may properly be brought before the meeting. No notice of any kind to either old or new members of the Board of Directors for this annual meeting shall be necessary unless the meeting is to be held at a place other than the place of the meeting of the stockholders, in which case notice of the place of the meeting shall be given as provided in Section 4.06.

Section 4.04 Regular Meetings. Regular meetings of the Board of Directors shall be held at the times and places within or without the State of Nevada as may be designated from time to time by resolution of the Board of Directors or by written consent of all members of the Board of Directors. No notice of any kind to members of the Board of Directors for these regular meetings shall be necessary unless the meeting is to be held at a place other than the principal executive office of the Corporation, in which case notice of the place of the meeting shall be given as provided in Section 4.05.

Section 4.05 Other Meetings. Other meetings of the Board of Directors for any purpose or purposes maybe held at any time upon call by the Chairman of the Board, Chief Executive Officer, President or, if any of the above listed officers is absent or unable or refuses to act, by any Vice President or by any two (2) Directors (or by the sole director, if he or she is a sole director of the Corporation). The other meetings may be held at any place within or without the State of Nevada as may be designated from time to time by resolution of the Board of Directors or by written consent of all Directors.

Written notice of the time and place of other meetings shall be delivered personally to each Director or sent to each Director by mail or other form of written communication, charged prepaid, addressed to the Director at the Director's address as it is shown upon the records of the Corporation or, if it is not so shown on the Corporation's records

or is not readily ascertainable, at the place in which the meetings of the Directors are regularly held. In case the notice is mailed or telegraphed, it shall be deposited in the United States mail or delivered to the telegraph company in the place in which the principal executive office of the Corporation is located at least twenty-four (24) hours prior to the time of the holding of the meeting. In case the notice is delivered personally as above provided, it shall be so delivered at least eight (8) hours prior to the time of the holding of the meeting. The mailing, telegraphing or delivery as above provided shall constitute due, legal and personal notice to the Director.

Section 4.06 Notice of Adjourned Meetings. Notice of the time and place of holding an adjourned meeting need not be given to absent Directors if the time and place be fixed at the meeting adjourned.

Section 4.07 Entry of Notice. An entry in the minutes of any special meeting of the Board of Directors to the effect that notice has been duly given shall be conclusive and incontrovertible evidence that due notice of the special meeting was given to all Directors as required by law and by these Bylaws.

Section 4.08 Waiver of Notice. The transactions of any meeting of the Board of Directors, however called and noticed or wherever held, shall be as valid as though had at a meeting duly held after regular call and notice, if a quorum be present, and if, either before or after the meeting, each of the Directors not present signs a written waiver of notice or a consent to the holding of the meeting or an approval of the minutes thereof. All such waivers, consents or approvals shall be filed with the corporate records or made a part of the minutes of the meeting.

Section 4.09 Quorum. A majority of the established number of Directors shall be necessary to constitute a quorum for the transaction of business, except to adjourn as hereinafter provided. Every act or decision done or made by a majority of the Directors present at a meeting duly held at which a quorum is present shall be regarded as the act of the Board of Directors unless a greater number or different vote be required by the Articles of Incorporation, these Bylaws or applicable law.

Section 4.10 Participation in Meetings by Telephone. Members of the Board of Directors, or of any committee thereof, may participate in any meeting of the Board of Directors or committee by means of telephone conference or similar communications by which all persons participating in the meeting can hear each other and such participation shall constitute presence in person at such meeting.

Section 4.11 Adjournment. A quorum of the Directors may adjourn any Directors' meeting to meet again at a stated day and hour; provided, however, that in the absence of a quorum, a majority of the Directors present at any Directors' meeting either regular or special, may adjourn from time to time until the time fixed for the next regular meeting of the Board of Directors.

Section 4.12 Action Without Meeting. Any action required or permitted to be taken by the Board of Directors under the Articles of Incorporation, these Bylaws, or under applicable law, may be taken without a meeting if all members of the Board of Directors shall

individually or collectively consent, in writing, before or after the action, to the action. Any action by written consent shall have the same force and effect as a unanimous vote of all Directors. All written consents must be filed with the Secretary.

Section 4.13 Fees and Compensation. Directors shall not receive any stated salary for their services as Directors or as members of committees, but, by resolution of the Board of Directors, a fixed fee, with or without expenses of attendance, may be allowed to Directors for the Director's services. Nothing herein contained shall be construed to preclude any Director from serving the Corporation in any other capacity as an officer, agent, employee or otherwise, and receiving compensation therefor.

Section 4.14 Limitation of Liability. To the fullest extent permitted by law, a Director or an officer shall have no personal or individual liability to the Corporation or its stockholders for monetary damages for breach of fiduciary duty as a Director or as an officer. Any amendment to or repeal of this Section 4.14 shall not adversely affect any right or protection of a Director or an officer of the Corporation for or with respect to any acts or omissions of such director or officer occurring prior to such amendment or repeal. In the event that the Nevada General Corporation Law is amended, after the filing of the Articles of Incorporation, to authorize corporate action further eliminated or limiting the personal liability of a Director or an officer then the liability of each Director and each officer of the Corporation shall be eliminated or limited to the fullest extent permitted by the Nevada General Corporation Law, as so amended.

Section 4.15 Indemnification; Advancement of Expenses. The Corporation shall indemnify each Director and each officer of the Corporation to the fullest extent permitted by the Nevada General Corporation Law as the same exists or may hereafter by amended.

The Corporation shall pay the expenses incurred by each Director and each officer in defending any civil, criminal, administrative, or investigative action, suit or proceeding in advance of the final disposition of such action, suit or proceeding upon receipt of an undertaking by or on behalf of such Director or officer to repay such amount if it should by ultimately determined that he or she is not entitled to be indemnified by the Corporation as authorized by Nevada General Corporation Law.

All rights to indemnification and to the advancement of expenses granted herein shall be deemed to arise out of a contract between the Corporation and each person who is entitled to indemnification from the Corporation and this right may be evidenced by a separate contract between the Corporation and each indemnified person; and such rights shall be effective in respect of all actions commenced after the date of the commencement of the corporate existence of the Corporation, whether arising from acts or omissions occurring before or after such date.

Any amendment, modification or repeal of any of the provisions in this Section 4.16 shall not adversely affect any right or protection of a director or an officer of the Corporation for or with respect to any act or omission of such director occurring prior to such amendment or repeal.

Section 4.16 Indemnification of Employees and Agents. The Corporation may, to the extent authorized from time to time by the Board of Directors, grant rights to indemnification and to the advancement of expenses to any employee or agent of the Corporation to the fullest extent permitted by the provisions of Section 4.17 of these Bylaws, the Articles of Incorporation and Nevada General Corporation Law.

Section 4.17 Insurance. The Corporation may purchase and maintain insurance or make other financial arrangements on behalf of any person who is entitled to be indemnified against any liability asserted or expense incurred by such person in connection with any action, whether or not the Corporation would have the power to indemnify such person against such liability or expense by law or under the Articles of Incorporation or these Bylaws. Such other financial arrangements may include, without limitation, the creation of a trust fund, the establishment of a program of self-insurance, the grant of a security interest or other lien on any assets of the Corporation, or the establishment of a letter or credit, guaranty or surety, all to the extent not prohibited by applicable law. The Corporation's indemnity of any person who is entitled to indemnification shall be reduced by any amounts such person may collect with respect to such liability (i) under any policy of insurance purchased and maintained on his or her behalf by the Corporation or (ii) from any other entity or enterprise served by such person.

Section 4.18 Powers of Board of Directors. The Board of Directors may, except as otherwise provided or required by law, exercise all such powers and do all such acts and things as may be exercised or done by the Corporation.

Section 4.19 Committees. The Board of Directors, by resolution passed by a majority of the whole Board, may from time to time designate committees of the Board of Directors, including, without limitation, Executive, Nomination, Audit and Compensation Committees with such lawfully delegable powers and duties as the Board of Directors may confer, to serve at the pleasure of the Board of Directors and shall, for those committees and any other provided herein, elect one or more directors to serve on such committees. Except as otherwise provided in these Bylaws or by resolution of the Board of Directors, each committee may fix its own rules of procedure and shall hold its meetings as provided by such rules.

Section 4.20 Audit Committee. The Board of Directors may, by resolution passed by a majority of the whole Board, create an Audit Committee. If created, the majority of the members of the Audit Committee shall be independent directors. The Audit Committee shall conduct appropriate reviews of all related party transaction, review situations and transactions that may pose a potential or actual conflicts of interest and perform such other responsibilities as the Board of Directors may direct by resolution.

ARTICLE 5
THE OFFICERS

Section 5.01 Officers. The officers of the Corporation must include a President, Treasurer and Secretary. The Corporation may also have, at the discretion of the Board of Directors, a Chief Executive Officer, a Chief Financial Officer, a Chairman, a Vice Chairman, one or more vice presidents, one or more assistant treasurers, one or more assistance secretaries, and such other officers as may be designated from time to time by the Board of Directors. Any

number of offices may be held by the same person. The officers shall be elected by the Board of Directors or appointed by officers granted powers of appointment by the Board of Directors, subject to any powers of removal set forth as set forth in Section 5.04. Officers need not be Directors.

Section 5.02 Election. The officers of the Corporation, except those officers as may be appointed in accordance with the provisions of Section 5.03 or Section 5.05 of this Article, shall be elected annually by the Board of Directors, and each shall hold office until the officer shall resign or shall be removed or otherwise disqualified to serve, or the officer's successor shall be elected and qualified; provided that officers may be elected at any time by the Board of Directors, or, as permitted by Section 5.03 of this Article, appointed by the Chairman of the Board, for the purpose of initially filling an office or filling a newly created or vacant office.

Section 5.03 Subordinate Officers. The Board of Directors may elect, and may empower any officer to appoint, such officers as the business of the Corporation may require, each of whom shall hold office for the term, have the authority and perform the duties as are provided in these Bylaws or as the Board of Directors may from time to time determine.

Section 5.04 Removal and Resignation. Any officer may, subject to any contractual arrangements between the officer and the Corporation, be removed, either with or without cause, by a majority of the Directors in office at the time, at any regular or special meeting of the Board of Directors, or, unless otherwise specified by the Board of Directors, by the President or any other officer upon whom a general or special power of removal may be conferred by the Board of Directors.

Any officer may resign at any time by giving written notice to the Board of Directors or to an officer of the Corporation. Any resignation shall take effect at the date of the receipt of the notice or at any later time specified therein, and, unless otherwise specified therein, the acceptance of a resignation shall not be necessary to make it effective.

Section 5.05 Vacancies. A vacancy in any office because of death, resignation, removal, disqualification or any other cause shall be filled in the manner prescribed in these Bylaws for regular appointments to that office.

Section 5.06 Chairman of the Board. The Chairman of the Board, if there be such person, shall, if present, preside at all meetings of the Board of Directors and the stockholders, and exercise and perform such other powers and duties as may be from time to time assigned to him or her by the Board of Directors or prescribed by these Bylaws. For purposes of these Bylaws, any sole director of the Corporation shall have the powers of a Chairman of the Board.

Section 5.07 Corporate Bank Accounts. Bank accounts in the name of the Corporation may be opened without the approval of the Board of Directors if opened with the consent of both the Chief Executive Officer and the Chief Financial Officer. The Chief Financial Officer shall inform the Board of Directors of any bank account opened by the Chief Executive Officer and Chief Financial Officer pursuant to the authority granted in this section at the next meeting of the Board of Directors.

Section 5.08 Transfers of Authority. In case of the absence of any officer of the Corporation, or for any reason that the Board of Directors may consider sufficient, the Board of Directors may transfer the powers or duties of that officer to any other officer or to any employee of the Corporation.

ARTICLE 6
MISCELLANEOUS

Section 6.01 Checks, Drafts, etc. All checks, drafts, bonds, bills of exchange, or other orders for payment of money, notes, or other evidences of indebtedness issued in the name of or payable to the Corporation shall be signed or endorsed by such person or persons and in such manner as, from time to time, shall be determined by resolution of the Board of Directors.

Section 6.02 Contracts, etc., How Executed. The Board of Directors, except as in these Bylaws otherwise provided, may authorize any officer or officers, agent or agents, to enter into any contract or execute any instrument or document in the name of and on behalf of the Corporation, and the authority may be general or confined to specific instances. Unless otherwise specifically determined by the Board of Directors or otherwise required by law, formal contracts, promissory notes and other evidences of indebtedness, deeds of trust, mortgages and corporate instruments or documents requiring the corporate seal, and certificates for shares of stock owned by the Corporation shall be executed, signed or endorsed by the President (or any Vice President) and by either the Secretary (or any Assistant Secretary) or the Treasurer (or any Assistant Treasurer). The Board of Directors may, however, authorize any one (1) of these officers to sign any of such instruments, for and on behalf of the Corporation, without necessity of countersignature; may designate officers or employees of the Corporation, other than those named above, who may, in the name of the Corporation, sign such instruments; and may authorize the use of facsimile signatures for any of such persons. No officer, agent or employee shall have any power or authority to bind the Corporation by any contract or engagement or to pledge its credit to render it liable for any purpose or to any amount except as specifically authorized in these Bylaws or by the Board of Directors in accordance with these Bylaws.

Section 6.03 Lost Certificates of Stock. The Board of Directors may direct a new certificate or certificates to be issued in place of any certificate or certificates theretofore issued by the Corporation alleged to have been lost, destroyed, or stolen, upon the making of an affidavit of that fact by the person claiming the certificate of stock to be lost or destroyed. When authorizing the issue of a new certificate or certificates, the Board of Directors may, in its discretion, and as a condition precedent to the issuance thereof, require the owner of the lost or destroyed certificate or certificates, or the stockholder's legal representative, to advertise the same in any manner as it shall require or give the Corporation a bond in any sum as it may direct as indemnity against any claim that may be made against the Corporation with respect to the certificate alleged to have been lost or destroyed, or both.

Section 6.04 Representation of Shares. The Chairman of the Board, Chief Executive Officer, or the President (or any Vice President) and the Secretary (or any Assistant Secretary) of this Corporation are authorized to vote, represent and exercise on behalf of this Corporation all rights incident to any and all shares of any other Corporation or Corporations standing in the name of this Corporation. The authority herein granted to these officers to vote

or represent on behalf of this Corporation any and all shares held by this Corporation in any other Corporation or Corporations may be exercised either by these officers in person or by any persons authorized so to do by proxy or power of attorney duly executed by these officers.

Section 6.05 Inspection of Bylaws. The Corporation shall keep in its registered office for the transaction of business the original or a copy of the Bylaws as amended or otherwise altered to date, certified by the Secretary, which shall be open to inspection by the stockholders at all reasonable times during office hours.

ARTICLE 7
AMENDMENTS

Section 7.01 Power of Stockholders. New Bylaws may be adopted or these Bylaws may be amended or repealed by the vote or written assent of stockholders entitled to exercise a majority of the voting power of the Corporation, unless a greater number is required by law, by the Articles of Incorporation or by these Bylaws.

Section 7.02 Power of Directors. Subject to the right of stockholders as provided in Section 7.01 of this Article 7 to adopt, amend or repeal Bylaws, Bylaws may be adopted, amended, or repealed by the Board of Directors.

EXHIBIT B

SPECIMEN SHARE CERTIFICATE OF THE CORPORATION
SEE ATTACHED

Exhibit 3.85

CERTIFICATE OF AMENDMENT
STOCK CORPORATION
Office of the Secretary of the State
30 Trinity Street/P.O. Box 150470/Hartford, CT 06115-0470/new/1-97

Space For

FILING #0002112712 PG 01 of 02 VOL B-00338
FILED 05/19/2000 08:30 AM PAGE 01580
SECRETARY OF THE STATE
CONNECTICUT SECRETARY OF THE STATE

1. NAME OF CORPORATION:

International Analytics Corporation

2. THE CERTIFICATE OF INCORPORATION IS (CHECK A., B. OR C.):

X A. AMENDED.

B. AMENDED AND RESTATED.

C. RESTATED.

3. TEXT OF EACH AMENDMENT / RESTATEMENT:

CHANGE NAME TO:

Ship Analytics, Inc.

(PLEASE REFERENCE 8 1/2 X 11 ATTACHMENT IF ADDITIONAL SPACE IS NEEDED)

Space For Office Use Only

FILING #0002112712 PG 02 OF 02 VOL B-00338
FILED 05/19/2000 08:30 AM PAGE 01581
SECRETARY OF THE STATE
CONNECTICUT SECRETARY OF THE STATE

4. VOTE INFORMATION (CHECK A., B. OR C.)

A. THE RESOLUTION WAS APPROVED BY SHAREHOLDERS AS FOLLOWS:

(SET FORTH ALL VOTING INFORMATION REQUIRED BY CONN. GEN. STAT. SECTION 33-800 AS AMENDED IN THE SPACE PROVIDED BELOW)

XX B. THE AMENDMENT WAS ADOPTED BY THE BOARD OF DIRECTORS WITHOUT SHAREHOLDER ACTION. NO SHAREHOLDER VOTE WAS REQUIRED FOR ADOPTION.

C. THE AMENDMENT WAS ADOPTED BY THE INCORPORATORS WITHOUT SHAREHOLDER ACTION. NO SHAREHOLDER VOTE WAS REQUIRED FOR ADOPTION.

5. EXECUTION

Dated this 18th day of May, 2000

PRINT OR TYPE NAME OF SIGNATORY	CAPACITY OF SIGNATORY	SIGNATURE
JANET FIORE	SECRETARY	/S/ JANET FIORE

CERTIFICATE OF AMENDMENT
STOCK CORPORATION
Office of the Secretary of the State
30 Trinity Street/P.O. Box 150470/Hartford, CT 06115-0470/new/1-97

Space For

FILING #0002081600 PG 01 OF 02 VOL B-00322
FILED 03/03/2000 -08:30 AM PAGE 00964
SECRETARY OF THE STATE
CONNECTICUT SECRETARY OF THE STATE

1. NAME OF CORPORATION:

SHIP ANALYTICS, INC.

2. THE CERTIFICATE OF INCORPORATION IS (CHECK A., B. OR C.):

X A. AMENDED.

B. AMENDED AND RESTATED.

C. RESTATED.

3. TEXT OF EACH AMENDMENT / RESTATEMENT:

CHANGE NAME TO:

INTERNATIONAL ANALYTICS CORPORATION

(PLEASE REFERENCE 8 1/2 X 11 ATTACHMENT IF ADDITIONAL SPACE IS NEEDED)

Space For

FILING #0002081600 PG 01 OF 02 VOL B-00322
FILED 03/03/2000 -08:30 AM PAGE 00964
SECRETARY OF THE STATE
CONNECTICUT SECRETARY OF THE STATE

4. VOTE INFORMATION (CHECK A., B. OR C.)

A. THE RESOLUTION WAS APPROVED BY SHAREHOLDERS AS FOLLOWS:

(SET FORTH ALL VOTING INFORMATION REQUIRED BY CONN.GEN. STAT. SECTION 33-800 AS AMENDED IN THE SPACE PROVIDED BELOW)

XX B. THE AMENDMENT WAS ADOPTED BY THE BOARD OF DIRECTORS WITHOUT SHAREHOLDER ACTION. NO SHAREHOLDER VOTE WAS REQUIRED FOR ADOPTION.

C. THE AMENDMENT WAS ADOPTED BY THE INCORPORATORS WITHOUT SHAREHOLDER ACTION. NO SHAREHOLDER VOTE WAS REQUIRED FOR ADOPTION.

5. EXECUTION

Dated this 29th day of February, 2000

PRINT OR TYPE NAME OF SIGNATORY	CAPACITY OF SIGNATORY	SIGNATURE
JANET FIORE	SECRETARY	

August 1, 1989

CERTIFICATE OF MERGER
by
DIRECTORS AND STOCKHOLDERS

To: The Secretary of the State of Connecticut

Name of Constituent Corporations:

Ship Analytic Inc. (Surviving Domestic Corporation); Eclectech Associates, Inc. (Domestic Terminating Corporation) and Mara-Time Marine Services, Inc. (Foreign Terminating Corporation)

Address of Corporation: North Stonington, Professional Center
North Stonington, Connecticut 06359

Date of Directors and Stockholders Meeting: August 1, 1989

WHEREAS, Ship Analytics Inc. a domestic stock corporation owns all outstanding shares of: Eclectech Associates, Inc. a domestic stock corporation; and Mara-Time Marine Services, Inc., a State of New York stock corporation; and

WHEREAS, said Eclectech Associates, Inc. and Mara-Time Marine Services, Inc. are wholly owned subsidiaries of Ship Analytics Inc. and operate as affiliated companies under common management; and,

NOWTHEREFORE, pursuant to the terms of each of the said Corporation's By-Laws and the provisions of Sections 33-364, 33-366, 33-370, and other applicable provisions of the State of Connecticut Stock Corporation statutes, as amended, and the provisions of the applicable laws and regulations of the State of New York (for Mara-Time Marine Services, Inc.) the Board of Directors of Ship Analytics Inc. ("Surviving Corporation") which owns all of the outstanding stock shares of Eclectech Associates, Inc. ("Domestic Terminating Corporation"); and, Mara-Time Marine Services, Inc.; unanimously voted by resolution for a Plan of Merger at a duly constituted August 1, 1989 meeting with all Directors in attendance. Said Plan of Merger was further unanimously voted and accepted by resolution adopted by the Board of Directors of each of the Domestic and Foreign Terminating Corporations at a duly constituted August 1, 1989 meeting.

FURTHER, such Plan of Merger with related implementation actions as voted and approved by the Board of Directors of the Surviving Corporation and the Domestic Corporations at the said August 1, 1989 meetings was unanimously ratified and adopted by all of the Stockholders of record entitled to vote all outstanding shares of Ship Analytics Inc., the Surviving Corporation and the Domestic Corporation of Eclectech Associates, Inc. and Foreign Corporation Mara-Time Marine Services, Inc.

August 1, 1989

The approved Plan of Merger provides for the following:

1. The merging corporations are: Ship Analytics Inc., a domestic stock corporation; Eclectech Associates, Inc., a domestic stock corporation; and Mara-Time Marine Services, Inc., a foreign (State of New York) stock corporation.

2. Said Ship Analytics Inc. shall be the Surviving Corporation.

3. The name of the Surviving Corporation shall be continued as Ship Analytics Inc.

4. The Certificate of Incorporation of Ship Analytics Inc., the Surviving Corporation, as presently filed with the Secretary of the State of Connecticut shall continue in effect after the merger without change or amendment.

5. The Plan of Merger shall be effective as of August 1, 1989.

6. As of the effective date of the Plan of Merger, the Merging Corporations shall be a single corporation (Ship Analytics Inc.) and the separate existence of Eclectech Associates, Inc. and Mara-Time Marine Services, Inc. shall cease.

7. The effect of the merger shall be as provided by the terms of said Plan of Merger as consistent with Section 33-369 and other applicable provisions of the State of Connecticut Stock Corporation statutes as amended and the applicable provisions of the State of New York and the State of New York Stock Corporation statutes to implement a so-called statutory merger.

The undersigned authorized officers of the Merging Corporations hereby represent and attest that:

(a) The said Plan of Merger has been approved by each of the Merging Corporations in accord and in the manner provided by the applicable State of Connecticut statutes (Chapter 599) and regulations; and the applicable statutes of the State of New York in regard to the Foreign Terminating Corporations; and the By-Laws of the Merging Corporations.

(b) The said Plan of Merger as approved by the Merging Corporations Board of Directors and Stockholders on August 1, 1989 is on file with the Secretary of Ship Analytics Inc. at its principal place of business and home corporate office located at:

North Stonington Professional Center
North Stonington, Connecticut 06359

(c) The Secretary of Ship Analytics Inc. or his designated delegate shall promptly provide a copy of the full Plan of Merger at no cost, on the request of any shareholder of any of the Merging Corporations.

Dated at North Stonington, Connecticut this 1st day of August 1989.

August 1, 1989

We hereby declare, under the penalties of false statement, that the statements made in the foregoing certificate are true.

SHIP ANALYTICS INC.

By: /s/ Jerry C. Lamb
Jerry C. Lamb
President

SHIP ANALYTICS INC.

By: /s/ Francis L. Crowley
Francis L. Crowley
Secretary

ECLECTECH ASSOCIATES, INC.

By: /s/ Jerry C. Lamb
Jerry C. Lamb
President

ECLECTECH ASSOCIATES, INC.

By: /s/ Francis L. Crowley
Francis L. Crowley
Secretary

MARA-TIME MARINE SERVICES, INC.

By: /s/ Jerry C. Lamb
Jerry C. Lamb
President

MARA-TIME MARINE SERVICES, INC.

By: /s/ Francis L. Crowley
Francis L. Crowley
Secretary

August 1, 1989

AGREEMENT AND PLAN OF MERGER

AGREEMENT AND PLAN OF MERGER, dated August 1, 1989 and effective August 1, 1989, among Ship Analytics, Inc., a Connecticut Corporation ("SA" or "Surviving Corporation"); Eclectech Associates, Inc., a Connecticut Corporation ("EA" or "Terminating Corporation"); and Mara-Time Marine Services, Inc., a New York Corporation ("MT" or "Terminating Corporation").

WITNESSETH

WHEREAS, said EA and MT are wholly owned subsidiaries of SA each conducting related business activities under a common management and operating as affiliated companies; and,

WHEREAS, the Surviving Corporation owns all outstanding shares of each of the Terminating Corporations, and such corporations are desirous of simplifying business procedures, accounting and administrative structure and the elimination of duplicate functions; and

WHEREAS, the respective Board of Directors, of SA, EA, and MT deem it advisable to merge the SA wholly owned subsidiaries of EA and MT into SA as the sole Surviving Corporation pursuant to this Agreement and the Certificate of Merger to be filed for the said Merging Corporations with the respective Secretary of the State of Connecticut and New York; and

NOWTHEREFORE, in consideration of the mutual benefits to be derived from this Agreement and of the representations, warranties, conditions and promises hereinafter contained, SA, EA, and MT each hereby adopt this Agreement, whereby at the effective time of the Merger EA and MT shall be merged into SA as the Surviving Corporation and the outstanding issued shares of each of the Terminating Corporations shall not be converted into shares of the Surviving Corporation, but shall be cancelled and the authorized capital stock of the Surviving Corporation (Ship Analytics. Inc.) shall not be changed, but shall be and remain the same as before the Merger.

ARTICLE I

1.1 Execution of Certification of Merger. Subject to the provisions of this Agreement, a Certificate of Merger to effectuate the terms of this AGREEMENT AND PLAN OF MERGER containing the information required by and executed and acknowledged in accordance with the applicable laws and statutes of the State of Connecticut and the State of New York as pertains to the respective Merging Corporations shall be delivered by the Surviving Corporation to the Secretary of the States of Connecticut and New York for filing and recording in accordance with the applicable laws as soon as practical on or after all of the Merging Corporation Board of Directors and Stockholders have approved this AGREEMENT AND PLAN OF MERGER.

The Merger shall become effective upon the filing of the Certificate of Merger with the respective Secretary of State as required by law. At the effective time of the Merger (i) the separate existence of EA and MT shall cease and such Terminating Corporations shall be merged

with the into SA as the Surviving Corporation as provided by the applicable state statutes and laws, (ii) the Certificate of Incorporation of SA in effect at the effective time of the Merger shall be the Certificate of Incorporation of the Surviving Corporation, (iii) the By-Laws of SA in effect at the effective time of the Merger shall be the By-Laws of the Surviving Corporation and (iv) the persons whose names are listed in Section 1.3 hereof will continue as directors and/or officers of the Surviving Corporation.

1.2 Cancellation of Terminating Corporation Stock. All stock shares of the Terminating Corporations presently held by the Surviving Corporation shall upon the effective date of the Merger be cancelled for consideration of the transfer of assets per paragraph 2.1 and with no exchange for the Surviving Corporation stock shares which will remain unchanged by the Merger and the Surviving Corporation shall promptly surrender all Certificates of such stock shares to the respective Corporation Secretary for cancellation.

1.3 Officers and Directors of the Surviving Corporation. The number of directors of the Surviving Corporation shall be as specified in the Certificate of Incorporation and the By-Laws of the Surviving Corporation and the names of the directors of the Surviving Corporation, who shall hold office until their respective successors are elected and qualify, shall be as follows:

Francis L. Crowley
Jerry C. Lamb
Alan J. Pesch

The names of the officers of the Surviving Corporation, who shall hold office until their respective successors are appointed and qualify, and the office to be held by each, shall be as follows:

Alan J. Pesch, Chairman and Treasurer
Jerry C. Lamb, President
Francis L. Crowley, Secretary
Susan D. Shannon, Assistant Secretary

If on the effective date of this Agreement any vacancy shall exist in the Board of Directors or in any of the satisfied offices of the Surviving Corporation, such vacancy may thereafter be filled in the manner prescribed in the By-Laws of the Surviving Corporation.

1.4 State of Incorporation of the Surviving Corporation. The state of incorporation of the Surviving Corporation shall be and remain in the State of Connecticut.

1.5 Surviving Corporation Principal Office. The principal office of Ship Analytics, Inc. at the North Stonington Professional Center, North Stonington, Connecticut shall remain the principal office of the Surviving Corporation.

1.6 Surviving Corporation Statutory Agent. The Surviving Corporation statutory agent for process in the State of Connecticut in effect at the effective time of the Merger shall continue for the Surviving Corporation until otherwise changed in accordance with State of Connecticut laws and procedures.

1.7 Name of Surviving Corporation. The name of the Surviving Corporation upon the effective date of the Merger shall be and remain Ship Analytics, Inc.

ARTICLE II

2.1 Transfers to Surviving Corporation. On the effective date of the Merger the Surviving Corporation shall possess all the rights, privileges, immunities, powers and franchises of a public and a private nature, and shall be subject to all of the restrictions, disabilities and duties of each of the Merging Corporations; and all property, real, personal and mixed, including all patents, applications for patents, trademarks, trademark registrations and applications for registration of trademarks, together with the goodwill of the business in connection with which said patents and marks are used, and all debts due on whatever account, including subscriptions to shares of capital stock, and all other chooses in action and all and every other interest of or belonging to or due to each of the Merging Corporations shall be deemed to be transferred to and vested in the Surviving Corporation without further act or deed, and the title to any real estate, or any interest therein, vested in any of the Merging Corporations shall not revert or be in any way impaired by reason of the Merger.

2.2 Responsibility and Liability of Surviving Corporations. On the effective date of the Merger and Surviving Corporation shall be responsible and liable for all the liabilities and obligations of each of the Merging Corporations; and any claim existing or action or proceeding pending by or against any of the Merging Corporations may be prosecuted to judgment as if the Merger had not taken place, or the Surviving Corporation may be substituted in its place and neither the rights of creditors nor any liens upon the property of any of the Merging Corporations shall be impaired by the Merger. The Surviving Corporation shall execute and deliver any and all documents which may be required for it to assume or otherwise comply with outstanding obligations of the Merging Corporations.

2.3 Documentation of Transfer of Assets to Surviving Corporation. If at any time the Surviving Corporation shall consider or be advised that any further instruments, assignment or assurance in law are necessary or desirable to vest or to perfect or confirm of record in the Surviving Corporation the title to any property or rights of the Terminating Corporations, or to otherwise carry out the provisions hereof, the proper officers and directors of the Terminating Corporations as of the effective date of the Merger shall execute and deliver any and all proper deeds, assignments and assurances in law, and do all things necessary or proper to vest, perfect or confirm title to such property or rights in the Surviving Corporation.

2.4 Omnibus Actions to Effect the Merger. Each of the Merging Corporations shall take, or cause to be taken, all action or do or cause to be done, all things necessary, proper, or advisable under the applicable laws of the States of Connecticut and New York to consummate and make effective the Merger; subject, however to the appropriate vote or consent of the Stockholders of each of the Merging Corporations in accordance with the requirements of the applicable provisions of the laws of the State of Connecticut and of the State of New York. In case at any time after the effective date of the Merger any further action is necessary or desirable to carry out the purposes of this Agreement and to vest the Surviving Corporation with full title to all properties, assets, rights, approvals, immunities, choices of actions and franchises of whatever kind and nature of the Terminating Corporations, the officers and directors of such Terminating Corporations at the expense of the Surviving Corporation shall take all such necessary or desirable action.

2.5 Merger Expenses. The Surviving Corporation shall pay all expenses of accomplishing the Merger and in addition, the Surviving Corporation shall provide its management and personnel and other resources to effectuate the Merger and assist the Terminating Corporations to wind up their affairs for transfer to the Surviving Corporation.

ARTICLE III

3.1 Tax Consideration. It is the intent of the parties to effect the proposed Merger of the Terminating Corporations into Surviving Corporation in a manner which will constitute a tax-free "reorganization" within the meaning of Sections 368(a)(1)(A) and 368(a)(2)(D) of the Internal Revenue Code of 1954, as amended (the "Code"), and that each of the Merging Corporations will be "a party to a reorganization" within the meaning of Section 368(b) of the Code, and that no taxable gain for federal income tax purposes will be recognized to the Merging Corporations as a result of the Merger, and that no gain or loss will be recognized to the Merging Corporation's Stockholders, and that the basis of the shares of Ship Analytics, Inc. common stock after the Merger will be the same as the basis before the Merger.

3.2 Tax Ruling and Cooperation. Each of the parties hereto shall cooperate and implement this Agreement to qualify the Merger as a tax free reorganization as indicated by section 5.1 above and each party shall, if requested, provide information and support to obtain all necessary Internal Revenue Service rulings to affect such tax free reorganization.

ARTICLE IV

4.1 Submission to Stockholders. This Agreement shall be submitted to the Stockholders of record of the Merging Corporations in the manner provided by the applicable state statutes and if the votes of Stockholders of each such Corporation representing one hundred per cent (100%) of the total number of shares of its capital stock shall be in favor of the adoption of this Agreement, it shall, subject to the provisions of Article VI of this Agreement, take effect as the Agreement and Plan of Merger of the Merging Corporations.

ARTICLE V

5.1 Abandonment of Merger. Anything to the contrary herein notwithstanding, if the Board of Directors of either the Surviving Corporation or the Board of Directors of any of the Terminating Corporations should determine, either before or after the meeting of the Stockholders of the respective corporations called to vote on the adoption or rejection of this Agreement and Plan of Merger, that for any legal, financial, economic, or business reason deemed sufficient by such Board it is not in the interest of the Corporation it represents, or the Stockholders of such Corporation, or is otherwise inadvisable or impracticable to consummate the Merger, such Board of Directors may abandon the Merger by directing the officers of the corporations to refrain from executing or filing this Agreement and Plan of Merger, and thereupon this Agreement and the Merger shall be abandoned and terminated as provided below.

5.2 Effect of Abandonment. In the event of the termination and abandonment of this Agreement and the Merger, this Agreement shall become void and have no effect and without any liability on the part of any party or its directors, officers, employees or stockholders.

ARTICLE VI

6.1 Entire Agreement. This Agreement contains the entire agreement among the Merging Corporations with respect to the Merger and the related transactions and supersedes all prior arrangements or understandings with respect thereto.

6.2 Descriptive Headings. Descriptive headings are for convenience only and shall not control or affect the meaning or construction of any provision of this Agreement.

6.3 Notices. All notices or other communications which are required or permitted hereunder shall be in writing and sufficient if delivered personally or sent by registered or certified mail, postage prepaid, addressed as follows:

If to Ship Analytics, Inc.:

Ship Analytics, Inc.
North Stonington Professional Center
North Stonington, Connecticut 06359
Attention: Secretary - F. L. Crowley

If to Eclectech Associates, Inc.:

Eclectech Associates, Inc.
North Stonington Professional Center
North Stonington, Connecticut 06359
Attention: Secretary - F. L. Crowley

If to Mara-Time Marine Services, Inc.:

Mara-Time Marine Services, Inc.
Park Circle
Centerport, New York 11721
Attention: Secretary - F. L. Crowley

6.4 Counterparts. This Agreement may be executed in any number of counterparts, and each such counterpart hereof shall be deemed to be an original instrument, but all such counterparts together shall constitute but one agreement.

6.5 Severability. Each provision of this Agreement is intended by the parties to be effective and valid under applicable law, but it any provision hereof is prohibited or invalid by law, that provision is to be ineffective only to one extent of the prohibition or invalidity, so that the remainder of that provision and the remaining provisions of this Agreement will not be invalidated.

6.6 Non-Waiver. Any waiver by any party hereto of a breach of any provision of this Agreement by any other party or parties hereto shall not operate as or be construed as a waiver of any subsequent breach thereof.

6.7 Non-Assignment. None of the parties hereto shall assign, encumber, pledge, sell or otherwise dispose of its rights and obligations under this Agreement and Plan of Merger, except as expressly provided by the terms of this Agreement, without the prior written consent of all of the other parties hereto.

6.8 Governing Law. This Agreement shall be governed by the laws of the State of Connecticut subject to the further understanding and conditions that this Merger shall be subject to the approval, authorization and consent of all regulatory agencies having jurisdiction in such Merger matters.

6.9 Authorizing Vote. This Agreement has been duly authorized by unanimous vote, resolution, and consent of the Board of Directors and Stockholders of each of the Merging Corporations at an August 1, 1989 meeting duly constituted by the respective By-Laws of each of the Merging Corporations and attended by all of the Directors and Stockholders.

IN WITNESS WHEREOF, each of the parties hereto has caused this Agreement to be executed on its behalf and its corporate seal to be hereunto affixed and attested by its officers thereunto duly authorized, all as of the day and year first above written.

[Corporate Seal]

Attest: /s/ Francis L. Crowley
Secretary

SHIP ANALYTICS, INC.

By: /s/ Jerry C. Lamb
Jerry C. Lamb - President

[Corporate Seal]

Attest: /s/ Francis L. Crowley
Secretary

ECLECTECH ASSOCIATES, INC.

By: /s/ Jerry C. Lamb
Jerry C. Lamb - President

[Corporate Seal]

Attest: /s/ Francis L. Crowley
Secretary

MARA-TIME MARINE SERVICES, INC.

By: /s/ Jerry C. Lamb
Jerry C. Lamb - President

CERTIFICATE OF MERGER

By

DIRECTORS AND STOCKHOLDERS

To: The Secretary of the State of Connecticut

Name of Constituent Corporations:

SHIP ANALYTICS, INC. (Surviving Domestic Corporation) and LATTICE, INC. (Domestic Terminating Corporation);

Address of Corporation: North Stonington Professional Center
North Stonington, Connecticut 06359

Date of Directors Meeting: February 1, 1988

WHEREAS, Ship Analytics Inc. a domestic stock corporation owns all outstanding shares of: Lattice, Inc., a domestic stock corporation and,

WHEREAS, said Lattice, Inc., is a wholly owned subsidiary of Ship Analytics Inc. and operate as affiliated companies under common management; and,

NOWTHEREFORE, pursuant to the terms of each of the said Corporation's By-Laws and the provisions of Sections 33-364 and 33-370, and other applicable provisions of the State of Connecticut Stock Corporation statutes, as amended; the Board of Directors of Ship Analytics Inc. ("Surviving Corporation") which owns all of the outstanding stock shares of Lattice, Inc. ("Domestic Terminating Corporation") unanimously voted by resolution for a Plan of Merger at a duly constituted February 1, 1988 meeting with all Directors in attendance. Said Plan of Merger was further unanimously voted and accepted by resolution adopted by the Board of Directors of Lattice, the Domestic Terminating Corporation at a duly constituted February 1, 1986 meeting.

The approved Plan of Merger provides for the following:

1. The merging corporations are: Ship Analytics Inc., a domestic stock corporation and Lattice, Inc., a domestic stock corporation.

2. Said Ship Analytics Inc. shall be the Surviving Corporation.

3. The name of the Surviving Corporation shall be continued as Ship Analytics Inc.

4. The Certificate of Incorporation of Ship Analytics Inc., the Surviving Corporation, as presently filed with the Secretary of the State of Connecticut shall continue in effect after the merger without change or amendment.

5. The Plan of Merger shall be effective as of February 1, 1988.

6. As of the effective date of the Plan of Merger, the Merging Corporations shall be a single corporation (Ship Analytics Inc.) and the separate existence of Lattice, Inc. shall cease.

7. The effect of the merger shall be as provided by the terms of said Plan of Merger as consistent with Section 33-369 and other applicable provisions of the State of Connecticut Stock Corporation statutes, as amended, to implement a so-called statutory merger.

The undersigned authorized officers of the Domestic Merging Corporations hereby represent and attest that:

(a) The said Plan of Merger has been approved by each of the Merging Corporations in accord and in the manner provided by the applicable State of Connecticut statutes (Chapter 599) and regulations and the By-Laws of the Merging Corporations.

(b) The said Plan of Merger as approved by the Merging Corporations Board of Directors on February 1, 1988 as provided by Section 33-370 for merger of a wholly owned subsidiary; is on file with the Secretary of Ship Analytics Inc. at its principal place of business and home corporate office located at:

North Stonington Professional Center
North Stonington, Connecticut 06359

THIS SPACE INTENTIONALLY LEFT BLANK

(c) The Secretary of Ship Analytics Inc. or his designated delegate shall promptly provide a copy of the full Plan of Merger at no cost, on the request of any shareholder of either of the Merging Corporations.

Dated at North Stonington, Connecticut this 1st day of February 1988.

We hereby declare, under the penalties of false statement, that the statements made in the foregoing certificate are true:

SHIP ANALYTICS INC.

By: /s/ Jerry C. Lamb
Jerry C. Lamb
President

SHIP ANALYTICS INC.

By: /s/ Francis L. Crowley
Francis L. Crowley
Secretary

LATTICE, INC.

By: /s/ Alan J. Pesch
Alan J. Pesch
President

LATTICE, INC.

By: /s/ Francis L. Crowley
Francis L. Crowley
Secretary

January 2, 1986

CERTIFICATE OF MERGER

By

DIRECTORS

To: The Secretary of the State of Connecticut

Name of Constituent Corporations:

Ship Analytics Inc. (Surviving Domestic Corporation) and American Data Corporation (Foreign Terminating Corporation)

Address of Corporation: North Stonington Professional Center
North Stonington, Connecticut 06359

Date of Directors Meeting: January 2, 1986

WHEREAS, Ship Analytics Inc. a domestic stock corporation owns all outstanding shares of American Data Corporation, a State of Florida stock corporation; and

WHEREAS, said American Data Corporation is a wholly owned subsidiary of Ship Analytics Inc. and operated as an affiliated company under common management; and,

NOWTHEREFORE, pursuant to the terms of each of the said Corporation's By-Laws and the provisions of Sections 33-364, and 33-370, and other applicable provisions of the State of Connecticut Stock Corporation statutes, as amended, and the provisions of the applicable laws and regulations of the State of Florida for American Data Corporation; the Board of Directors of Ship Analytics Inc. ("Surviving Corporation") which owns all of the outstanding stock shares of American Data Corporation ("Foreign Terminating Corporation"); unanimously voted by resolution for a Plan of Merger at a duly constituted January 2, 1986 meeting with all Directors in attendance. Said Plan of Merger was further unanimously voted and accepted by resolution adopted by the Board of Directors of American Data Corporation the Foreign Terminating Corporation at a duly constituted January 2, 1986 meeting.

The aforesaid approved Plan of Merger provides for the following:

1. The merging corporations are: Ship Analytics Inc., a domestic stock corporation; and American Data Corporation, a foreign (State of Florida) stock corporation.

2. Said Ship Analytics Inc. shall be the Surviving Corporation.

3. The name of the Surviving Corporation shall be continued as Ship Analytics Inc.

4. The Certificate of Incorporation of Ship Analytics Inc., the Surviving Corporation, as presently filed with the Secretary of the State of Connecticut shall continue in effect after the merger without change or amendment.

5. The Plan of Merger shall be effective as of January 2, 1986.

6. As of the effective date of the Plan of Merger, the Merging Corporations shall be a single corporation (Ship Analytics Inc.) and the separate existence of American Data Corporation shall cease.

7. The effect of the merger shall be as provided by the terms of said Plan of Merger as consistent with Section 33-369 and other applicable provisions of the State of Connecticut Stock Corporation statutes as amended and the applicable provisions of the State of Florida Stock Corporation statutes to implement a so-called statutory merger.

The undersigned authorized officers of the Domestic Merging Corporation hereby represent and attest that:

(a) The said Plan of Merger has been approved by each of the Merging Corporations in accord and in the manner provided by the applicable State of Connecticut statutes (Chapter 599) and regulations; and the State of Florida in regard to the Foreign Terminating Corporation; and the By-Laws of the Merging Corporations.

(b) The said Plan of Merger as approved by the Merging Corporations Board of Directors on January 2, 1986 is on file with the Secretary of Ship Analytics Inc. at its principal place of business and home corporate office located at:

North Stonington Professional Center
North Stonington, Connecticut 06359

(c) The Secretary of Ship Analytics Inc. or his designated delegate shall promptly provide a copy of the full Plan of Merger at no cost, on the request of any shareholder of any of the Merging Corporations.

Dated at North Stonington, Connecticut this 2nd day of January 1986.

We hereby declare, under the penalties of false statement, that the statements made in the foregoing certificate are true.

SHIP ANALYTICS INC.

By /s/ Jerry C. Lamb
Jerry C. Lamb
President

SHIP ANALYTICS INC.

By: Francis L. Crowley
Francis L. Crowley
Secretary

AMERICAN DATA CORPORATION

By /s/ Jerry C. Lamb
Jerry C. Lamb
President

AMERICAN DATA CORPORATION

By: Francis L. Crowley
Francis L. Crowley
Secretary

January 2, 1986

State of Connecticut
County of New London

On this the 2nd day of January, 1986, before me, Jerry C. Lamb, the foregoing officer, personally appeared before me to be the president and CEO of Ship Analytics, Inc., a corporation, and that he, as such President and CEO being authorized so to do, executed the foregoing instrument for the purposes therein contained, by signing the name of the corporation by himself as the President and CEO.

In witness whereof, I hereunder set my hand,

(SEAL) /s/ Susan D. Shannon

Susan D. Shannon
Notary Public

My Commission expires March 31, 1998

State of Connecticut
County of New London

On this the 2nd day of January, 1986, before me, Jerry C. Lamb, the foregoing officer, personally appeared before me to be the President and CEO of American Data Corporation, a corporation, and that he, as such President and CEO being authorized so to do, executed the foregoing instrument for the purposes therein contained, by signing the name of the corporation by himself as the President and CEO.

In witness whereof, I hereunder set my hand,

(SEAL) /s/ Susan D. Shannon

Susan D. Shannon
Notary Public

My Commission expires March 31, 1998

CERTIFICATE OF STOCK CORPORATION
SI-39 REV. 9-65

[ ] CANCELLATION OF SHARES [X] RETIREMENT OF SHARES

For Office Use Only

ACCOUNT NO.

INITIALS

VOL 1055 STATE OF CONNECTICUT 1435

SECRETARY OF THE STATE

1. The name of the corporation is SHIP ANALYTICS, INC.

2. [ ] CANCELLATION OF SHARES / or 2 [X] RETIREMENT OF SHARES	DESIGNATION OF SHARES: Class	Series	Par	NUMBER OF SHARES: Issued and Outstanding	Treasury	Authorized (For cancellation only)
a. before cancellation / a. before retirement	Common	N/A	No Par	168	32	
				200		
b. Shares being cancelled / b. Shares being retired	Common	N/A	No Par		32	
				32		
c. After cancellation / c. After retirement	Common	N/A	No Par	168	-0-	
				168		

Dated at North Stonington, CT this 30th day of September, 1985

We hereby declare, under the penalties of perjury, that the statements made in the foregoing certificate are true.

NAME OF PRESIDENT OR VICE PRESIDENT	NAME OF SECRETARY OR ASSISTANT SECRETARY
Jerry C. Lamb	Francis L. Crowley
SIGNED (President or Vice President)	SIGNED (Secretary or Assistant Secretary)
/s/ Jerry C. Lamb	/s/ Francis L. Crowley

FOR OFFICE USE ONLY	FILING FEE	CERTIFICATION FEE	TOTAL FEES
	$ 6	$ 9	$ 15

SIGNED (For Secretary of the State)
Rec. Sent 2/10/86 RB

CERTIFIED COPY SENT ON (Date) INITIALS
Ship Analytics

TO:

P.O. Box 419

CARD	LIST	PROOF
North Stonington	CT	06359

CERTIFICATE
- -----------
AMENDING OR RESTATING CERTIFICATE OF INCORPORATION BY ACTION OF
61-38

[ ] INCORPORATORS [ ] BOARD OF DIRECTORS [X] BOARD OF DIRECTORS AND SHAREHOLDERS (Stock Corporation) [ ] BOARD OF DIRECTORS AND MEMBERS (Nonstock Corporation)

For office use only

STATE OF CONNECTICUT

SECRETARY OF THE STATE

ACCOUNT NO.

INITIALS

1. NAME OF CORPORATION
SHIP ANALYTICS, INC.

DATE
December 27, 1984

2. The Certificate of Incorporation is [X] A. AMENDED ONLY [ ] B. AMENDED AND RESTATED [ ] C. RESTATED ONLY BY THE FOLLOWING RESOLUTION

VOTED: That the Certificate of Incorporation of this Corporation be and it hereby is amended to increase the number of shares of common stock that it is authorized to issue, from 5,000 to 750,000

3. (Omit if 2A is checked)

(a) The above resolution merely restates and does not change the provisions of the original Certificate of Incorporation as supplemented and amended to date, except as follows: (indicate amendments made, if any, if none, so indicate)

Inapplicable

(b) Other than as indicated in Par. 3(a), there is no discrepancy between the provisions of the original Certificate of Incorporation as supplemented to date, and the provisions of this Certificate Restating the Certificate of Incorporation.

BY ACTION OF INCORPORATORS

[ ] 4. The above resolution was adopted by vote of at least two-thirds of the incorporators before the organization meeting of the incorporation, and approved in writing by all subscribers (if any) for shares of the corporation, (or if nonstock corporation, by all applicants for membership entitled to vote, if any.)

We (at least two-thirds of the incorporators) hereby declare, under the penalties of false statement that the statements made in the foregoing certificate are true.

SIGNED SIGNED SIGNED

APPROVED

(All subscribers, or, if nonstock corporation, all applicants, for membership entitled to vote, if none, so indicate)

SIGNED SIGNED SIGNED

(Continued)

[ ] 4. (Omit if 2C. is checked.) The above resolution was adopted by the board of directors acting alone,

BY ACTION OF BOARD OF DIRECTORS

[ ] there being no shareholders or subscribers.

[ ] the corporation being a nonstock corporation and having no members and no applicants for membership entitled to vote on such resolution.

[ ] The board of directors being so authorized pursuant to Section 33-341, Conn. G.S. as amended

5. The number of affirmative votes required to adopt such resolution is:	6. The number of directors' votes in favor of the resolution was:

We hereby declare, under the penalties of false statement that the statements made in the foregoing certificate are true.

NAME OF PRESIDENT OR VICE PRESIDENT (Print or Type)	NAME OF SECRETARY or ASSISTANT SECRETARY (Print or Type)
SIGNED (President or Vice President)	SIGNED (Secretary or Assistant Secretary)

[x] 4. The above resolution was adopted by the board of directors and by shareholders.

BY ACTION OF BOARD OF DIRECTORS AND SHAREHOLDERS

5. Vote of shareholders:

(a) (Use if no shares are required to be voted as a class)

NUMBER OF SHARES ENTITLED TO VOTE	TOTAL VOTING POWER	VOTE REQUIRED FOR ADOPTION	VOTE FAVORING ADOPTION
168	168	112	168

(b) (If the shares of any class are entitled to vote as a class, indicate the designation and number of outstanding shares of each such class, the voting power thereof, and the vote of each such class for the amendment resolution.)

Not Applicable

We hereby declare, under the penalties of false statement that the statements made in the foregoing certificate are true.

NAME OF PRESIDENT (Print or Type)	NAME OF SECRETARY (Print or Type)
Jerry C. Lamb	Francis L. Crowley
SIGNED (President or Vice President)	SIGNED (Secretary of Assistant Secretary)
/s/ Jerry C. Lamb	/s/ Francis L. Crowley

[ ] 4. The above resolution was adopted by the board of directors and by members.

BY ACTION OF BOARD OF DIRECTORS AND MEMBERS

5. Vote of members.

(a) (Use if no members are required to vote as a class)

NUMBER OF MEMBERS VOTING	TOTAL VOTING POWER	VOTE REQUIRED FOR ADOPTION	VOTE FAVORING ADOPTION

(b) (If the members of any class are entitled to vote as a class, indicate the designation and number of members of each such class, the voting power thereof, and the vote of each such class for the amendment resolution)

We hereby declare, under the penalties of false statement that the statements made in the foregoing certificate are true.

NAME OF PRESIDENT OR VICE PRESIDENT (Print or Type)	NAME OF SECRETARY OF ASSISTANT SECRETARY (Print or Type)
SIGNED (President or Vice President)	SIGNED (Secretary or Assistant Secretary)

For office use only

FILING FEE	CERTIFICATION FEE	TOTAL FEES
$ 30 FYT-2125	$ 9	$ 2164

SIGNED (For Secretary of the State)
Rec & cc sent 3-12-85

CERTIFIED COPY SENT ON (Date)	INITIALS
Ship Analytics	Francis L. Crowley

TO N. Stonington Professional Ctr.

CARD N. Stonington LIST CT 06358 PROOF

Revised 6/21/83

CERTIFICATE OF MERGER

By

DIRECTORS AND STOCKHOLDERS

To: The Secretary of the State of Connecticut

Name of Constituent Corporations:

Ship Analytics Inc. (Surviving Domestic Corporation); Eclectech Associates, Inc. (Domestic Terminating Corporation); Mara-Time Marine Services, Inc. (Foreign Terminating Corporation); SIM-SHIP CORP. (Foreign Terminating Corporation)

Address of Corporation: North Stonington Professional Center
North Stonington, Connecticut 06359

Date of Directors and Stockholders Meeting: June 28, 1983

WHEREAS, Ship Analytics Inc. a domestic stock corporation owns all outstanding shares of: Eclectech Associates, Inc. a domestic stock corporation; and, Mara-Time Marine Services, Inc., a State of New York stock corporation; and, SIM-SHIP CORP., a State of Delaware stock corporation; and

WHEREAS, said Eclectech Associations, Inc., Mara-Time Marine Services, Inc., and SIM-SHIP CORP. are wholly owned subsidiaries of Ship Analytics Inc. and operate as affiliated companies under common management; and

NOWTHEREFORE, pursuant to the terms of each of the said Corporation's By-Laws and the provisions of Sections 33-364, 33-366, 33-370, and other applicable provisions of the State of Connecticut Stock Corporation statutes, as amended, and the provisions of the applicable laws and regulations of the State of New York (for Mara-Time Marine Services, Inc.) and the State of Delaware (for SIM-SHIP CORP.) the Board of Directors of Ship Analytics Inc. ("Surviving Corporation") which owns all of the outstanding stock shares of Eclectech Associates, Inc. ("Domestic Terminating Corporation"); and, Mara-Time Marine Services, Inc. and SIM-SHIP CORP. ("Foreign Terminating Corporation(s)"); unanimously voted by resolution for a Plan of Merger at a duly constituted June 28, 1983 meeting with all Directors in attendance. Said Plan of Merger was further unanimously voted and accepted by resolution adopted by the Board of Directors of each of the Domestic and Foreign Terminating Corporations at a duly constituted June 28, 1983 meeting.

FURTHER, such Plan of Merger with related implementation actions as voted and approved by the Board of Directors of the Surviving Corporation and the Domestic and Foreign Terminating Corporations at the said June 28, 1983 meetings was unanimously ratified and adopted by all of the Stockholders of record entitled to vote all outstanding shares of Ship Analytics Inc., the Surviving Corporation and the Domestic and Foreign Terminating Corporations of Eclectech Associates, Inc., Mara-Time Marine Services, Inc. and SIM-SHIP CORP.

The approved Plan of Merger provides for the following:

1. The merging corporations are: Ship Analytics Inc., a domestic stock corporation; Eclectech Associates, Inc., a domestic stock corporation; Mara-Time Marine Services, Inc., a foreign (State of New York) stock corporation; and SIM-SHIP CORP., a foreign (State of Delaware) stock corporation.

2. Said Ship Analytics Inc. shall be the Surviving Corporation.

3. The name of the Surviving Corporation shall be continued as Ship Analytics Inc.

4. The Certificate of Incorporation of Ship Analytics Inc., the Surviving Corporation, as presently filed with the Secretary of the State of Connecticut shall continue in effect after the merger without change or amendment.

5. The Plan of Merger shall be effective as of July 1, 1983.

6. As of the effective date of the Plan of Merger, the Merging Corporations shall be a single corporation (Ship Analytics Inc.) and the separate existence of Eclectech Associates, Inc., Mara-Time Marine Services, Inc., and SIM-SHIP CORP. shall cease.

7. The effect of the merger shall be provided by the terms of said Plan of Merger as consistent with Section 33-369 and other applicable provisions of the State of Connecticut Stock Corporation statutes as amended and the applicable provisions of the State of New York and the State of Delaware Stock Corporation statutes to implement a so-called statutory merger.

The undersigned authorized officers of the Domestic Merging Corporations hereby represent and attest that:

(a) The said Plan of Merger has been approved by each of the Merging Corporations in accord and in the manner provided by the applicable State of Connecticut statutes (Chapter 599) and regulations; the applicable statutes of the State of New York and the State of Delaware in regard to the Foreign Terminating Corporations; and the By-Laws of the Merging Corporations.

(b) The said Plan of Merger as approved by the Merging Corporations Board of Directors and Stockholders on June 28, 1983 is on file with the Secretary of Ship Analytics Inc. at its principal place of business and home corporate office located at:

North Stonington Professional Center
North Stonington, Connecticut 06359

(c) The Secretary of Ship Analytics Inc. or his designated delegate shall promptly provide a copy of the full Plan of Merger at no cost, on the request of any shareholder of any of the Merging Corporations.

Dated at North Stonington, Connecticut this 28th day of June 1983.

We hereby declare, under the penalties of false statement, that the statements made in the foregoing certificate are true:

SHIP ANALYTICS INC.

By: /s/ Jerry C. Lamb
Jerry C. Lamb
President

SHIP ANALYTICS INC.

By: /s/ Francis L. Crowley
Francis L. Crowley
Secretary

ECLECTECH ASSOCIATES, INC.

By: /s/ Jerry C. Lamb
Jerry C. Lamb
President

ECLECTECH ASSOCIATES, INC.

By: /s/ Francis L. Crowley
Francis L. Crowley
Secretary

MARA-TIME MARINE SERVICES, INC.

By: /s/ Jerry C. Lamb
Jerry C. Lamb
President

MARA-TIME MARINE SERVICES, INC.

By: /s/ Thomas J. Cote
Thomas J. Cote
Secretary

SIM-SHIP CORP.

By: /s/ Jerry C. Lamb
Jerry C. Lamb
President

SIM-SHIP CORP.

By: /s/ Thomas J. Cote
Thomas J. Cote
Secretary

STATE OF CONNECTICUT

SECRETARY OF THE STATE

The undersigned Incorporator(s) hereby form(s) a corporation under the Stock Corporation Act of the State of Connecticut:

1. The name of the corporation is SHIP ANALYTICS INC.

2. The nature of the business to be transacted, or the purposes to be promoted or carried out by the corporation, are as follows:

To provide management and technological advice and services to industry and the government particularly in the marine systems and shipping areas of activity.

To carry on and conduct a business to perform analysis, research, development, design, engineering for evaluation, development and manufacture of marine and ship systems and related products which inherently involve scientific technology in their design, manufacture and operations.

To build, make, operate, maintain, buy, sell, deal in and with the design and manufacture of ships and vessels of whatsoever nature, and marine transportation systems of every nature and kind whatsoever; together with all materials, articles, tools, machinery and support systems related to such shipping and maritime activities and operations.

To carry on and conduct a business to provide comprehensive scientific, operations research, performance evaluations, and management representation services to individuals, corporations, governments (state, federal and foreign), and to others generally as a consultant, agent, representative, contractor for the development design, manufacture, operation, and evaluation of such marine systems, equipment and products.

While the initial focus of the corporation shall be in the marine systems and product area such stated focus herein shall not constitute or be construed as a limitation on the nature or scope of the corporation's business activity to be conducted or authorized by the Board of Directors pursuant to this Certificate of Incorporation as such business activity can be legally permitted by the State of Connecticut statutes.

To manufacture, purchase or otherwise acquire, invest in, own, mortgage, pledge, sell, assign and transfer or otherwise dispose of, trade, deal in and deal with goods, wares and merchandise and personal property of every class and description.

To acquire, and pay for in cash, stock or bonds of this corporation or otherwise, the good will, rights, assets and property, and to undertake or assume the whole or any part of the obligations or liabilities of any person, firm, association or corporation.

To acquire, hold, use, sell, assign, lease, grant licenses in respect of, mortgage or otherwise dispose of letters patent of the United States or any foreign country, patents rights, licenses and privileges, inventions, improvements, and processes, copy-rights, trade-marks, and trade names, relating to or useful in connection with any business of this corporation.

To acquire by purchase, subscription or otherwise, and to receive, hold, own, guarantee, sell, assign, exchange, transfer, mortgage, pledge or otherwise dispose of or deal in and with any of the shares of the capital stock or any voting trust certificates in respect of the shares of capital stock, script, warrants, rights, bonds, debentures, notes, trust receipts, and other securities, obligations, chosen in action and evidences of indebtedness or interest issued or created by any corporations, joint stock companies, syndicates, associations, firms, trusts or persons, public or private, or by the government, or by any state, territory, province, municipality or other political subdivision or by any governmental agency, and as owner thereof to possess and exercise all the rights, powers and privileges of ownership, including the right to execute consents and vote thereon, and to do any and all acts and things necessary or advisable for the preservation, protection, improvement and enhancement in value thereof.

To enter into, make and perform contracts of every kind and description with any person, firm, association, corporation, municipality, county, state, body politic or government or colony or dependency thereof.

To borrow or raise moneys for any of the purposes of the corporation and, from time to time without limits to amount, to draw, make, accept, endorse, execute and issue promissory notes, drafts, bills of exchange, warrants, bonds, debentures and other negotiable or non-negotiable instruments and evidence of indebtedness, and to secure the payment of any thereof and of the interest thereon by mortgage upon or pledge, conveyance or assignment in trust of the whole or any part of the property of the corporation, whether at the time owned or thereafter acquired, and to sell, pledge or otherwise dispose of such bonds or other obligations of the corporation for its corporate purposes.

To loan to any person, firm or corporation any of its surplus funds, either with or without security.

To purchase, hold, sell, and transfer the shares of its own capital stock; provided it shall not use its funds or property for the purchase of its own shares of capital stock when such use would cause any impairment of its capital except as otherwise permitted by law, and provided further that shares of its own capital stock belonging to it shall not be voted upon directly or indirectly.

To have one or more offices, to carry on all or any of its operations and business and without restriction or limit as to amount to purchase or otherwise acquire, hold, own, mortgage, sell, convey or otherwise dispose of, real and personal property of every class, and description in any of the states, and districts, territories or colonies of the United States, and in any and all foreign countries, subject to the laws of such state, district, territory, colony or country.

In general, to carry on any other business in connection with the foregoing, and to have and exercise all the powers conferred by the laws of Connecticut upon corporations formed under the General Corporation Law of the State of Connecticut, and to do any or all of the things hereinbefore set forth, to the same extent as natural persons might or could do.

The objects and purposes specified in the foregoing clauses shall except where otherwise expressed, be in no way limited or restricted by reference to, or inference from the terms of any other clause in this certificate of incorporation, but the objects and purposes specified in each of the foregoing clauses of this article shall be regarded as independent objects and purposes.

(Continued)

3. The designation of each class of shares, the authorized number of shares of each such class, and the par value (if any) of each share thereof, are as follows:

The authorized capital stock shall consist of five thousand shares of common stock without par value.

4. The terms, limitations and relative rights and preferences of each class of shares and series thereof (if any), or an express grant of authority to the board of directors pursuant to Section 33-341, 1959 Supp. Conn. G.S., are as follows:

a) All shares are voting common shares without restriction or priority except that preemptive rights are denied to all such shares.

b) The Board of Directors are hereby expressly granted the right to exercise the authority related to the issuance of shares as specified by Section 33-341 of the General Statutes of the State of Connecticut, as amended to the date of this Certificate.

5. The minimum amount of stated capital with which the corporation shall commence business is one thousand ($1000.00) dollars. (Not less than one thousand dollars)

6. (7) Other provisions

Dated at Groton, Connecticut this seventh day of September, 1977

I/We hereby declare, under the penalties of false statement that the statements made in the foregoing certificate are true.

This certificate of incorporation must be signed by one or more incorporators

NAME OF INCORPORATION (Print or Type)	NAME OF INCORPORATION (Print or Type)	NAME OF INCORPORATION (Print or Type)
1. Francis L. Crowley	2. /s/ Francis L. Crowley	3.
SIGNED (Incorporated)	**SIGNED (Incorporated)**	**SIGNED (Incorporated)**
1. /s/ Francis L. Crowley	2.	3.
NAME OF INCORPORATOR (Print or Type)	**NAME OF INCORPORATION (Print or Type)**	**NAME OF INCORPORATION (Print or Type)**
4.	5.	6.
SIGNED (Incorporator)	**SIGNED (Incorporated)**	**SIGNED (Incorporated)**
4.	5.	6.

FOR OFFICE USE ONLY	FRANCHISE FEE	FILING FEE	CERTIFICATION FEE	TOTAL FEES
	$ 50	$ 20	$ 11	$ 81

SIGNED (For Secretary of the State)
Rec. Sent 5/3/78

CERTIFIED COPY SENT ON (Date) INITIALS
Receipts to Ms. Francis L. Crowley R.L.

TO
8 Palmer Court, Noank, CT 06340

CARD LIST PROOF

APPOINTMENT OF STATUTORY AGENT FOR SERVICE
DOMESTIC CORPORATION
61-6 REV. 6-66

TO: THE SECRETARY OF THE STATE OF CONNECTICUT

NAME OF CORPORATION
SHIP ANALYTICS INC.

APPOINTMENT

The above corporation appoints as its statutory agent for service, one of the following:

NAME OF NATURAL PERSON WHO IS RESIDENT OF CONNECTICUT FRANCIS L. CROWLEY	BUSINESS ADDRESS POST OFFICE BOX 22, OLD MYSTIC, CT 06372 RESIDENCE ADDRESS 8 PALMER COURT, NOANK, CT 06340
NAME OF CONNECTICUT CORPORATION SHIP ANALYTICS INC.	ADDRESS OF PRINCIPAL OFFICE IN CONN. (If none, enter address of appointee's statutory agent for service) POST OFFICE BOX 22, OLD MYSTIC, CT 06372
NAME OF CORPORATION not Organized Under the Laws of Conn.*	ADDRESS OF PRINCIPAL OFFICE IN CONN. (If none, enter "Secretary of the State of Connecticut")

*Which has procured a Certificate of Authority to transact business or conduct affairs in this state.

AUTHORIZATION

ORIGINAL APPOINTMENT (Must be signed by a majority of incorporators)	NAME OF INCORPORATOR (Print or Type) FRANCIS L. CROWLEY	SIGNED (Incorporator) /s/ Francis L. Crowley	DATE SEPTEMBER 7, 1977
	NAME OF INCORPORATOR (Print or Type)	SIGNED (Incorporator)	
	NAME OF INCORPORATOR (Print or Type)	SIGNED (Incorporator)	
SUBSEQUENT APPOINTMENT	NAME OF PRESIDENT, VICE PRESIDENT, OR SEC.	SIGNED (President, or Vice President, or Secretary)	DATE

ACCEPTANCE

Accepted: NAME OF STATUTORY AGENT FOR SERVICE (Print or Type): FRANCIS L. CROWLEY
SIGNED (Statutory Agent for Service): /s/ Francis L. Crowley

FOR OFFICE USE ONLY

FILING FEE	CERTIFICATION FEE	TOTAL FEES
$	$	$

SIGNED (For Secretary of the State)

CERTIFIED COPY SENT ON (Date) INITIALS

TO

CARD LIST PROOF

BY-LAWS
of
SHIP ANALYTICS, INC.

ARTICLE I. OFFICE(S)

The principal office of the Corporation shall be at such place within the State of Connecticut as the Directors shall from time to time designate. The Corporation may have such other offices within or without the State of Connecticut as the Directors may from time to time determine.

ARTICLE II. MEETINGS OF STOCKHOLDERS

Section 1. Place of Meetings. All meetings of the stockholders shall be held at the principal office or place of business of the Corporation, or at such place within or without the State of Connecticut as from time to time may be designated by the By-Laws or by resolution of the Board of Directors.

Section 2. Annual Meetings. (a) The annual meetings of the stockholders shall be held on the second Monday in the month of September or on such day other than a legal holiday in the month of September in each year and at such time and place as may be designated by the Board of Directors. Such annual meeting shall be held for the election of Directors and for the transaction of such other business as may properly come before such meeting.

(b) If the election of Directors shall not be held on the day here designated for any annual meeting, or at any adjournment of such meeting, the Board of Directors shall call a special meeting of the stockholders as soon as conveniently possible thereafter. At such meeting, the election of Directors shall take place, and such election of any other business transacted thereat shall have the same force and effect as at an annual meeting duly called and held.

(c) No change in the time or place for a meeting for the election of Directors shall be made within seven (7) days preceding the day on which the election is to be held. Written notice of any such change shall be given each stockholder at least seven (7) days before the election is held, either in person or by letter mailed to him at the address last shown on the books of the Corporation.

(d) In the event the annual meeting is not held at the time prescribed in Article II, Section 2(a) above, and if the Board of Directors shall not call a special meeting as prescribed in Article II, Section 2(b) above within one month after the date prescribed for the annual meeting, then any stockholder may call such meeting, and at such meeting the stockholders may elect the Directors and transact other business with the same force and effect as at an annual meeting duly called and held.

Section 3. Notice of Meeting. A notice setting out the day, hour and place of each meeting of stockholders shall be mailed, postage prepaid, to each stockholder of record, at his last known post office address as the same appears on the stock records of the Corporation, or said notice

shall be left with each such stockholder at his residence or usual place of business, not less than seven (7) days nor more than fifty (50) days before such annual meeting.

Section 4. Adjournment of Stockholders' Meeting. If a quorum is not present at any meeting of the stockholders, the holders of a majority of the voting power of the shares entitled to vote present, in person or by proxy, may adjourn the meeting to such future time as shall be agreed upon by them, and notice of such adjournment shall be given to the stockholders not present or represented at the meeting.

Section 5. Special Meetings. Special meetings of the stockholders may be called at any time by the President or by resolution of the Board of Directors and shall be called by the President upon the request of the majority of the elected Directors or upon the written request of one (1) or more stockholders holding in the aggregate at least one-tenth (1/10) of the total number of shares entitled to vote at such meeting. The President or Secretary or the Directors calling the meeting shall mail a notice of such meeting to each stockholder of record not less than seven (7) days nor more than fifty (50) days before such meeting, and such notice shall state the day, hour and place of such meeting and the purpose or purposes thereof.

Section 6. Waiver of Notice. Notice of any stockholders' meeting may be waived in writing by any stockholder either before or after the time stated therein and, if any person present at a stockholders' meeting does not protest, prior to or at the commencement of the meeting, the lack of proper notice, such person shall be deemed to have waived notice of such meeting. Attendance at a meeting for the express purpose of objecting that the meeting was not lawfully called or convened shall not, however, constitute a waiver of notice. Except where otherwise required by law or by these By-Laws, notice need not be given of any adjourned meeting of the stockholders.

Section 7. Shareholders' Consent. Any resolution in writing approved and signed by all the stockholders or their proxies or attorneys shall have the same force and effect as if it were a vote passed by all the stockholders at a meeting duly called and held for that purpose. In addition, actions taken at any meeting of stockholders however called and with whatever notice, if any, are as valid as if taken at a meeting duly called and held on notice, if:

(a) All stockholders entitled to vote were present in person or by proxy and no objection to holding the meeting was made by any stockholder; or

(b) A quorum was present, either in person or by proxy, and no objection to holding the meeting was made by any stockholder entitled to vote so present, and it, either before or after the meeting, each of the persons entitled to vote, not present in person or by proxy, signs a written waiver of notice, or a consent to the holding of the meeting, or an approval of the action taken as shown by the minutes thereof. All such resolutions, waivers, consents and approvals shall be recorded in the minute book of the Corporation by the Secretary.

Section 8. Quorum. The holders of a majority of the issued and outstanding stock entitled to vote, either in person or by proxy, shall constitute a quorum for the transaction of business at any meeting of the stockholders, except that if no quorum be present, the holders of a majority of the stock entitled to vote present in person or by proxy may adjourn the meeting to such time as they

may determine and notice of such adjournment shall be given to the stockholders not present or represented at such meeting.

Section 9. Proxies. At all meetings of the stockholders, any stockholder entitled to vote may vote either in person or by proxy. Such proxy shall be in writing, signed and dated.

Section 10. Number of Votes of Each Stockholder. Each outstanding share, regardless of class, shall be entitled to one vote on each matter submitted to a vote at a meeting of shareholders unless, and except to the extent that, voting rights or shares of any class are increased, limited or denied by the Certificate of Incorporation.

Section 11. Voting. In voting on any question on which a vote by ballot is required by law or is demanded by any stockholder, the voting shall be by ballot; on all other questions it may be viva voce. Cumulative voting permitted by Sec. 33-325 of the Stock Corporation Act is not authorized by the Certificate of Incorporation and is denied by these By-Laws.

Section 12. Closing of Transfer Books; Record Date. (a) In order to determine the holders of record of the Corporation's stock who are entitled to notice of meetings, to vote at a meeting or adjournment thereof, and to receive payment of any dividend or to make a determination of the stockholders of record for any other proper purpose, the Board of Directors of the Corporation may order that the Stock Transfer Books be closed for a period not to exceed seventy (70) days. If the purpose of such closing is to determine who is entitled to notice of a meeting and to vote at such meeting, the Stock Transfer Books shall be closed for at least ten (10) days preceding such meeting.

(b) In lieu of closing the Stock Transfer Books, the Board of Directors may fix a date as the record date for such determination of stockholders. Such date shall be no more than seventy (70) days prior to the date of the action which requires such determination, nor, in the case of a stockholders' meeting, shall it be less than ten (10) days in advance of such meeting.

(c) If the Stock Transfer Books are not closed and no record date is fixed for such determination of the stockholders of record, the date of which notice of the meeting is mailed, or on which the resolution of the Board of Directors declaring a dividend is adopted, as the case may be, shall be the record date for such determination of stockholders.

(d) When a determination of stockholders entitled to vote at any meeting has been made as provided in this section, such determination shall apply to any adjournment of such meeting, except when the determination has been made by the closing of the Stock Transfer Books and the stated period of closing has expired.

Section 13. List of Stockholders. (a) A complete list of the stockholders of the Corporation entitled to vote at the ensuing meeting, arranged in alphabetical order, and showing the address of, and number of shares owned by, each stockholder shall be prepared by the Secretary, or other officer of the Corporation having charge of the Stock Transfer Books. This list shall be kept on file for a period of at least seven (7) days prior to the meeting at the registered office of the Corporation in the State of Connecticut and shall be subject to inspection during the usual business hours of such period by any stockholder. This list shall also be produced at the meeting and shall be subject to inspection by any stockholder at any time during the meeting.

(b) The original Stock Transfer Books shall be prima facie evidence as to who are the stockholders entitled to examine such list or to vote at any meeting of the stockholders.

(c) Failure to comply with the requirements of this section shall not affect the validity of any action taken at such meeting of the stockholders.

Section 14. Presiding Officer. Meetings of the stockholders shall be presided over by the Chairman of the Board, or, if he is not present, by the President, or if he is not present, by a Vice President, or if neither the Chairman of the Board nor the President nor the Vice President is present, by a chairman to be chosen unanimously by the stockholders entitled to vote at the meeting who are present in person or by proxy. The Secretary of the Corporation, or, in his/her absence, an Assistant Secretary, shall act as secretary of every meeting, but if neither the Secretary nor an Assistant Secretary is present, the meeting shall choose any person present to act as secretary of the meeting.

ARTICLE III. DIRECTORS

Section 1. Number, Election and Term of Office, Qualifications. (a) The property, business and affairs of the Corporation shall be managed by a Board of Directors composed of not less than three (3) except that where all the issued and outstanding shares are owned beneficially and of record by less than three (3) shareholders the number of Directorships may be less than three (3) but not less than the number of shareholders nor more than five (5) directorships. The actual number of directorships shall be fixed from time to time as the Board of Directors may determine pursuant to the requirements and limitations Sec. 33-314 of the Connecticut Stock Corporation Act. However, the number of directorships for the Corporation's first Board of Directors shall be determined by the incorporators and subscribers of stocks in accord with the provisions of these By-Laws and the law. The number of directors may be increased or decreased from time to time by an amendment to these By-Laws. Any increased number of directors shall be elected unanimously by the stockholders at the next regular annual meeting or at a special meeting called for that purpose. The number of directors shall never be less than three (3) except as permitted by Sec. 33-314 of the Connecticut Stock Corporation Act as amended.

(b) Directors shall be elected by the stockholders at the annual meeting or at a special meeting called for that purpose.

(c) Each Director shall hold office for a one year term and until his successor has been elected and qualified except that a Director shall cease to be in office upon his death, resignation, lawful removal or court order decreeing that he is no longer a Director in office.

(d) Directors need not be stockholders of the corporation nor a resident of the State of Connecticut.

Section 2. Vacancies. Any vacancy in the Board of Directors by reason of death, resignation or other cause other than an increase in the number of directorships may be filled for the unexpired portion of the term by the concurring vote of a majority of the remaining Directors in office, or by action of the sole remaining Director in office, though such remaining directors constitute less than a quorum, though the number of directors at the meeting to fill such vacancy constitutes less than a quorum and though such majority is less than a quorum.

Section 3. Powers of Directors. The Directors shall have the general management and control of the property, business and affairs of the Corporation and may exercise all the powers that may be exercised or performed by the Corporation under the statutes, its Certification of Incorporation, and these By-Laws.

Section 4. Place of Meeting. The Directors may hold their meetings at such place or places within or without the State of Connecticut as the Board may from time to time determine.

Section 5. Meetings. Regular meetings of the Board of Directors shall be held at such times as are fixed from time to time by resolution of the Board. Special meetings may be held at any time upon call of the Chairman of the Board, President or a Vice President, or the majority of elected directors, upon written or telegraphic notice deposited in the U. S. mail or delivered to the telegraph company at least three (3) days prior to the day of the meeting. A meeting of the Board of Directors may be held without notice immediately following the annual meeting of the stockholders. Notice need not be given of regular meetings of the Board of Directors held at times fixed by resolution of the Board of Directors nor need notice be given of adjourned meetings. Meetings may be held at any time without notice if all the directors are present, or if, before the meeting, those not present waive such notice in writing. Notice of a meeting of the Board of Directors need not state the purpose of, nor the business to be transacted, at such meeting.

Section 6. Directors Consent. Any resolution in writing concerning action to be taken by the Corporation, which resolution is approved and signed by all the Directors, severally or collectively, whose number shall constitute at least a quorum for such action, shall have the same force and effect as if such action were authorized at a meeting of the Board of Directors duly called and held for that purpose, and such resolution, together with the Director's written approval thereof shall be recorded by the Secretary in the minute book of the Corporation.

Section 7. Quorum. A majority of the elected directorships shall constitute a quorum for the transaction of business at all meetings of the Board of Directors. If, at any meeting of the Board of Directors, there shall be less than a quorum present, a majority of those present may adjourn the meeting, without further notice, from time to time until a quorum shall have been obtained. The act of a majority of the Directors present at a meeting at which a quorum is present at the time of the act shall be the act of the Board of Directors.

Section 8. Compensation of Directors. The Board of Directors shall have authority to fix fees of Directors, including reasonable allowance for expenses actually incurred in connection with their duties. Any director receiving compensation under this section shall not be barred from serving the Corporation in any other capacity and receiving reasonable compensation for such other services.

Section 9. Indemnification. (a) The Corporation shall indemnify each of its directors and officers, whether or not then in office (and his executor, administrator and heirs), against all reasonable expenses actually and necessarily incurred by him in connection with the defense of any litigation to which he may have been made a party because he is or was a director or officer of the Corporation. He shall have no right to reimbursement, however, in relation to matters as to which he has been adjudged liable to the Corporation for negligence or misconduct in the

performance of his duties. The right to indemnity for expenses shall also apply to the expenses of suits which are compromised or settled if the court having jurisdiction of the matter shall approve such settlement.

(b) The foregoing right of indemnification shall be in addition to, and not exclusive of, all other rights to which such Director or Officer may be entitled and specifically the rights granted by Section 33-320(a) of the State of Connecticut Statutes.

Section 10. Committees. (a) The Board of Directors, by a resolution or resolutions adopted by a majority of the members of the whole Board, may appoint an Executive Committee and such other committees as it may deem appropriate. Each such committee shall consist of at least two (2) members of the Board of Directors. Each committee shall have and may exercise such powers as shall be conferred or authorized by the resolution appointing it. A majority of any such committee may determine its action and may fix the time and place of its meetings, unless provided otherwise by the Board of Directors. The Board of Directors shall have the power at any time to fill vacancies in, to change the size or membership of, and to discharge any such committee.

(b) Each such committee shall keep a written record of its acts and proceedings and shall submit such record to the Board of Directors at each regular meeting thereof and at such other times as requested by the Board of Directors. Failure to submit such record, or failure of the Board to approve any action indicated therein will not, however, invalidate such action to the extent it has been carried out by the Corporation prior to the time the record of such action was, or should have been, submitted to the Board of Directors as herein provided.

Section 11. Dividends. Subject always to the provisions of the law and the Articles of Incorporation, the Board of Directors shall have full power to determine whether any, and, if so, what part, of the funds legally available for the payment of dividends shall be declared in dividends and paid to the stockholders of the Corporation. The Board of Directors may fix a sum which may be set aside or reserved over and above the paid-in capital of the Corporation for working capital or as a reserve for any proper purpose, and from time to time may increase, diminish and vary such fund in the Board's absolute judgment and discretion.

ARTICLE IV. OFFICERS

Section 1. Number. The officers of the Corporation shall be a Chairman of the Board, a President, one or more Vice-Presidents, a Treasurer, a Secretary, and one or more Assistant Secretaries. In addition, there may be such subordinate officers as the Board of Directors may deem necessary. Any person may hold two or more offices except that no person shall hold the offices of President and Secretary simultaneously.

Section 2. Term of Office. The principal officers shall be chosen annually by the Board of Directors at the first meeting of the Board following the stockholders' annual meeting, or as soon thereafter as is conveniently possible. Subordinate officers may be elected from time to time. Each officer shall serve until his successor shall have been chosen and qualified, or until his death, resignation or removal.

Section 3. Removal. Any officer may be removed from office, with or without cause, at any time by the affirmative vote of a majority of the Board of Directors then in office. Such removal shall not prejudice the contract rights, if any, of the person so removed nor such removal violate the terms of the Stockholder's Agreement.

Section 4. Vacancies. Any vacancy in an office from any cause may be filled for the unexpired portion of the term by the Board of Directors.

Section 5. Duties. (a) The Chairman of the Board shall preside at all meetings of the stockholders and the Board of Directors. Except where, by law, the signature of the President is required, the Chairman shall possess the same power as the President to sign all certificates, contracts, and other instruments of the Corporation which may be authorized by the Board of Directors.

(b) The President, in the absence of the Chairman of the Board, shall preside at all meetings of the stockholders and the Board of Directors. He shall have general supervision of the affairs of the Corporation, shall sign or countersign all certificates, contracts or other instruments of the Corporation as authorized by the Board of Directors, shall make reports to the Board of Directors and stockholders, and shall perform such other duties as are incident to his office or are properly required of him by the Board of Directors.

(c) The Vice-Presidents, in the order designated by the Board of Directors, shall exercise the functions of the President during the absence or disability of the President. Each Vice-President shall have such other duties as are assigned to him from time to time by the Board of Directors.

(d) The Secretary and the Treasurer shall perform such duties as are incident to their offices, or are properly required of them by the Board of Directors, or are assigned to them by the Articles of Incorporation or these By-Laws. The Assistant Secretaries, in the order of their seniority, shall, in the absence of the Secretary, perform the duties and exercise the powers of the Secretary, and shall perform such other duties as may be assigned by the Board of Directors.

(e) Other subordinate officers appointed by the Board of Directors shall exercise such powers and perform such duties as may be delegated to them by the resolutions appointing them, or by subsequent resolutions adopted from time to time.

(f) In case of the absence or disability of any officer of the Corporation and of any person hereby authorized to act in his place during such period of absence or disability, the Board of Directors may from time to time delegate the powers and duties of such officer to any other officer, or any director, or any other person whom it may select.

Section 6. Salaries. The salaries of all officers of the Corporation shall be fixed by the Board of Directors. No officer shall be ineligible to receive such salary by reason of the fact that he is also a Director of the Corporation and receiving compensation therefore.

ARTICLE V. CERTIFICATES OF STOCK

Section 1. Form. (a) The interest of each stockholder of the Corporation shall be evidenced by certificates for shares of stock, certifying the number of shares represented thereby and in such form not inconsistent with the Articles of Incorporation as the Board of Directors may from time to time prescribe.

(b) The certificates of stock shall be signed by the President or a Vice-President and by the Secretary or an Assistant Secretary or the Treasurer, and sealed with the seal of the Corporation. Such seal may be a facsimile, engraved or printed. Where any certificate is manually signed by a transfer agent or a transfer clerk and by a registrar, the signatures of the President, Vice-President, Secretary, Assistant Secretary, or Treasurer upon such certificate may be facsimiles, engraved or printed. In case any officer who has signed or whose facsimile signature has been placed upon any certificate shall have ceased to be such before the certificate is issued. It may be issued by the Corporation with the same effect as if such officer has not ceased to be such at the time of its issue.

Section 2. Subscriptions for Shares. Unless the subscription agreement provides otherwise, subscriptions for shares regardless of the time when they are made, shall be paid in full at such time, or in such installments and at such periods, as shall be specified by the Board of Directors. All calls for payments on subscriptions shall carry the same terms with regard to all shares of the same class.

Section 3. Transfers. (a) Transfers of shares of the capital stock of the Corporation shall be made only on the books of the Corporation by the registered owner thereof or by his duly authorized attorney, with a transfer clerk or transfer agent appointed as provided in Section 5 of this Article of the By-Laws, and on surrender of the certificate or certificates for such shares properly endorsed and with all taxes thereon paid.

(b) The person in whose name shares of stock stand on the books of the Corporation shall be deemed by the Corporation to be the owner thereof for all purposes. However, if any transfer of shares is made only for the purpose of furnishing collateral security, and such fact is made known to the Secretary of the Corporation, or to the Corporation transfer clerk or transfer agent, the entry of the transfer shall record such fact.

Section 4. Lost, Destroyed, or Stolen Certificates. No certificate for shares of stock in the Corporation shall be issued in place of any certificate alleged to have been lost, destroyed, or stolen except on production of evidence, satisfactory to the Board of Directors, of such loss, destruction or theft, and, if the Board of Directors so requires, upon the furnishing of an indemnity bond in such amount (but not to exceed twice the value of the shares represented by the certificate) and with such terms and such surety as the Board of Directors may, in its discretion, require.

Section 5. Transfer Agent and Registrar. The Board of Directors may appoint one or more transfer agents or transfer clerks and one or more registrars, and may require all certificates for shares to bear the signature or signatures of any of them.

ARTICLE VI. ISSUANCE OF SHARES

Pursuant to Sections 33-341 and 33-348 of the State of Connecticut Statutes, the Board of Directors of the Corporation, by resolution, may determine the terms of issuance of shares of the Corporations' stock, and the consideration for issuance of such shares.

ARTICLE VII. CORPORATE ACTIONS

Section 1. Deposits. The Board of Directors shall select banks, trust companies, or other depositories in which all funds of the Corporation not otherwise employed shall, from time to time, be deposited to the credit of the Corporation.

Section 2. Voting Securities Held by the Corporation. Unless otherwise ordered by the Board of Directors, the Chairman of the Board of Directors and/or the President shall have full power and authority on behalf of the Corporation to attend and to act and to vote at any meeting of security holders of other corporations in which the Corporation may hold securities. At such meeting the Chairman of the Board and/or the President shall possess and may exercise any and all rights and powers incident to the ownership of such securities which the Corporation might have possessed and exercised if it had been present. The Board of Directors may, from time to time, confer like powers upon any other person or persons. The Board of Directors shall approve proxies for the Chairman of the Board of Directors and/or President in accordance with the provisions of the Stockholders Agreement then in effect.

ARTICLE VIII. SEAL

The seal of this corporation shall have inscribed thereon the name of this Corporation, the word "Seal" and the word "Connecticut", and shall be in the custody of the Secretary.

ARTICLE IX. FISCAL YEAR

The fiscal year of the Corporation shall be from July 1st to June 30th.

ARTICLE X. AMENDMENT OF BY-LAWS

The Board of Directors shall have the power to amend, alter or repeal these By-Laws, and to adopt new By-Laws, from time to time, by an affirmative vote of a majority of the whole Board as then constituted, provided that notice of the proposal to make, alter, amend or repeal the By-Laws was included in the notice of the Directors meeting at which such action takes place. At the next stockholders meeting following any such action by the Board of directors, the stockholders, by a unanimous vote of those present and entitled to vote thereat, shall have the power to alter or repeal By-Laws newly adopted by the Board of Directors, or to restore to their original status By-Laws which they may have altered or repealed, and the notice of such stockholders meeting shall include notice that the stockholders will be called on to ratify the action taken by the Board of Directors with regard to the By-Laws.

****

The foregoing By-Laws Rev 03 (Articles I through X) were presented to the annual Stockholder's meeting held on the 19th day of September 1984.

ATTEST:

/s/ Francis L. Crowley

Francis L. Crowley, Secretary

Exhibit 3.87

STATE OF DELAWARE
SECRETARY OF STATE
DIVISION OF CORPORATIONS
FILED 09:00 AM 05/25/2000
001266275 - 2203869

CERTIFICATE OF AMENDMENT

OF

CERTIFICATE OF INCORPORATION

OF

INTERNATIONAL ANALYTICS, INC.

INTERNATIONAL ANALYTICS, INC., a corporation organized and existing under and by virtue of the general corporation Law of the State of Delaware, DOES HEREBY CERTIFY;

FIRST. That the Board of Directors of said corporation, at a meeting duly convened and held, adopted the following resolution:

RESOLVED that the Board of Directors hereby declares it advisable and in the best interest of the Company that Article FIRST of the Certificate of Incorporation be amended to read as follows:

FIRST: The name of this corporation shall be:

SHIP ANALYTICS INTERNTIONAL, INC.

SECOND. That the said amendment has been consented to and authorized by the holders of a majority of the issued and outstanding stock entitled to vote by written consent given in accordance with the provisions of Section 228 of the General Corporation Law of the State of Delaware.

THIRD. That the aforesaid amendment was duly adopted in accordance with the applicable provisions of Sections 242 and 228 of the general Corporation Law of the State of Delaware.

IN WITNESS WHEREOF, said corporation has caused this Certificate to be signed by JANET FIORE, this 18th day of May A.D. 2000

/s/ Janet Fiore

Authorized Officer

STATE OF DELAWARE
SECRETARY OF STATE
DIVISION OF CORPORATIONS
FILED 09:00 AM 03/08/2000
001116205 - 2203869

CERTIFICATE OF AMENDMENT

OF

CERTIFICATE OF INCORPORATION

OF

SHIP ANALYTICS INTERNATIONAL, INC.

SHIP ANALYTICS INTERNATIONAL, INC., a corporation organized and existing under and by virtue of the general corporation Law of the State of Delaware, DOES HEREBY CERTIFY:

FIRST. That the Board of Directors of said corporation, at a meeting duly convened and held, adopted the following resolution:

RESOLVED that the Board of Directors hereby declares it advisable and in the best interest of the Company that Article FIRST of the Certificate of Incorporation be amended to read as follows:

FIRST: The name of this corporation shall be:

INTERNATIONAL ANALYTICS, INC.

SECOND. That the said amendment has been consented to and authorized by the holders of a majority of the issued and outstanding stock entitled to vote by written consent given in accordance with the provisions of Section 228 of the General Corporation Law of the State of Delaware.

THIRD. That the aforesaid amendment was duly adopted in accordance with the applicable provisions of Sections 242 and 228 of the general Corporation Law of the State of Delaware.

IN WITNESS WHEREOF, said corporation has caused this Certificate to be signed by JANET FIORE, this 28th day of February A.D. 2000.

/s/ Janet Fiore

Authorized Officer

STATE OF DELAWARE
SECRETARY OF STATE
DIVISION OF CORPORATIONS
FILED 09:00 AM 03/23/1993
763082801 - 2203869

CERTIFICATE OF AMENDMENT
OF
CERTIFICATE OF INCORPORATION

Ship Analytics of Singapore Inc., a corporation organized and existing under and by virtue of the General Corporation Law of the State of Delaware.

DOES HEREBY CERTIFY:

FIRST: That at a meeting of the Board of Directors of Ship Analytics of Singapore Inc. held on 29 January 1993, the following resolutions were duly adopted setting forth a proposed amendment of the Certificate of Incorporation of said corporation, declaring said amendment to be advisable and calling a meeting of the stockholders of said corporation for consideration thereof. The resolution setting forth the proposed amendment is as follows:

RESOLVED, that the Certificate of Incorporation of this corporation to be amended by changing the First Article so that, as amended said Article shall be and read as follows:

"The name of the Corporation is:

Ship Analytics International, Inc."

SECOND: That thereafter, pursuant to the above resolution of its Board of Directors, a special meeting of the stockholders of said corporation was duly called and held, upon notice in accordance with Section 222 of the General Corporation Law of the State of Delaware at which meeting of the necessary number of shares as required by statute were voted in favor of the amendment.

THIRD: That said amendment as duly adopted in accordance with the provisions of Section 242 of the General Corporation Law of the State of Delaware.

FOURTH: That the capital of said corporation shall not be reduced under or by reason of amendment.

IN WITNESS WHEREOF, said Ship Analytics of Singapore Inc. has caused its corporate seal to be hereunto affixed and this certificate to be signed by Alan J. Pesch its President and Francis L. Crowley its Secretary, this 29th day of January 1993.

/s/ Francis L. Crowley
Francis L. Crowley, Secretary

/s/ Alan J. Pesch
Alan J. Pesch, President

STATE OF DELAWARE
SECRETARY OF STATE
DIVISION OF CORPORATIONS
FILED 09:00 AM 10/16/1992
922905323 - 2203869

CERTIFICATE OF CHANGE OF LOCATION OF REGISTERED OFFICE
AND OF REGISTERED AGENT

It is hereby certified that:

SHIP ANALYTICS OF SINGAPORE INC.

2. The registered office of the corporation within the State of Delaware is hereby changed to Three Christina Centre, 201 North Walnut Street, City of Wilmington 19801, County of New Castle.

3. The registered agent of the corporation within the State of Delaware is hereby changed to The Company Corporation, the business office of which is identical with the registered office of the corporation as hereby changed.

4. The corporation has authorized the changes hereinbefore set forth by resolution of its Board of Directors.

Signed on June 15, 1992

/s/ Alan J. Pesch

Alan J. Pesch, President

Attest:

/s/ Francis L. Crowley
- ---
Secretary
Francis L. Crowley

CERTIFICATE OF INCORPORATION

OF

SHIP ANALYTICS OF SINGAPORE INC.

* * * * *

1. The name of the corporation is

SHIP ANALYTICS OF SINGAPORE INC.

2. The address of its registered office in the State of Delaware is Corporation Trust Center, 1209 Orange Street, in the City of Wilmington, County of New Castle. The name of its registered agent at such address is The Corporation Trust Company.

3. The nature of the business or purposes to be conducted or promoted is:

To engage in any lawful act or activity for which corporations may be organized under the General Corporation Law of Delaware. 4. The total number of shares of stock which the corporation shall have authority to issue is three thousand (3,000); all of such shares shall be without par value.

The holders of common stock shall, upon the issue or sale of shares of stock of any class (whether now or hereafter authorized) or any securities convertible into such stock, have the right, during such period of time and on such conditions as the board of directors shall prescribe, to subscribe to and purchase such shares or securities in proportion to their respective holdings of common stock, at such price or prices as the board of directors may from time to time fix and as may be permitted by law.

5. The name and mailing address of each incorporator is as follows:

NAME	MAILING ADDRESS
L. J. Vitalo - ----------	Corporation Trust Company 1209 Orange Street Wilmington, Delaware 19801
J. A. Grodzicki - ----------	Corporation Trust Company 1209 Orange Street Wilmington, Delaware 19801
E. A. Jensen - ----------	Corporation Trust Company 1209 Orange Street Wilmington, Delaware 19801

6. The corporation is to have perpetual existence.

7. In furtherance and not in limitation of the powers conferred by statute, the board of directors is expressly authorized:

To make, alter or repeal the by-laws of the corporation.

8. Elections of directors need not be by written ballot unless the by-laws of the corporation shall so provide.

Meetings of stockholders may be held within or without the State of Delaware, as the by-laws may provide. The books of the corporation may be kept (subject to any provision contained in the statutes) outside the State of Delaware at such place or places as may be designated from time to time by the board of directors or in the by-laws of the corporation.

Whenever a compromise or arrangement is proposed between this corporation and its creditors or any class of them and/or between this corporation and its stockholders or any class of them, any court of equitable jurisdiction within the State of Delaware may, on the application in a summary way of this corporation or of any creditor or stockholder thereof or on the application of any receiver or receivers appointed for this corporation under the provisions of Section 291 of Title 8 of the Delaware Code or on the application of trustees in dissolution or of any receiver or

receivers appointed for this corporation under the provisions of Section 279 of Title 8 of the Delaware Code order a meeting of the creditors or class of creditors, and/or of the stockholders or class of stockholders of this corporation, as the case may be, to be summoned in such manner as the said court directs. If a majority in number representing three-fourths in value of the creditors or class of creditors, and/or of the stockholders or class of stockholders of this corporation, as the case may be, agree to any compromise or arrangement and to any reorganization of this corporation as consequence of such compromise or arrangement, the said compromise or arrangement and the said reorganization shall, if sanctioned by the court to which the said application has been made, be binding on all the creditors or class of creditors, and/or on all the stockholders or class of stockholders, of this corporation, as the case may be, and also on this corporation.

9. The corporation reserves the right to amend, alter, change or repeal any provision contained in this certificate of incorporation, in the manner now or hereafter prescribed by statute, and all rights conferred upon stockholders herein are granted subject to this reservation.

10. A director of the corporation shall not be personally liable to the corporation or its stockholders for monetary damages for breach of fiduciary duty as a director except for liability (i) for any breach of the director's duty of loyalty to the corporation or its stockholders, (ii) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (iii) under Section 174 of the Delaware General Corporation Law, or (iv) for any transaction from which the director derived any improper personal benefit.

WE, THE UNDERSIGNED, being each of the incorporators hereinbefore named, for the purpose of forming a corporation pursuant to the General Corporation Law of the State of

Delaware, do make this certificate, hereby declaring and certifying that this is our act and deed and the facts herein stated are true, and accordingly have hereunto set our hands this 2nd day of August, 1989.

/s/ L. J. Vitalo

L. J. Vitalo

/s/ J. A. Grodzicki

J. A. Grodzicki

/s/ E. A. Jensen

E. A. Jensen

Exhibit 3.88

(Now Ship Analytics International, Inc.)

SHIP ANALYTICS OF SINGAPORE INC.

* * * * *

B Y - L A W S

* * * * *

ARTICLE I

OFFICES

Section 1. The registered office shall be in the City of Wilmington, County of New Castle, State of Delaware.

Section 2. The corporation may also have offices at such other places both within and without the State of Delaware as the board of directors may from time to time determine or the business of the corporation may require.

ARTICLE II

MEETINGS OF STOCKHOLDERS

Section 1. All meetings of the stockholders for the election of directors shall be held in the City of North Stonington, State of Connecticut, at such place as may be fixed from time to time by the board of directors, or at such other place either within or without the State of Delaware as shall be designated from time to time by the board of directors and stated in the notice of the meeting. Meetings of stockholders for any other purpose may be held at such time and place, within or without the State of Delaware, as shall be stated in the notice of the meeting or in a duly executed waiver of notice thereof.

Section 2. Annual meetings of stockholders, commencing with the year 1990, shall be held on the second Monday of September if not a legal holiday, and if a legal holiday,

then on the next secular day following, at 10:00 A.M., or at such other date and time as shall be designated from time to time by the board of directors and stated in the notice of the meeting, at which they shall elect by a plurality vote a board of directors, and transact such other business as may properly be brought before the meeting.

Section 3. Written notice of the annual meeting stating the place, date and hour of the meeting shall be given to each stockholder entitled to vote at such meeting not less than ten nor more than sixty days before the date of the meeting.

Section 4. The officer who has charge of the stock ledger of the corporation shall prepare and make, at least ten days before every meeting of stockholders, a complete list of the stockholders entitled to vote at the meeting, arranged in alphabetical order, and showing the address of each stockholder and the number of shares registered in the name of each stockholder. Such list shall be open to the examination of any stockholder, for any purpose germane to the meeting, during ordinary business hours, for a period of at least ten days prior to the meeting, either at a place within the city where the meeting is to be held, which place shall be specified in the notice of the meeting, or, if not so specified, at the place where the meeting is to be held. The list shall also be produced and kept at the time and place of the meeting during the whole time thereof, and may be inspected by any stockholder who is present.

Section 5. Meetings of the stockholders shall be presided over by the chairman of the board, or, if he is not present, by the president, or if he is not present, by a vice-president, or if neither the chairman of the board nor the president nor the vice-president is present, by a chairman to be chosen unanimously by the stockholders entitled to vote at the meeting who are present in person or by proxy. The secretary of the corporation, or, in his/her absence, an assistant secretary, shall act as secretary of every meeting, but if neither the secretary nor an

assistant secretary is present, the meeting shall choose any person present to act as secretary of the meeting.

Section 6. Written notice of a special meeting stating the place, date and hour of the meeting and the purpose or purposes for which the meeting is called, shall be given not less than ten nor more than sixty days before the date of the meeting, to each stockholder entitled to vote at such meeting.

Section 7. Business transacted at any special meeting of stockholders shall be limited to the purposes stated in the notice.

Section 8. The holders of a majority of the stock issued and outstanding and entitled to vote thereat, present in person or represented by proxy, shall constitute a quorum at all meetings of the stockholders for the transaction of business except as otherwise provided by statute or by the certificate of incorporation. If, however, such quorum shall not be present or represented at any meeting of the stockholders, the stockholders entitled to vote thereat, present in person or represented by proxy, shall have power to adjourn the meeting from time to time, without notice other than announcement at the meeting, until a quorum shall be present or represented. At such adjourned meeting at which a quorum shall be present or represented any business may be transacted which might have been transacted at the meeting as originally notified. If the adjournment is for more than thirty days, or if after the adjournment a new record date is fixed for the adjourned meeting, a notice of the adjourned meeting shall be given to each stockholder of record entitled to vote at the meeting.

Section 9. When a quorum is present at any meeting, the vote of the holders of a majority of the stock having voting power present in person or represented by proxy shall decide any question brought before such meeting, unless the question is one upon which by express

provision of the statutes or of the certificate of incorporation, a different vote is required in which case such express provision shall govern and control the decision of such question.

Section 10. Unless otherwise provided in the certificate of incorporation each stockholder shall at every meeting of the stockholders be entitled to one vote in person or by proxy for each share of the capital stock having voting power held by such stockholder, but no proxy shall be voted on after three years from its date, unless the proxy provides for a longer period.

Section 11. Any resolution in writing concerning action to be taken by the corporation, which resolution is approved and signed by all the directors, severally or collectively, whose number shall constitute at least a quorum for such action, shall have the same force and effect as if such action were authorized at a meeting of the board of directors duly called and held for that purpose, and such resolution, together with the director's written approval thereof shall be recorded by the secretary in the minute book of the corporation.

ARTICLE III

DIRECTORS

Section 1. The number of directors which shall constitute the whole board shall be not less than one nor more than five. The first board shall consist of one director. Thereafter, within the limits above specified, the number of directors shall be determined by resolution of the board of directors or by the stockholders at the annual meeting. The directors shall be elected at the annual meeting of the stockholders, except as provided in Section 2 of this Article, and each director elected shall hold office until his successor is elected and qualified. Directors need not be stockholders.

Section 2. Vacancies and newly created directorships resulting from any increase in the authorized number of directors may be filled by a majority of the directors then in office, though less than a quorum, or by a sole remaining director, and the directors so chosen shall hold office until the next annual election and until their successors are duly elected and shall qualify, unless sooner displaced. If there are no directors in office, then an election of directors may be held in the manner provided by statute. If, at the time of filling any vacancy or any newly created directorship, the directors then in office shall constitute less than a majority of the whole board (as constituted immediately prior to any such increase), the Court of Chancery may, upon application of any stockholder or stockholders holding at least ten percent of the total number of the shares at the time outstanding having the right to vote for such directors, summarily order an election to be held to fill any such vacancies or newly created directorships, or to replace the directors chosen by the directors then in office.

Section 3. Any vacancy in the board of directors by reason of death, resignation or other cause other than an increase in the number of directorships may be filled for the unexpired portion of the term by the concurring vote of a majority of the remaining directors in office, or by action of the sole remaining director in office, though such remaining directors constitute less than a quorum, though the number of directors at the meeting to fill such vacancy constitutes less than a quorum and though such majority is less than a quorum.

Section 4. The business of the corporation shall be managed by or under the direction of its board of directors which may exercise all such powers of the corporation and do all such lawful acts and things as are not by statute or by the certificate of incorporation or by these by-laws directed or required to be exercised or done by the stockholders.

MEETINGS OF THE BOARD OF DIRECTORS

Section 4. The board of directors of the corporation may hold meetings, both regular and special, either within or without the State of Delaware.

Section 5. The first meeting of each newly elected board of directors shall be held at such time and place as shall be fixed by the vote of the stockholders at the annual meeting and no notice of such meeting shall be necessary to the newly elected directors in order legally to constitute the meeting, provided a quorum shall be present. In the event of the failure of the stockholders to fix the time or place of such first meeting of the newly elected board of directors, or in the event such meeting is not held at the time and place so fixed by the stockholders, the meeting may be held at such time and place as shall be specified in a notice given as hereinafter provided for special meetings of the board of directors, or as shall be specified in a written waiver signed by all of the directors.

Section 6. Regular meetings of the board of directors may be held without notice at such time and at such place as shall from time to time be determined by the board.

Section 7. Special meetings of the board may be called by the president on one day's notice to each director, either personally or by mail or by telegram; special meetings shall be called by the president or secretary in like manner and on like notice on the written request of two directors unless the board consists of only one director; in which case special meetings shall be called by the president or secretary in like manner and on like notice on the written request of the sole director.

Section 8. At all meetings of the board a majority of the directors shall constitute a quorum for the transaction of business and the act of a majority of the directors present at any meeting at which there is a quorum shall be the act of the board of directors, except as may be otherwise specifically provided by statute or by the certificate of incorporation. If a quorum

shall not be present at any meeting of the board of directors the directors present thereat may adjourn the meeting from time to time, without notice other than announcement at the meeting, until a quorum shall be present.

Section 9. Unless otherwise restricted by the certificate of incorporation or these by-laws, any action required or permitted to be taken at any meeting of the board of directors or of any committee thereof may be taken without a meeting, if all members of the board or committee, as the case may be, consent thereto in writing, and the writing or writings are filed with the minutes of proceedings of the board or committee.

Section 10. Unless otherwise restricted by the certificate of incorporation or these by-laws, members of the board of directors, or any committee designated by the board of directors, may participate in a meeting of the board of directors, or any committee, by means of conference telephone or similar communications equipment by means of which all persons participating in the meeting can hear each other, and such participation in a meeting shall constitute presence in person at the meeting.

COMMITTEES OF DIRECTORS

Section 11. The board of directors may, by resolution passed by a majority of the whole board, designate one or more committees, each committee to consist of one or more of the directors of the corporation. The board may designate one or more directors as alternate members of any committee, who may replace any absent or disqualified member at any meeting of the committee.

Any such committee, to the extent provided in the resolution of the board of directors, shall have and may exercise all the powers and authority of the board of directors in the management of the business and affairs of the corporation, and may authorize the seal of the

corporation to be affixed to all papers which may require it; but no such committee shall have the power or authority in reference to amending the certificate of incorporation, (except that a committee may, to the extent authorized in the resolution or resolutions providing for the issuance of shares of stock adopted by the board of directors as provided in Section 151(a) fix any of the preferences or rights of such shares relating to dividends, redemption, dissolution, any distribution of assets of the corporation or the conversion into, or the exchange of such shares for, shares of any other class or classes or the same or any other series of the same or any other class or classes of stock of the corporation) adopting an agreement of merger or consolidation, recommending to the stockholders the sale, lease or exchange of all or substantially all of the corporation's property and assets, recommending to the stockholders a dissolution of the corporation or a revocation of a dissolution, or amending the by-laws of the corporation; and, unless the resolution or the certificate of incorporation expressly so provide, no such committee shall have the power or authority to declare a dividend or to authorize the issuance of stock or to adopt a certificate of ownership and merger. Such committee or committees shall have such name or names as may be determined from time to time by resolution adopted by the board of directors.

Section 12. Each committee shall keep regular minutes of its meetings and report the same to the board of directors when required.

COMPENSATION OF DIRECTORS

Section 13. The board of directors shall have authority to fix fees of directors, including reasonable allowance for expenses actually incurred in connection with their duties. Any directors receiving compensation under this section shall not be barred from serving the corporation in any other capacity and receiving reasonable compensation for such other services.

REMOVAL OF DIRECTORS

Section 14. Unless otherwise restricted by the certificate of incorporation or by law, any director or the entire board of directors may be removed, with or without cause, by the holders of a majority of shares entitled to vote at an election of directors.

ARTICLE IV

NOTICES

Section 1. Whenever, under the provisions of the statutes or of the certificate of incorporation or of these by-laws, notice is required to be given to any director or stockholder, it shall not be construed to mean personal notice, but such notice may be given in writing, by mail, addressed to such director or stockholder, at his address as it appears on the records of the corporation, with postage thereon prepaid, and such notice shall be deemed to be given at the time when the same shall be deposited in the United States mail. Notice to directors may also be given by telegram.

Section 2. Whenever any notice is required to be given under the provisions of the statutes or of the certificate of incorporation or of these by-laws, a waiver thereof in writing, signed by the person or persons entitled to said notice, whether before or after the time stated therein, shall be deemed equivalent thereto.

ARTICLE V

OFFICERS

Section 1. The officers of the corporation shall be chosen by the board of directors and shall be a president, a vice-president, a secretary and a treasurer. The board of directors may also choose additional vice-presidents, and one or more assistant secretaries and

assistant treasurers. Any number of offices may be held by the same person, unless the certificate of incorporation or these by-laws otherwise provide.

Section 2. The board of directors at its first meeting after each annual meeting of stockholders shall choose a president, one or more vice-presidents, a secretary and a treasurer.

Section 3. The board of directors may appoint such other officers and agents as it shall deem necessary who shall hold their offices for such terms and shall exercise such powers and perform such duties as shall be determined from time to time by the board.

Section 4. The salaries of all officers and agents of the corporation shall be fixed by the board of directors.

Section 5. The officers of the corporation shall hold office until their successors are chosen and qualify. Any officer elected or appointed by the board of directors may be removed at any time by the affirmative vote of a majority of the board of directors. Any vacancy occurring in any office of the corporation shall be filled by the board of directors.

THE PRESIDENT

Section 6. The president shall be the chief executive officer of the corporation, shall preside at all meetings of the stockholders and the board of directors, shall have general and active management of the business of the corporation and shall see that all orders and resolutions of the board of directors are carried into effect.

Section 7. He shall execute bonds, mortgages and other contracts requiring a seal, under the seal of the corporation, except where required or permitted by law to be otherwise signed and executed and except where the signing and execution thereof shall be expressly delegated by the board of directors to some other officer or agent of the corporation.

THE VICE-PRESIDENTS

Section 8. In the absence of the president or in the event of his inability or refusal to act, the vice-president (or in the event there be more than one vice-president, the vice-presidents in the order designated by the directors, or in the absence of any designation, then in the order of their election) shall perform the duties of the president, and when so acting, shall have all the powers of and be subject to all the restrictions upon the president. The vice-presidents shall perform such other duties and have such other powers as the board of directors may from time to time prescribe.

THE SECRETARY AND ASSISTANT SECRETARY

Section 9. The secretary shall attend all meetings of the board of directors and all meetings of the stockholders and record all the proceedings of the meetings of the corporation and of the board of directors in a book to be kept for that purpose and shall perform like duties for the standing committees when required. He shall give, or cause to be given, notice of all meetings of the stockholders and special meetings of the board of directors, and shall perform such other duties as may be prescribed by the board of directors or president, under whose supervision he shall be. He shall have custody of the corporate seal of the corporation and he, or an assistant secretary, shall have authority to affix the same to any instrument requiring it and when so affixed, it may be attested by his signature or by the signature of such assistant secretary. The board of directors may give general authority to any other officer to affix the seal of the corporation and to attest the affixing by his signature.

Section 10. The assistant secretary, or if there be more than one, the assistant secretaries in the order determined by the board of directors (or if there be no such determination, then in the order of their election) shall, in the absence of the secretary or in the

event of his inability or refusal to act, perform the duties and exercise the powers of the secretary and shall perform such other duties and have such other powers as the board of directors may from time to time prescribe.

THE TREASURER AND ASSISTANT TREASURERS

Section 11. The treasurer shall have the custody of the corporate funds and securities and shall keep full and accurate accounts of receipts and disbursements in books belonging to the corporation and shall deposit all moneys and other valuable effects in the name and to the credit of the corporation in such depositories as may be designated by the board of directors.

Section 12. He shall disburse the funds of the corporation as may be ordered by the board of directors, taking proper vouchers for such disbursements, and shall render to the president and the board of directors, at its regular meetings, or when the board of directors so requires, an account of all his transactions as treasurer and of the financial condition of the corporation.

Section 13. If required by the board of directors, he shall give the corporation a bond (which shall be renewed every six years) in such sum and with such surety or sureties as shall be satisfactory to the board of directors for the faithful performance of the duties of his office and for the restoration to the corporation, in case of his death, resignation, retirement or removal from office, of all books, papers, vouchers, money and other property of whatever kind in his possession or under his control belonging to the corporation.

Section 14. The assistant treasurer, or if there shall be more than one, the assistant treasurers in the order determined by the board of directors (or if there be no such determination, then in the order of their election) shall, in the absence of the treasurer or in the

event of his inability or refusal to act, perform the duties and exercise the powers of the treasurer and shall perform such other duties and have such other powers as the board of directors may from time to time prescribe.

ARTICLE VI

CERTIFICATES FOR SHARES

Section 1. The shares of the corporation shall be represented by a certificate or shall be uncertificated. Certificates shall be signed by, or in the name of the corporation by, the chairman or vice-chairman of the board of directors, or the president or a vice-president and the treasurer or an assistant treasurer, or the secretary or an assistant secretary of the corporation.

Within a reasonable time after the issuance or transfer of uncertificated stock, the corporation shall send to the registered owner thereof a written notice containing the information required to be set forth or stated on certificates pursuant to Sections 151, 156, 202(a) or 218(a) or a statement that the corporation will furnish without charge to each stockholder who so requests the powers, designations, preferences and relative participating, optional or other special rights of each class of stock or series thereof and the qualifications, limitations or restrictions of such preferences and/or rights.

Section 2. Any of or all the signatures on a certificate may be facsimile. In case any officer, transfer agent or registrar who has signed or whose facsimile signature has been placed upon a certificate shall have ceased to be such officer, transfer agent or registrar before such certificate is issued, it may be issued by the corporation with the same effect as if he were such officer, transfer agent or registrar at the date of issue.

LOST CERTIFICATES

Section 3. The board of directors may direct a new certificate or certificates or uncertificated shares to be issued in place of any certificate or certificates theretofore issued by the corporation alleged to have been lost, stolen or destroyed, upon the making of an affidavit of that fact by the person claiming the certificate of stock to be lost, stolen or destroyed. When authorizing such issue of a new certificate or certificates or uncertificated shares, the board of directors may, in its discretion and as a condition precedent to the issuance thereof, require the owner of such lost, stolen or destroyed certificate or certificates, or his legal representative, to advertise the same in such manner as it shall require and/or to give the corporation a bond in such sum as it may direct as indemnity against any claim that may be made against the corporation with respect to the certificate alleged to have been lost, stolen or destroyed.

TRANSFER OF STOCK

Section 4. Upon surrender to the corporation or the transfer agent of the corporation of a certificate for shares duly endorsed or accompanied by proper evidence of succession, assignation or authority to transfer, it shall be the duty of the corporation to issue a new certificate to the person entitled thereto, cancel the old certificate and record the transaction upon its books. Upon receipt of proper transfer instructions from the registered owner of uncertificated shares such uncertificated shares shall be cancelled and issuance of new equivalent uncertificated shares or certificated shares shall be made to the person entitled thereto and the transaction shall be recorded upon the books of the corporation.

FIXING RECORD DATE

Section 5. In order that the corporation may determine the stockholders entitled to notice of or to vote at any meeting of stockholders or any adjournment thereof, or to express

consent to corporate action in writing without a meeting, or entitled to receive payment of any dividend or other distribution or allotment of any rights, or entitled to exercise any rights in respect of any change, conversion or exchange of stock or for the purpose of any other lawful action, the board of directors may fix, in advance, a record date, which shall not be more than sixty nor less than ten days before the date of such meeting, nor more than sixty days prior to any other action. A determination of stockholders of record entitled to notice of or to vote at a meeting of stockholders shall apply to any adjournment of the meeting: provided, however, that the board of directors may fix a new record date for the adjourned meeting.

REGISTERED STOCKHOLDERS

Section 6. The corporation shall be entitled to recognize the exclusive right of a person registered on its books as the owner of shares to receive dividends, and to vote as such owner, and to hold liable for calls and assessments a person registered on its books as the owner of shares, and shall not be bound to recognize any equitable or other claim to or interest in such share or shares on the part of any other person, whether or not it shall have express or other notice thereof, except as otherwise provided by the laws of Delaware.

ARTICLE VII

GENERAL PROVISIONS

DIVIDENDS

Section 1. Dividends upon the capital stock of the corporation, subject to the provisions of the certificate of incorporation, if any, may be declared by the board of directors at any regular or special meeting, pursuant to law. Dividends may be paid in cash, in property, or in shares of the capital stock, subject to the provisions of the certificate of incorporation.

Section 2. Before payment of any dividend, there may be set aside out of any funds of the corporation available for dividends such sum or sums as the directors from time to time, in their absolute discretion, think proper as a reserve or reserves to meet contingencies, or for equalizing dividends, or for repairing or maintaining any property of the corporation, or for such other purpose as the directors shall think conducive to the interest of the corporation, and the directors may modify or abolish any such reserve in the manner in which it was created.

ANNUAL STATEMENT

Section 3. The board of directors shall present at each annual meeting, and at any special meeting of the stockholders when called for by vote of the stockholders, a full and clear statement of the business and condition of the corporation.

CHECKS

Section 4. All checks or demands for money and notes of the corporation shall be signed by such officer or officers or such other person or persons as the board of directors may from time to time designate.

FISCAL YEAR

Section 5. The fiscal year of the corporation shall be fixed by resolution of the board of directors.

SEAL

Section 6. The corporate seal shall have inscribed thereon the name of the corporation, the year of its organization and the words "Corporate Seal, Delaware". The seal may be used by causing it or a facsimile thereof to be impressed or affixed or reproduced or otherwise.

INDEMNIFICATION

Section 7. The corporation shall indemnify its officers, directors, employees and agents to the extent permitted by the General Corporation Law of Delaware.

ARTICLE VIII

AMENDMENTS

Section 1. These by-laws may be altered, amended or repealed or new by-laws may be adopted by the stockholders or by the board of directors, when such power is conferred upon the board of directors by the certificate of incorporation at any regular meeting of the stockholders or of the board of directors or at any special meeting of the stockholders or of the board of directors if notice of such alteration, amendment, repeal or adoption of new by-laws be contained in the notice of such special meeting. If the power to adopt, amend or repeal by-laws is conferred upon the board of directors by the certificate of incorporation it shall not divest or limit the power of the stockholders to adopt, amend or repeal by-laws.

Exhibit 3.89

CERTIFICATE OF INCORPORATION
STOCK CORPORATION

STATE OF CONNECTICUT
SECRETARY OF THE STATE

The undersigned incorporator(s) hereby form(s) a corporation under the Stock Corporation Act of the State of Connecticut:

1. The name of the corporation is Ship Analytics USA, Inc.

2. The nature of the business to be transacted, or the purposes to be promoted or carried out by the corporation, are as follows:

To provide management and technological advice and services to the government particularly for simulation systems and trainers.

To carry on and conduct a business to perform analysis, research, development, design, engineering for evaluation, development and manufacture of marine and ship systems and related products which inherently involve scientific and computer based technology in their design, manufacture and operation.

To acquire, and pay for in cash, stock or bonds of this corporation or otherwise, the good will, rights, assets and property, and to undertake or assume the whole or any part of the obligations or liabilities of any person, firm, association or corporation.

To acquire, hold, use, sell, assign, lease, grant licenses in respect of, mortgage or otherwise dispose of letters patent of the United States or any foreign country, patents rights, licenses and privileges, inventions, improvements, and processes, copy-rights, trade-marks and trade names, relating to or useful in connection with any business of this corporation.

To acquire by purchase, subscription or otherwise, and to receive, hold, own, guarantee, sell, assign, exchange, transfer, mortgage, pledge or otherwise dispose of or deal in and with any of the shares of capital stock, script, warrants, rights, bonds, debentures, notes, trust receipts, and other securities, obligations, chosen in action and evidences of indebtedness or interest issued or created by any corporations, joint stock companies, syndicates, associations, firms, trusts or persons, public or private, or by the government.

To enter into, make and perform contracts of every kind and description with any person, firm, association, corporation, municipality, county, state, body politic or government or colony or dependency thereof.

To borrow or raise moneys for any of the purposes of the corporation and, from time to time without limit as to amount, to draw, make, accept, endorse, execute and issue promissory notes, drafts, bills of exchange, warrants, bonds, debentures and other negotiable or non-negotiable instruments and evidence of indebtedness, and to secure the payment of any thereof and of the interest thereon by mortgage upon or pledge, conveyance or assignment in trust of the whole or any part of the property of the corporation, whether at the time owned or thereafter acquired, and to sell, pledge

or otherwise dispose of such bonds or other obligations of the corporation for its corporate purposes.

To purchase, hold, sell, and transfer the shares of its own capital stock; provided it shall not use its funds or property for the purchase of its own shares of capital stock when such use would cause any impairment of its capital except as otherwise permitted by law, and provided further that shares of its own capital stock belonging to it shall not be voted upon directly or indirectly.

To have one or more offices, to carry on all or any of its operations and business and without restriction or limit as to amount to purchase or otherwise acquire, hold, own, mortgage, sell, convey or otherwise dispose of, real and personal property of every class, and description in any of the states, and districts, territories or colonies of the United States, and in any and all foreign countries, subject to the laws of such state, district, territory, colony or country.

In general, to carry on any other business in connection with the foregoing, and to have and exercise all the powers conferred by the laws of Connecticut upon corporations formed under the General Corporation Laws of the State of Connecticut, and to do any or all of the things hereinbefore set forth, to the same extent as natural persons might or could do.

The objects and purposes specified in the foregoing clauses shall except where otherwise expressed, be in no way limited or restricted by reference to, or inference from the terms of any other clause in this certificate of incorporation, but the objects and purposes specified in each of the foregoing clauses of this article shall be regarded as independent objects and purposes.

3. The designation of each class of shares, the authorized number of shares of each such class, and the par value (if any) of each share thereof are as follows:

The authorized capital stock shall consist of twenty thousand shares of common stock without par value.

4. The terms, limitations and relative rights and preferences of each class of shares and series thereof (if any), or an express grant of authority to the board of directors pursuant to Section 33-341,1959 Supp. Conn. G.S., are as follows:

a. All shares are voting common shares without restriction or priority except that preemptive rights are denied to all such shares.

b. The Board of Directors are hereby expressly granted the rights to exercise the authority related to the issuance of shares as specified by Section 33-341 of the General Statutes of the State of Connecticut, as amended to the date of this Certificate.

5. The minimum amount of stated capital with which the corporation shall commence business is

One Thousand ($1,000.00) dollars. (Not less than one thousand dollars)

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6. (7) - Other provisions

6. The Corporation shall fully indemnify its directors, officers and employees against all judgements, fines and penalties and expenses as permitted and authorized by the State of Connecticut statutes as amended.

Dated this 24th day of March , 19 93

I/We hereby declare, under the penalties of false statement, that the statements made in the foregoing certificate are true.

This certificate of incorporation must be signed by each incorporator.

NAME OF INCORPORATOR (Print or Type)	NAME OF INCORPORATOR (Print or Type)	NAME OF INCORPORATOR (Print or Type)
Alan J. Pesch	2.	3.
	SIGNED (Incorporator)	SIGNED (Incorporator)
1. /s/ Alan J. Pesch	2.	3.
NAME OF INCORPORATOR (Print or Type)	NAME OF INCORPORATOR (Print or Type)	NAME OF INCORPORATOR (Print or Type)
4.	5.	6.
SIGNED (Incorporator)	SIGNED (Incorporator)	SIGNED (Incorporator)
4.	5.	6.

FOR OFFICE USE ONLY

Rec: CC; GS:
/s/ Francis L. Crowley
Francis L. Crowley
Ship Analytics, Inc.
Routes 184 & 2
North Stonington Professional Center

Filed State of Connecticut March 30, 1993

SECRETARY OF THE STATE
30 TRINITY STREET
HARTFORD, CT 06106

Name of Corporation: COMPLETE ALL BLANKS

Ship Analytics USA, Inc.

The above corporation appoints as its statutory agent for service, one of the following:

Name of Natural Person Who is Resident of Connecticut	Business Address Residence Address	Zip Code Zip Code
Name of Connecticut Corporation Ship Analytics, Inc.	Address of Principal Office in Conn. (If none, enter address of appointee's statutory agent for service) North Stonington Professional Center Routes 2 & 184, N. Stonington, CT 06359	
Name of Corporation (Not organized under the Laws of Conn.*)	Address of Principal Office in Conn. (If none, enter "Secretary of the State of Conn.")	

*Which has procured a Certificate of Authority to transact business or conduct affairs in this state.

AUTHORIZATION

	Name of Incorporator (Print or Type)	Signed (Incorporator)	Date
ORIGINAL APPOINTMENT (MUST BE SIGNED BY A MAJORITY OF INCORPORATORS)	Alan J. Pesch	/s/ Alan J. Pesch	24 March 1993
	Name of Incorporator (Print or Type)	Signed (Incorporator)	
	Name of Incorporator (Print or Type)	Signed (Incorporator)	

SUBSEQUENT APPOINTMENT	Name of President, Vice President or Secretary	Date
	Signed (President, or Vice President or Secretary)	

Acceptance: Name of Statutory Agent for Service (Print or Type)		Signed (Statutory Agent for Service)
Ship Analytics, Inc.		/s/ Francis L. Crowley
For Official Use Only	Rec; CC: -	Francis L. Crowley, Secretary
	-	rof. Ctr.
	-	ss for mailing receipt

SECRETARY OF THE STATE
ORGANIZATION & FIRST BIENNIAL REPORT
(DOMESTIC STOCK CORPORATION)

NOTE: Filing Fee $125.00. This report must be filed within 30 days after the date of organization meeting as shown in item 2 below. After 30 days, the late filing fee is an additional $25.00. ALL BLANKS MUST BE COMPLETED.

1. Name of Corporation

Ship Analytics USA, Inc.

2. Date of Organization Meeting

April 6, 1993

3. Address of Principal Office in Connecticut (if none so state)

Route 184, North Stonington, CT 06359

4. OFFICERS: (NO POST OFFICE ADDRESSES)

NAME	TITLE	RESIDENCE ADDRESS	BUSINESS ADDRESS
Alan James Pesch	Chairman & President	Wyassup Road North Stonington, CT 06359	Route 184 North Stoningtong, CT 06359
Alan James Pesch	Treasurer	Wyassup Road North Stonington, CT 06359	Route 184 North Stoningtong, CT 06359
Janet Fiore	Secretary	255 Grindstone Hill Road North Stonington, CT 06359	Route 184 North Stoningtong, CT 06359

5. DIRECTORS: (NO POST OFFICE ADDRESSES)

NAME	TITLE	RESIDENCE ADDRESS	BUSINESS ADDRESS
Alan James Pesch	Director	Wyassup Road North Stonington, CT 06359	Route 184 North Stonington, CT 06359

I HEREBY DECLARE UNDER THE PENALTIES OF FALSE STATEMENT THAT THE STATEMENTS MADE IN THE FOREGOING CERTIFICATE ARE TRUE:

6. Date	7. Officer's Signature - Janet Fiore	8. Title
April 12, 1993	/s/ Janet Fiore	Secretary

FOR OFFICIAL USE ONLY

FILED

STATE OF CONNECTICUT

APR 21, 1993

REC CC GS Sent to: Janet Fiore

Ship Analytics, Inc.

Route 184

North Stonington, CT 06359

Exhibit 3.90

BY-LAWS

of

SHIP ANALYTICS USA, INC.

ARTICLE I. OFFICE(S)

The principal office of the Corporation shall be at such place within the State of Connecticut as the Directors shall from time to time designate. The Corporation may have such other offices within or without the State of Connecticut as the Directors may from time to time determine.

ARTICLE II. MEETINGS OF STOCKHOLDERS

Section 1. Place of Meetings. All meetings of the stockholders shall be held at the principal office or place of business of the Corporation, or at such place within or without the State of Connecticut as from time to time may be designated by the By-Laws or by resolution of the Board of Directors.

Section 2. Annual Meetings. (a) The annual meetings of the stockholders shall be held on the second Monday in the month of September or on such day other than a legal holiday in the month of September in each year and at such time and place as may be designated by the Board of Directors. Such annual meeting shall be held for the election of Directors and for the transaction of such other business as may properly come before such meeting.

(b) If the election of Directors shall not be held on the day here designated for any annual meeting, or at any adjournment of such meeting, the Board of Directors shall call a special meeting of the stockholders as soon as conveniently possible thereafter. At such meeting, the election of Directors shall take place, and such election of any other business transacted thereat shall have the same force and effect as at an annual meeting duly called and held.

(c) No change in the time or place for a meeting for the election of Directors shall be made within seven (7) days preceding the day on which the election is to be held. Written notice of any such change shall be given each stockholder at least seven (7) days before the election is held, either in person or by letter mailed to him at the address last shown on the books of the Corporation.

(d) In the event the annual meeting is not held at the time prescribed in Article II, Section 2(a) above, and if the Board of Directors shall not call a special meeting as prescribed in Article II, Section 2(b) above within one month after the date prescribed for the annual meeting, then any stockholder may call such meeting, and at such meeting the stockholders may elect the Directors and transact other business with the same force and effect as at an annual meeting duly called and held.

Section 3. Notice of Meeting. A notice setting out the day, hour and place of each meeting of stockholders shall be mailed, postage prepaid, to each stockholder of record, at his last known post office address as the same appears on the stock records of the Corporation, or said notice

shall be left with each such stockholder at his residence or usual place of business, not less than seven (7) days nor more than fifty (50) days before such annual meeting.

Section 4. Adjournment of Stockholders' Meeting. If a quorum is not present at any meeting of the stockholders, the holders of a majority of the voting power of the shares entitled to vote present, in person or by proxy, may adjourn the meeting to such future time as shall be agreed upon by them, and notice of such adjournment shall be given to the stockholders not present or represented at the meeting.

Section 5. Special Meetings. Special meetings of the stockholders may be called at any time by the President or by resolution of the Board of Directors and shall be called by the President upon the request of the majority of the elected Directors or upon the written request of one (1) or more stockholders holding in the aggregate at least one-tenth (1/10) of the total number of shares entitled to vote at such meeting. The President or Secretary or the Directors calling the meeting shall mail a notice of such meeting to each stockholder of record not less than seven (7) days nor more than fifty (50) days before such meeting, and such notice shall state the day, hour and place of such meeting and the purpose or purposes thereof.

Section 6. Waiver of Notice. Notice of any stockholders' meeting may be waived in writing by any stockholder either before or after the time stated therein and, if any person present at a stockholders' meeting does not protest, prior to or at the commencement of the meeting, the lack of proper notice, such person shall be deemed to have waived notice of such meeting. Attendance at a meeting for the express purpose of objecting that the meeting was not lawfully called or convened shall not, however, constitute a waiver of notice. Except where otherwise required by law or by these By-Laws, notice need not be given of any adjourned meeting of the stockholders.

Section 7. Shareholders' Consent. Any resolution in writing approved and signed by all the stockholders or their proxies or attorneys shall have the same force and effect as if it were a vote passed by all the stockholders at a meeting duly called and held for that purpose. In addition, actions taken at any meeting of stockholders however called and with whatever notice, if any, are as valid as if taken at a meeting duly called and held on notice, if:

(a) All stockholders entitled to vote were present in person or by proxy and no objection to holding the meeting was made by any stockholder; or

(b) A quorum was present, either in person or by proxy, and no objection to holding the meeting was made by any stockholder entitled to vote so present, and it, either before or after the meeting, each of the persons entitled to vote, not present in person or by proxy, signs a written waiver of notice, or a consent to the holding of the meeting, or an approval of the action taken as shown by the minutes thereof. All such resolutions, waivers, consents and approvals shall be recorded in the minute book of the Corporation by the Secretary.

Section 8. Quorum. The holders of a majority of the issued and outstanding stock entitled to vote, either in person or by proxy, shall constitute a quorum for the transaction of business at any meeting of the stockholders, except that if no quorum be present, the holders of a majority of the stock entitled to vote present in person or by proxy may adjourn the meeting to such time as they

may determine and notice of such adjournment shall be given to the stockholders not present or represented at such meeting.

Section 9. Proxies. At all meetings of the stockholders, any stockholder entitled to vote may vote either in person or by proxy. Such proxy shall be in writing, signed and dated.

Section 10. Number of Votes of Each Stockholder. Each outstanding share, regardless of class, shall be entitled to one vote on each matter submitted to a vote at a meeting of shareholders unless, and except to the extent that, voting rights or shares of any class are increased, limited or denied by the Certificate of Incorporation.

Section 11. Voting. In voting on any question on which a vote by ballot is required by law or is demanded by any stockholder, the voting shall be by ballot; on all other questions it may be viva voce. Cumulative voting permitted by Sec. 33-325 of the Stock Corporation Act is not authorized by the Certificate of Incorporation and is denied by these By-Laws.

Section 12. Closing of Transfer Books; Record Date. (a) In order to determine the holders of record of the Corporation's stock who are entitled to notice of meetings, to vote at a meeting or adjournment thereof, and to receive payment of any dividend or to make a determination of the stockholders of record for any other proper purpose, the Board of Directors of the Corporation may order that the Stock Transfer Books be closed for a period not to exceed seventy (70) days. If the purpose of such closing is to determine who is entitled to notice of a meeting and to vote at such meeting, the Stock Transfer Books shall be closed for at least ten (10) days preceding such meeting.

(b) In lieu of closing the Stock Transfer Books, the Board of Directors may fix a date as the record date for such determination of stockholders. Such date shall be no more than seventy (70) days prior to the date of the action which requires such determination, nor, in the case of a stockholders' meeting, shall it be less than ten (10) days in advance of such meeting.

(c) If the Stock Transfer Books are not closed and no record date is fixed for such determination of the stockholders of record, the date of which notice of the meeting is mailed, or on which the resolution of the Board of Directors declaring a dividend is adopted, as the case may be, shall be the record date for such determination of stockholders.

(d) When a determination of stockholders entitled to vote at any meeting has been made as provided in this section, such determination shall apply to any adjournment of such meeting, except when the determination has been made by the closing of the Stock Transfer Books and the stated period of closing has expired.

Section 13. List of Stockholders. (a) A complete list of the stockholders of the Corporation entitled to vote at the ensuing meeting, arranged in alphabetical order, and showing the address of, and number of shares owned by, each stockholder shall be prepared by the Secretary, or other officer of the Corporation having charge of the Stock Transfer Books. This list shall be kept on file for a period of at least seven (7) days prior to the meeting at the registered office of the Corporation in the State of Connecticut and shall be subject to inspection during the usual business hours of such period by any stockholder. This list shall also be produced at the meeting and shall be subject to inspection by any stockholder at any time during the meeting.

(b) The original Stock Transfer Books shall be prima facie evidence as to who are the stockholders entitled to examine such list or to vote at any meeting of the stockholders.

(c) Failure to comply with the requirements of this section shall not affect the validity of any action taken at such meeting of the stockholders.

Section 14. Presiding Officer. Meetings of the stockholders shall be presided over by the Chairman of the Board, or, if he is not present, by the President, or if he is not present, by a Vice President, or if neither the Chairman of the Board nor the President nor the Vice President is present, by a chairman to be chosen unanimously by the stockholders entitled to vote at the meeting who are present in person or by proxy. The Secretary of the Corporation, or, in his/her absence, an Assistant Secretary, shall act as secretary of every meeting, but if neither the secretary nor an Assistant Secretary is present, the meeting shall choose any person present to act as secretary of the meeting.

ARTICLE III. DIRECTORS

Section 1. Number, Election and Term of Office Qualifications. (a) The property, business and affairs of the Corporation shall be managed by a Board of Directors composed of not less than three (3) except that where all the issued and outstanding shares are owned beneficially and of record by less than three (3) shareholders the number of Directorships may be less than three (3) but not less than the number of shareholders nor more than five (5) directorships. The actual number of directorships shall be fixed from time to time as the Board of Directors may determine pursuant to the requirements and limitations Sec. 33-314 of the Connecticut Stock Corporation Act. However, the number of directorships for the Corporation's first Board of Directors shall be determined by the incorporators and subscribers of stocks in accord with the provisions of these By-Laws and the law. The number of directors may be increased or decreased from time to time by an amendment to these By-Laws. Any increased number of directors shall be elected unanimously by the stockholders at the next regular annual meeting or at a special meeting called for that purpose. The number of directors shall never be less than three (3) except as permitted by Sec. 33-314 of the Connecticut Stock Corporation Act as amended.

(b) Directors shall be elected by the stockholders at the annual meeting or at a special meeting called for that purpose.

(c) Each Director shall hold office for a one year term and until his successor has been elected and qualified except that a Director shall cease to be in office upon his death, resignation, lawful removal or court order decreeing that he is no longer a Director in office.

(d) Directors need not be stockholders of the corporation nor a resident of the State of Connecticut.

Section 2. Vacancies. Any vacancy in the Board of Directors by reason of death, resignation or other cause other than an increase in the number of directorships may be filled for the unexpired portion of the term by the concurring vote of a majority of the remaining Directors in office, or by action of the sole remaining Director in office, though such remaining directors constitute less than a quorum, though the number of directors at the meeting to fill such vacancy constitutes less than a quorum and though such majority is less than a quorum.

Section 3. Powers of Directors. The Directors shall have the general management and control of the property, business and affairs of the Corporation and may exercise all the powers that may be exercised or performed by the Corporation under the statutes, its Certification of Incorporation, and these By-Laws.

Section 4. Place of Meeting. the Directors may hold their meetings at such place or places within or without the State of Connecticut as the Board may from time to time determine.

Section 5. Meetings. Regular meetings of the Board of Directors shall be held at such times as are fixed from time to time by resolution of the Board. Special meetings may be held at any time upon call of the Chairman of the Board, President or a Vice President, or the majority of elected directors, upon written or telegraphic notice deposited in the U.S. mail or delivered to the telegraph company at least three (3) days prior to the day of the meeting. A meeting of the Board of Directors may be held without notice immediately following the annual meeting of the stockholders. Notice need not be given of regular meetings of the Board of Directors held at times fixed by resolution of the Board of Directors nor need notice be given of adjourned meetings. Meetings may be held at any time without notice if all the directors are present, or if, before the meeting, those not present waive such notice in writing. Notice of a meeting of the Board of Directors need not state the purpose of, nor the business to be transacted, at such meeting.

Section 6. Directors Consent. Any resolution in writing concerning action to be taken by the Corporation, which resolution is approved and signed by all the Directors, severally or collectively, whose number shall constitute at least a quorum for such action, shall have the same force and effect as if such action were authorized at a meeting of the Board of Directors duly called and held for that purpose, and such resolution, together with the Director's written approval thereof shall be recorded by the Secretary in the minute book of the Corporation.

Section 7. Quorum. A majority of the elected directorships shall constitute a quorum for the transaction of business at all meetings of the Board of Directors. If, at any meeting of the Board of Directors, there shall be less than a quorum present, a majority of those present may adjourn the meeting, without further notice, from time to time until a quorum shall have been obtained. The act of a majority of the Directors present at a meeting at which a quorum is present at the time of the act shall be the act of the Board of Directors.

Section 8. Compensation of Directors. The Board of Directors shall have authority to fix fees of Directors, including reasonable allowance for expenses actually incurred in connection with their duties. Any director receiving compensation under this section shall not be barred from serving the Corporation in any other capacity and receiving reasonable compensation for such other services.

Section 9. Indemnification. (a) The Corporation shall indemnify each of its directors and officers, whether or not then in office (and his executor, administrator and heirs), against all reasonable expenses actually and necessarily incurred by him in connection with the defense of any litigation to which he may have been made a party because he is or was a director or officer of the Corporation. He shall have no right to reimbursement, however, in relation to matters as to which he has been adjudged liable to the corporation for negligence or misconduct in the

performance of his duties. The right to indemnity for expenses shall also apply to the expenses of suits which are compromised or settled if the court having jurisdiction of the matter shall approve such settlement.

(b) The foregoing right of indemnification shall be in addition to, and not exclusive of, all other rights to which such Director or Officer may be entitled and specifically the rights granted by Section 33-320(a) of the State of Connecticut Statutes.

Section 10. Committees. (a) The Board of Directors, by a resolution or resolutions adopted by a majority of the members of the whole Board, may appoint an Executive Committee and such other committees as it may deem appropriate. Each such committee shall consist of at least two (2) members of the Board of Directors. Each committee shall have and may exercise such powers as shall be conferred or authorized by the resolution appointing it. A majority of any such committee may determine its action and may fix the time and place of its meetings, unless provided otherwise by the Board of Directors. The Board of Directors shall have the power at any time to fill vacancies in, to change the size or membership of, and to discharge any such committee.

(b) Each such committee shall keep a written record of its acts and proceedings and shall submit such record to the Board of Directors at each regular meeting thereof and at such other times as requested by the Board of Directors. Failure to submit such record, or failure of the Board to approve any action indicated therein will not, however, invalidate such action to the extent it has been carried out by the Corporation prior to the time the record of such action was, or should have been, submitted to the Board of Directors as herein provided.

Section 11. Dividends. Subject always to the provisions of the law and the Articles of Incorporation, the Board of Directors shall have full power to determine whether any, and, if so, what part, of the funds legally available for the payment of dividends shall be declared in dividends and paid to the stockholders of the Corporation. The Board of Directors may fix a sum which may be set aside or reserved over and above the paid-in capital of the Corporation for working capital or as a reserve for any proper purpose, and from time to time may increase, diminish and vary such fund in the Board's absolute judgment and discretion.

ARTICLE IV. OFFICERS

Section 1. Number. The officers of the Corporation shall be a Chairman of the Board, a President, one or more Vice-Presidents, a Treasurer, a Secretary, and one or more Assistant Secretaries. In addition, there may be such subordinate officers as the Board of Directors may deem necessary. Any person may hold two or more offices except that no person shall hold the offices of President and Secretary simultaneously.

Section 2. Term of Office. The principal officers shall be chosen annually by the Board of Directors at the first meeting of the Board following the stockholders' annual meeting, or as soon thereafter as is conveniently possible. Subordinate officers may be elected from time to time. Each officer shall serve until his successor shall have been chosen and qualified, or until his death, resignation or removal.

Section 3. Removal. Any officer may be removed from office, with or without cause, at any time by the affirmative vote of a majority of the Board of Directors then in office. Such removal shall not prejudice the contract rights, if any, of the person so removed nor such removal violate the terms of the Stockholder's Agreement.

Section 4. Vacancies. Any vacancy in an office from any cause may be filled for the unexpired portion of the term by the Board of Directors.

Section 5. Duties. (a) The Chairman of the Board shall preside at all meetings of the stockholders and the Board of Directors. Except where, by law, the signature of the President is required, the chairman shall possess the same power as the President to sign all certificates, contracts, and other instruments of the Corporation which may be authorized by the Board of Directors.

(b) The President, in the absence of the Chairman of the Board, shall preside at all meetings of the stockholders and the Board of Directors. He shall have general supervision of the affairs of the Corporation, shall sign or countersign all certificates, contracts or other instruments of the Corporation as authorized by the Board of Directors, shall make reports to the Board of Directors and stockholders, and shall perform such other duties as are incident to his office or are properly required of him by the Board of Directors.

(c) The Vice-Presidents, in the order designated by the Board of Directors, shall exercise the functions of the President during the absence or disability of the President. Each Vice-President shall have such other duties as are assigned to him from time to time by the Board of Directors.

(d) The Secretary and the Treasurer shall perform such duties as are incident to their offices, or are properly required of them by the Board of Directors, or are assigned to them by the Articles of Incorporation or these By-Laws. The Assistant Secretaries, in the order of their seniority, shall, in the absence of the Secretary, perform the duties, and exercise the powers of the Secretary, and shall perform such other duties as may be assigned by the Board of Directors.

(e) Other subordinate officers appointed by the Board of Directors shall exercise such powers and perform such duties as may be delegated to them by the resolutions appointing them, or by subsequent resolutions adopted from time to time.

(f) In case of the absence or disability of any officer of the Corporation and of any person hereby authorized to act in his place during such period of absence or disability, the Board of Directors may from time to time delegate the powers and duties of such officer to any other officer, or any director, or any other person whom it may select.

Section 6. Salaries. The salaries of all officers of the Corporation shall be fixed by the Board of Directors. No officer shall be ineligible to receive such salary by reason of the fact that he is also a Director of the Corporation and receiving compensation therefore.

ARTICLE V. CERTIFICATES OF STOCK

Section 1. Form. (a) The interest of each stockholder of the Corporation shall be evidenced by certificates for shares of stock, certifying the number of shares represented thereby and in such form not inconsistent with the Articles of Incorporation as the Board of Directors may from time to time prescribe.

(b) The certificates of stock shall be signed by the President or a Vice-President and by the Secretary or an Assistant Secretary or the Treasurer, and sealed with the seal of the Corporation. Such seal may be a facsimile, engraved or printed. Where any certificate is manually signed by a transfer agent or a transfer clerk and by a registrar, the signatures of the President, Vice-President, Secretary, Assistant Secretary, or Treasurer upon such certificate may be facsimiles, engraved or printed. In case any officer who has signed or whose facsimile signature has been placed upon any certificate shall have ceased to be such before the certificate is issued it may be issued by the Corporation with the same effect as if such officer has not ceased to be such at the time of its issue.

Section 2. Subscriptions for Shares. Unless the subscription agreement provides otherwise, subscriptions for shares regardless of the time when they are made, shall be paid in full at such time, or in such installments and at such periods, as shall be specified by the Board of Directors. All calls for payments on subscriptions shall carry the same terms with regard to all shares of the same class.

Section 3. Transfers. (a) Transfers of shares of the capital stock of the Corporation shall be made only on the books of the Corporation by the registered owner thereof or by his duly authorized attorney, with a transfer clerk or transfer agent appointed as provided in Section 5 of this Article of the By-Laws, and on surrender of the certificate or certificates for such shares properly endorsed and with all taxes thereon paid.

(b) The person in whose name shares of stock stand on the books of the Corporation shall be deemed by the Corporation to be the owner thereof for all purposes. However, if any transfer of shares is made only for the purpose of furnishing collateral security, and such fact is made known to the Secretary of the Corporation, or to the Corporation transfer clerk or transfer agent, the entry of the transfer shall record such fact.

Section 4. Lost, Destroyed, or Stolen Certificates. No certificate for shares of stock in the corporation shall be issued in place of any certificate alleged to have been lost, destroyed, or stolen except on production of evidence, satisfactory to the Board of Directors, of such loss, destruction or theft, and, if the Board of Directors so requires, upon the furnishing of an indemnity bond in such amount (but not to exceed twice the value of the shares represented by the certificate) and with such terms and such surety as the Board of Directors may, in its discretion, require.

Section 5. Transfer Agent and Registrar. The Board of Directors may appoint one or more transfer agents or transfer clerks and one or more registrars, and may require all certificates for shares to bear the signature or signatures of any of them.

ARTICLE VI. ISSUANCE OF SHARES

Pursuant to Sections 33-341 and 33-348 of the State of Connecticut Statutes, the Board of Directors of the Corporation, by resolution, may determine the terms of issuance of shares of the Corporations' stock, and the consideration for issuance of such shares.

ARTICLE VII. CORPORATE ACTIONS

Section 1. Deposits. The Board of Directors shall select banks, trust companies, or other depositories in which all funds of the Corporation not otherwise employed shall, from time to time, be deposited to the credit of the Corporation.

Section 2. Voting Securities Held by the Corporation. Unless otherwise ordered by the Board of Directors, the Chairman of the Board of Directors and/or the President shall have full power and authority on behalf of the Corporation to attend and to act and to vote at any meeting of security holders of other corporations in which the Corporation may hold securities. At such meeting the Chairman of the Board and/or the President shall possess and may exercise any and all rights and powers incident to the ownership of such securities which the Corporation might have possessed and exercised if it had been present. The Board of Directors may, from time to time, confer like powers upon any other person or persons. The Board of Directors shall approve proxies for the chairman of the Board of Directors and/or President in accordance with the provisions of the Stockholders Agreement then in effect.

ARTICLE VIII. SEAL

The seal of this corporation shall have inscribed thereon the name of this Corporation, the word "Seal" and the word "Connecticut", and shall be in the custody of the Secretary.

ARTICLE IX. FISCAL YEAR

The fiscal year of the Corporation shall be from July 1st to June 30th.

ARTICLE X. AMENDMENT OF BY-LAWS

The Board of Directors shall have the power to amend, alter or repeal these By-Laws, and to adopt new By-Laws, from time to time, by an affirmative vote of a majority of the whole Board as then constituted, provided that notice of the proposal to make, alter, amend or repeal the By-Laws was included in the notice of the Directors meeting at which such action takes place. At the next stockholders meeting following any such action by the Board of Directors, the stockholders, by a unanimous vote of those present and entitled to vote thereat, shall have the power to alter or repeal By-Laws newly adopted by the Board of Directors, or to restore to their original status By-Laws which they may have altered or repealed, and the notice of such stockholders meeting shall include notice that the stockholders will be called on to ratify the action taken by the Board of Directors with regard to the By-Laws.

Exhibit 3.91

STATE OF FLORIDA

DEPARTMENT OF STATE

I certify the attached is a true and correct copy of the Amended and Restated Articles of Incorporation, as amended to date, for SYCOLEMAN CORPORATION, a corporation organized under the laws of the State of Florida, as shown by the records of this office.

The document number of this corporation is F02002.

Given under my hand and the
Great Seal of the State of Florida
At Tallahassee, the Capitol, this the
Thirteenth day of May, 2003

Glenda E. Hood
Secretary of State

GREAT SEAL OF THE STATE O F FLORIDA
IN GOD WE TRUST
CR2E022 (2-03)

ARTICLES OF AMENDMENT
TO
ARTICLES OF INCORPORATION
OF

Coleman Research Corporation

(present name)

Pursuant to the provisions of section 607.1006, Florida Statutes, this Florida profit corporation adopts the following articles of amendment to its articles of incorporation:

FIRST: Amendment(s) adopted: (indicate article number(s) being amended, added or deleted)

Article I is amended to read as follows:

"The name of this corporation is SYColeman Corporation".

SECOND: If an amendment provides for an exchange, reclassification or cancellation of issued shares, provisions for implementing the amendment if not contained in the amendment itself, are as follows:

THIRD: The date of each amendment's adoption: November 14th, 2002

FOURTH: Adoption of Amendment(s) (CHECK ONE)

[ ] The amendment(s) was/were approved by the shareholders. The number of votes cast for the amendment(s) was/were sufficient for approval.

[ ] The amendment(s) was/were approved by the shareholders through voting groups.
The following statement must be separately provided for each voting group entitled to vote separately on the amendment(s):

"The number of votes cast for the amendment(s) was/were sufficient for approval by

---

voting group

[X] The amendment(s) was/were adopted by the board of directors without shareholder action and shareholder action was not required.

[ ] The amendment(s) was/were adopted by the incorporators without shareholder action and shareholder action was not required.

Signed this 14th day of November, 2002

Signature /s/ Christopher C. Cambria

(By the Chairman or Vice Chairman of the Board of Directors, President or other officer if adopted by the shareholders)

OR

(By a director if adopted by the directors)

OR

(By an incorporator if adopted by the incorporators)

Christopher C. Cambria

Type or printed name

Director

Title

ARTICLES OF MERGER

The undersigned domestic Corporations, pursuant to Section 607,1101 of the Florida Business Corporation Act, hereby execute the following Articles of Merger:

First: The names of the corporations proposing to merge and the names of the States under the laws of which such corporations are organized are as follows:

Name of Corporation	State of Incorporation
Coleman Research Corporation	Florida
Aegis Engineering, Inc.	Florida

Second: The laws of the State of Florida under which both corporations are organized under permit such merger and both corporations are complying with the applicable provisions of the Florida Business Corporation Act in effecting the merger.

Third: The name of the Surviving Corporation is Coleman Research Corporation.

Fourth: The Plan of Merger is as follows:

1. The name of each of the domestic corporations of the merger is as follows: Coleman Research Corporation, a wholly-owned subsidiary of Thermo Electron Corporation, a Delaware corporation, and Aegis Engineering, Inc.

2. Effective upon issuance of the Certificate of Merger by the Secretary of State of Florida, Aegis Engineering, Inc. (hereinafter referred to as the "Merging Corporation") will merge into Coleman Research Corporation (the "Surviving Corporation"), and Coleman Research Corporation shall be the surviving corporation resulting from the merger.

3. Until altered, amended or repealed, as therein _____ Bylaws of the Surviving Corporation in effect as of' the date of these Articles of Merger shall continue to be the Bylaws of the Surviving Corporation.

4. The principal office of the Surviving Corporation shall be the principal office of the Surviving Corporation as of the date of the Articles of Merger.

5. The Surviving Corporation shall ray all the expenses of carrying the Articles of Merger into effect and of accomplishing the merger.

6. Upon the date when the Articles of Merger shall become effective (hereinafter referred to as the "Effective Date"), the separate existence of the Merging Corporation shall cease, and the Merging Corporation shall be merged into the Surviving Corporation, which shall possess all the rights, privileges, powers and franchises, and be subject to all of the restrictions, liabilities and duties of the corporation party to the Merger, and all and singular, the rights, privileges, powers and franchises of said corporation, and all property, real, personal and mixed, and all debts due to said corporation shall be vested in the Surviving Corporation: and all property, rights and privileges, powers and franchises, and all and every other interest, shall thereafter be as effectively the property of the Surviving Corporation as they were of the constituent corporation, and the title to any real estate, whether by deed or otherwise,

vested in said corporation party hereto, shall not revert or be in any way impaired by reason of this merger, provided that all the rights of creditors and all liens upon the property of the corporation party hereto shall be preserved unimpaired, and all debts, liabilities and duties of the Merging Corporation shall forthwith attach to the said Surviving Corporation and may be enforced against it to the same extent as if said debts, liabilities and duties had been incurred or contracted by it.

7. If, at any time, the Surviving Corporation shall consider or be advised that any further actions are necessary or desirable to vest in said Surviving Corporation, according to the terms hereof, the title to any property or rights of the said Merging Corporation, the proper officers and directors of said Merging Corporation shall and will execute and make all such proper assignments and assurances, and do all things necessary or proper to vest title in such property or rights in the Surviving Corporation. and otherwise to carry out the purposes of the Merger.

8. The manner of converting the outstanding capital shares of the merging corporations shall he as follows:

(a) Conversion of Shares. Upon the Effective Date, all of the outstanding common shares of the Surviving Corporation shall remain issued and outstanding to its sole shareholder Thermo Electron Corporation, the parent corporation of the Surviving Corporation. Upon the Effective Date, all of the outstanding common shares of the Merging Corporation shall be transferred, exchanged and/or converted for or into a number of shares of common stock of Thermo Electron Corporation ("Thermo Shares") which, when multiplied by the average closing per share price of the common stock of Thermo Electron Corporation on the New York Stock Exchange for the five (5) trading days preceding the Closing Date would equal $460,000. The Thermo Shares shall be delivered as soon as practicable after the Effective Date, but in no event more than sixty (60) days from the Closing Date. The Thermo Shares shall be subject to the Forfeiture Agreement signed on the Closing Date and pending the expiration of the period of forfeiture as described in the Forfeiture Agreement, the Thermo Shares, subject to forfeiture, shall be held in escrow pursuant to the terms of an Escrow Agreement. The issuance of the Thermo Shares shall not be registered under the Securities Act of 1933 (the Securities Act"), however, the Thermo Shares will be registered under the Securities Act before the first anniversary of the Closing Date, if an exemption from registration under the Securities Act does not otherwise exist.

FIFTH: The effective date of this Certificate of Merger shall be the 31st day March, 1996.

SIXTH: The Agreement and Plan of Merger was adopted by the Board of Directors of Coleman Research Corporation on the 5th day of April, 1996 and no action was required by the sole shareholder of the Surviving Corporation, Thermo Electron Corporation. The sole Shareholder and Board of Directors of Aegis Engineering adopted the Plan of Merger on the 5th day of April, 1996.

Signed this 5th day of April, 1996.

COLEMAN RESEARCH CORPORATION

By /s/ James B. Morrison

James B. Morrison
Its President

By /s/

Its Secretary, who by
this signature also attests

(CORPORATE SEAL)

(THE "SURVIVING CORPORATION")

Signed this 5th day of April, 1996.

AEGIS ENGINEERING, INC.

By /s/ Michael G. Stelling

Michael G. Stelling
Its President

By /s/ Michael G. Stelling

Its Secretary, who by
this signature also attests

(CORPORATE SEAL)

(THE "MERGING CORPORATION")

STATE OF FLORIDA)

COUNTY OF _____)

The foregoing instrument was acknowledged before me this 5 day of April, 1996, by James B. Morrison, President of Coleman Research Corporation, on behalf of the Corporation.

My commission expires: _____

/s/ C. Van Dermark

Notary Public
(SEAL) Notary Seal

STATE OF _____)

COUNTY OF _____)

The foregoing instrument was acknowledged before me this ___ day of ____, 1996, by Michael G. Stelling, President of Aegis Engineering Corporation, on behalf of the Corporation.

My commission expires: _____

Notary Public
(SEAL)

STATE OF FLORIDA

AMENDED AND RESTATED
ARTICLES OF INCORPORATION
OF
COLEMAN RESEARCH CORPORATION
(BY VOTE OF SHAREHOLDERS)

Pursuant to Sections 607.1006 and 607.1007 of the Florida Business Corporation Act, the undersigned corporation hereby adopts these Amended and Restated Articles of Incorporation.

ARTICLE I - NAME, PRINCIPAL OFFICE AND MAILING ADDRESS

(a) The name of this corporation is COLEMAN RESEARCH CORPORATION.

(b) The principal office of the corporation is located at 201 South Orange Avenue Suite 1300, Orlando, Florida 32801, and the mailing address of the corporation is 201 South Orange Avenue, Suite 1300, Orlando, Florida 32801.

ARTICLE II - DURATION

This Corporation shall have perpetual existence.

ARTICLE III - PURPOSE

This Corporation is organized for the following purposes:

(a) To operate a business engaged in studies, consultation, planning, engineering and other support efforts of a high technology nature involving defense, space, energy, and similar programs; to operate necessary facilities in support of such activities and to carry on any and all operations related thereto.

(b) To transact any and all lawful business.

ARTICLE IV - POWERS

This corporation shall have all of the corporate powers enumerated in the Florida Business Corporation Act.

ARTICLE V - CAPITAL STOCK

(a) The total number of shares which the Corporation shall have the authority to issue is 50,000,000 shares of Common of the par value of $.001 per share, constituting a total authorized capital of $50,000, and consisting of such one class only.

(b) Except as otherwise provided by law or in the by-laws of the corporation, the entire voting power for the election of directors and for all other purposes shall be vested exclusively in the holders of the outstanding Common Stock of the corporation, and each shareholder shall have one vote per share of Common Stock.

ARTICLE VI - PRE-EMPTIVE RIGHTS

The shareholders of this corporation shall have no preemptive right to acquire unissued or treasury shares of the corporation or securities of the corporation convertible into or carrying a right to subscribe to or acquire shares.

ARTICLE VII - REGISTERED OFFICE AND AGENT

The street address of the registered office of this corporation is 201 South Orange Avenue, Suite 1300, Orlando, Florida 32801, and the name of the registered agent of this corporation at that address is James B. Morrison.

ARTICLE VIII - INITIAL BOARD OF DIRECTORS

This article has been deleted and no substitution made.

ARTICLE IX - INCORPORATOR

The name and address of the person signing the initial articles of incorporation was:

Thomas Jefferson Coleman
6123 Parawood Drive
Orlando, FL 32811

ARTICLE X - BY-LAWS

The power to adopt, alter, amend or repeal by-laws shall be vested in the Board of Directors and the shareholders.

ARTICLE XI - OFFICERS

The officers of the corporation shall be a president and such other officers as shall be determined by the Board of Directors.

The Board of Directors may provide for the election or appointment and prescribe the duties of all officers and agents as the board may deem desirable and proper, and may take such action not inconsistent with the Articles of Incorporation and the by-laws of the corporation and the laws of the State of Florida as such board may deem advisable for the conduct and operation of the business of the corporation.

ARTICLE XII - MEETINGS

Meetings of shareholders and directors, including the time, place, and manner of calling such meetings, shall be fixed by the by-laws of the corporation.

ARTICLE XIII - AMENDMENT

This corporation reserves the right to amend or repeal any provisions contained in these Articles of Incorporation, or any amendment hereto, and any right conferred upon the shareholders is subject to this reservation.

ARTICLE XIV - STOCK RESTRICTION

This article has been deleted and no substitution made.

****

The Articles of Incorporation, as amended, have been further amended by these Amended and Restated Articles of Incorporation as follows:

(1) Articles VII has been amended to reflect the current address of the registered office and to name a new registered agent, which amendment does not require shareholder approval.

(2) Articles VIII setting forth the names and addresses of the initial directors has been deleted in its entirety and no substitution made, which amendment does not require shareholder approval.

(3) Article XIV restricting stock ownership to employees of the Corporation, the Corporation, a trust qualified under ss.401(a) of the Internal Revenue Code of 1986, as amended, or the Coleman Family has been deleted in its entirety and no substitution made, which amendment could be deemed to require shareholder approval.

The amendments to the Articles of Incorporation of the Corporation set forth above were adopted on the 15th day of March, 1995, by a vote of the Board of Directors and the Common shareholders of the Corporation, on which date there were 13,235,528 shares outstanding and entitled to vote thereon; and the number of votes cast for the amendments by the shareholders was sufficient for approval.

Signed this 15th day of March, 1995.

COLEMAN RESEARCH CORPORATION

By /s/ James B. Morrison

James B. Morrison
President

By /s/ Harriett C. Coleman

Harriett C. Coleman
Secretary

VERIFICATION

I, the undersigned, as President of Coleman Research Corporation, do hereby verify that the above and foregoing instrument represents an amendment to the Articles of Incorporation of Coleman Research Corporation, a Florida corporation, as set forth in these Amended and Restated Articles of Incorporation, duly approved and adopted by a vote of the directors and the shareholders of the Corporation and that the statements contained therein are true and correct.

This 15th day of March, 1995.

/s/ James B. Morrison

James B. Morrison
President

Sworn to and subscribed before me on this 15 day of March, 1995.

/s/ C. Van Dermark

Notary Public
My Commission Expires:
Notary Seal

ACCEPTANCE OF REGISTERED AGENT

The undersigned hereby accepts the designation and appointment of registered agent for service of process.

Dated this 15th day of March 1995.

/s/ James B. Morrison

James B. Morrison

DOMESTIC CORPORATION AND FOREIGN CORPORATION

ARTICLES OF MERGER

The undersigned Corporations, pursuant to Section 607.1107 of the Florida Business Corporation Act, hereby execute the following Articles of Merger:

First: The names of the corporations proposing to merge and the names of the States under the laws of which such corporations are organized are as follows:

Name of Corporation	State of Incorporation
Coleman Research Corporation	Florida
CRC Acquisition Corp.	Delaware

Second: The laws of the State under which such foreign corporation is organized permit such merger and such foreign corporation is complying with those laws in effecting the merger.

Third: The name of the Surviving Corporation is Coleman Research Corporation, a Florida corporation, and it is complying with the applicable provisions of Sections 607.1101 - 607.1105 F.S.

Fourth: The Plan of Merger is as follows:

1. The name of each of the constituent corporations of the merger is as follows: Coleman Research Corporation, a Florida corporation, and CRC Acquisition Corp., a Delaware corporation, a wholly-owned subsidiary of Thermo Electron Corporation, a Delaware corporation (hereinafter referred to as "Thermo").

2. Effective upon issuance of the Certificates of Merger by the Secretary of State of Florida and the Secretary of State of Delaware, CRC Acquisition Corp. (hereinafter referred to as "Acquisition" or the "Merging Corporation") hereby merges into Coleman Research Corporation (hereinafter referred to as "CRC" or the "Surviving Corporation"), and the Surviving Corporation shall be the surviving corporation resulting from said merger.

The Articles of Incorporation of CRC are being Amended and Restated simultaneously herewith to delete a provision which limits stock ownership to employees of CRC.

Until altered, amended or repeated, as therein provided, the Bylaws of the Surviving Corporation in effect as of the date of these Articles of Merger, shall continue to be the Bylaws of the Surviving Corporation.

The principal office of the Surviving Corporation shall be the principal office of the Surviving Corporation as of the date of the Articles of Merger.

The Surviving Corporation shall pay all the expenses of carrying the Articles of Merger into effect and of accomplishing the merger.

Upon the date when the Articles of Merger shall become effective (hereinafter referred to as the "Effective Date"), the separate existence of the Merging Corporation shall cease, and the Merging

Corporation shall be merged into the Surviving Corporation, which shall possess all the rights, privileges, powers and franchises, and be subject to all of the restrictions, liabilities and duties of the corporation party to the Merger, and all and singular, the rights, privileges, powers and franchises of said corporation, and all property, real, personal and mixed, and all debts due to said corporation shall be vested in the Surviving Corporation; and all property, rights and privileges, powers and franchises, and all and every other interest, shall thereafter be as effectively the property of the Surviving Corporation as they were of the constituent corporation, and the title to any real estate, whether by deed or otherwise, vested in said corporation party hereto, shall not revert or be in any way impaired by reason of this merger, provided that all the rights of creditors and all liens upon the property of the corporation party hereto shall be preserved unimpaired, and all debts, liabilities and duties of the Merging Corporation shall forthwith attach to the said Surviving Corporation and may be enforced against it to the same extent as if said debts, liabilities and duties had been incurred or contracted by it.

If, at any time, the Surviving Corporation shall consider or be advised that any further actions are necessary or desirable to vest in said Surviving Corporation, according to the terms hereof, the title to any property or rights of the said Merging Corporation, the proper officers and directors of said Merging Corporation shall and will execute and make all such proper assignments and assurance, and do all things necessary or proper to vest title in such property or rights in the Surviving Corporation, and otherwise to carry out the purposes of the Merger.

3. The manner of converting the outstanding capital shares of the merging corporations shall be as follows:

(a) Conversion of CRC's Shares. Upon the effective date of the merger, each share of the CRC's common stock outstanding immediately prior thereto (hereinafter referred to as the "CRC Shares") shall, by virtue of the Merger and without any action on the part of the holder thereof, be canceled and converted into the right to receive .19138 (hereinafter referred to as the "Exchange Ratio") shares of Thermo common stock, $1.00 par value (hereinafter referred to as the "Thermo Shares").

(b) CRC Stock Options. At or prior to the Effective Date, Thermo and CRC shall take all action necessary to cause the assumption by Thermo of the options to purchase CRC common stock outstanding as of the effective date (the "CRC Options"). Each of the CRC Options shall he converted without any action on the part of the holder thereof into an option to purchase shares of Thermo common stock as of the Effective Date (hereinafter referred to as the "Thermo Options"). The number of shares of Thermo common stock that each record holder of an option agreement which represents CRC Options (the "Optionholders") shall he entitled to receive upon the exercise of such option shall be a number of whole and fractional shares determined by multiplying the number of shares of CRC common stock subject to such option, determined immediately before the Effective Date, by the Exchange Ratio. The assumption and conversion of CRC Options to Thermo Options shall not give the Optionholders additional benefits which they did not have immediately prior to the Effective Date, result in any acceleration of any vesting schedule for any CRC Option, other than the acceleration of the vesting schedules pursuant to the terms of the CRC Nonqualified Stock Option Plan dated January 2, 1990, or relieve the Optionholders of any obligations or restrictions applicable to their options or the shares obtainable upon exercise of the options. Only whole shares of Thermo common stock shall be issued upon exercise of any Thermo Option and in lieu of receiving any fractional share of Thermo common stock, the holder of such option shall receive in cash the fair market value of the fractional share, net of the applicable exercise price of the fractional share and applicable withholding taxes.

(c) Limit on Issuance of Thermo Shares. Anything to the contrary herein notwithstanding, the total. number of Thermo Shares which shall be: required to be issued pursuant

to the paragraph (a) above and upon the exercise of CRC Options that are converted into Thermo Options pursuant to paragraph (b) above shall not (except as such number of shares shall be required to be adjusted pursuant to paragraph (h) hereof) exceed 2,669,158. In the event that the application of the Exchange Ratio set forth in paragraph (a) above could result in the issuance of more than 2,669.158 Thermo Shares, such Exchange Ratio shall be automatically adjusted such that the total number of Thermo Shares will not exceed 2,669,158.

(d) Dissenting Shares. Each outstanding CRC Share held by a CRC shareholder who has demanded and perfected his or her right to an appraisal of his or her CRC Shares in accordance with Sections 607.1301, 607.1302 and 607.1320 of the Florida Business Corporation Act and who has not effectively withdrawn or lost his or her right to such appraisal ("Dissenting Shares") shall not be converted into or represent the right to receive the Thermo Shares represented by such CRC Shares pursuant to paragraph (a) above, but the holder thereof shall be entitled only to such rights as are granted by Sections 607.1301, 607.1302 and 607.1320 of the Florida Business Corporation Act.

(e) Payment for the CRC Shares. Promptly following the effective date of the merger, The First National Bank of Boston, Thermo's stock transfer agent (hereinafter referred to as the "Exchange Agent"), shall transmit to each record holder of an outstanding certificate which prior thereto represented CRC Shares (the "Shareholders") a form of letter of transmittal and instructions for use in effecting the surrender of such certificate and/or option agreement in exchange for the Thermo Shares represented by such CRC Shares. Upon the proper surrender of such certificates and a duly executed letter of transmittal and any required tax certifications, in accordance with such instructions, to the Exchange Agent, the Exchange Agent shall deliver a certificate for the Thermo Shares that such person is entitled to receive, minus the deduction specified in paragraph (f) hereof. It shall be a condition of such payment and delivery that the surrendered certificate be properly endorsed or otherwise in proper form for transfer and that the person requesting such shall pay any transfer or other taxes required by reason of such payment or delivery or establish to the satisfaction of the Transfer Agent, Thermo and/or the Surviving Corporation that such tax has been paid or is not applicable. Until so surrendered for exchange, each certificate heretofore representing CRC common stock (other than Dissenting Shares) shall, subject to paragraph (f) hereof, be deemed for all purposes to evidence the right to receive the consideration as described in accordance with paragraph (a) above; provided however, that unless and until any such outstanding certificate is so surrendered, the holder of such outstanding certificate shall cease to have any rights as a stockholder of CRC, except such rights, if any, as such holder may have with respect to Dissenting Shares and shall not be entitled to receive any consideration from the Surviving Corporation and/or Thermo with respect to the CRC Shares represented by such certificate. Each Shareholder, upon surrender of each such certificate to the Exchange Agent, shall receive promptly in exchange for each such certificate the Thermo Shares and cash (if any) to which such holder is entitled pursuant to paragraphs (a), (g) and (h) hereof. Unless and until any such outstanding certificates for CRC Shares shall be so surrendered, no dividend (cash or stock) payable to holders of record of shares of Thermo common stock as of any date subsequent to the Effective Date shall be paid to the holder of any such outstanding certificate and his other rights as a stockholder of Thermo shall be suspended, but upon such surrender of such outstanding certificate there shall be paid to the record holder of the certificate of shares of Thermo common stock issued in exchange therefor the amount of dividends, if any, without interest and less any taxes which may have been imposed thereon, that have theretofore become payable with respect to the number of those shares of Thermo common stock represented by such certificate issued upon such surrender and exchange, and his other rights as a stockholder of Thermo shall thereafter be restored.

(f) Escrow Account. For the purpose of providing support of the representations and warranties contained herein and to induce Thermo to enter into the Agreement and Plan of Merger, ten percent (10%) of Thermo Shares each CRC shareholder has the right to beneficially

receive pursuant to paragraph (a) above (including Thermo Shares to be issued to the CRC 401(k) Employee Stock Ownership Plan (the "KSOP")) shall be withheld from payment to such CRC shareholder pursuant to paragraph (a) and shall be set aside in escrow pursuant to the terms of the Indemnification and Stock Escrow Agreement (the "Escrow Agreement") entered into by and among Therrno, CRC, the shareholder representative as defined in the Escrow Agreement) and The First National Bank of Boston, as escrow agent. The amount of shares placed in escrow pursuant to this paragraph (f) shall be considered the "Escrowed Shares." The Escrowed Shares shall be held as a trust fund and shall not be subject to any lien, attachment, trustee process or any other judicial process of' any creditor of any party, and shall he held and disbursed by the Escrow Agent solely for the purposes and in accordance with the terms of the Escrow Agreement. It is intended that the assets held in escrow as above provided shall facilitate Thermo's and the Surviving Corporation's ability to recover amounts to which they are entitled under the Agreement and Plan of Merger dated February 8, 1995 (hereinafter referred to as the "Agreement and Plan of Merger") or the Escrow Agreement as a result of misrepresentations, breaches of warranties and breaches of covenants contained in the Agreement and Plan of Merger and to satisfy claims of Thermo and Acquisition arising as a result of the Agreement and Plan of Merger or the Escrow Agreement. Accordingly, and to the extend necessary to provide such protection to Thermo and the Surviving Corporation, property held in escrow thereunder shall be available to satisfy claims of Thermo and the Surviving Corporation under the Agreement and Plan of Merger or the Escrow Agreement to the extent provided in such agreements.

(g) No Fractional Shares of Thermo Common Stock. Notwithstanding any other provision, neither certificates nor scrip for fractional shares of Thermo common stock shall be issued to any holder of CRC common stock in the Merger and the holder thereof shall not be entitled to any voting or other rights of a holder of shares or a fractional share interest. Each CRC shareholder who otherwise would have been entitled to receive a fraction of a share of Thermo common stock shall receive in lieu thereof cash, without interest, in an amount determined by multiplying such shareholder's fractional interest by the closing price of Thermo common stock as reported on the New York Stock Exchange on the Effective Date. All amounts of cash in respect of fractional interests which have not been claimed at the end of three years from the Effective Date by surrender of certificates for shares of CRC common stock shall be repaid to the Surviving Corporation, subject to the provisions of applicable escheat or similar laws, for the account of the holders entitled thereto.

(h) Adjustments. In the event Thermo shall declare, pay, make or effect between the date the Agreement and Plan of Merger and the Effective Date hereof (i) any stock dividend or other distribution in respect of Thermo common stock payable in shares of capital stock of Thermo, (ii) any stock split or other subdivision of outstanding shares of Thermo common stock into a larger number of shares, (iii) any combination of outstanding shares of Thereto common stock into a smaller number of shares, (iv) any reclassification of Thermo common stock into other shares of capital stock or securities, or (v) any exchange of the outstanding shares of Thermo common stock, in connection with a merger or consolidation of Thermo or sale by Thermo of all or part of its assets, for a different number or class of shares of stock or securities of Thermo or for the shares of the capital stock or other securities of any other corporation, appropriate adjustment shall he made in the ratio for the conversion of CRC Shares into Thermo Shares as may be required to put the CRC shareholders in the same position as if the record date, with respect to any such transaction or transactions which shall so occur, had been immediately after the Effective Date, or otherwise to carry out the intents and purposes of the Agreement and Plan of Merger.

(i) Closing of Stock Transfer Books. The stock transfer books of CRC shall be closed at the close of business on the day immediately preceding the Effective Date. In the event of a transfer of ownership of CRC common stock, the shares of Thermo common stock and cash (if any) to be issued in the Merger as provided herein may be delivered to a transferee, if the certificate

representing such CRC common stock is presented to the Exchange Agent, accompanied by all documents required to evidence and effect such transfer and by payment of any applicable stock transfer taxes.

(j) Lost Certificates. In the event any certificate representing a shareholder's CRC Shares shall have been lost, stolen or destroyed, upon the making of an affidavit of that fact by the person claiming such certificate or option instrument to be lost, stolen or destroyed, the Exchange Agent or the Surviving Corporation shall issue in exchange for such lost, stolen or destroyed certificate or option instrument the consideration payable in exchange therefor pursuant to this Section 3. The Board of Directors of the Exchange Agent or the Surviving Corporation may, in its discretion and as a condition precedent to the issuance thereof, require the owner of such lost, stolen or destroyed certificate to give the Exchange Agent or the Surviving Corporation a bond in such sum as it may direct as indemnity against any claim that may be made against the Surviving Corporation with respect to the certificate or option instrument alleged to have been lost, stolen or destroyed.

(k) Conversion of Acquisition Shares. Upon the effective date hereof, each share of Acquisition's common stock outstanding immediately prior thereto shall, by virtue of the Merger and without any action on the part of the holder thereof, be canceled and converted into one (1) fully paid and nonassessable common share of the Surviving Corporation, which shares shall be registered in the name of and beneficially owned by Thermo.

The following sets forth the Board of Directors of the Surviving Corporation after the effective date of the merger who shall hold office until their successors are duly elected and qualified:

Name	Address
Marshall J. Armstrong	81 Wyman Street Waltham, Massachusetts 02254
James B. Morrison	201 South Orange Avenue Orlando, Florida 32801
Richard H. Levine	201 South Orange Avenue Orlando, Florida 32801
Martin R. Adams	950 L'Enfant Plaza Center, SW Eighth Floor Washington, D.C. 2002632801
Buddy G. Beck	950 L'Enfant Plaza Center, SW Eighth Floor Washington, D.C. 2002632801
Robert V. Wells	201 South Orange Avenue Orlando, Florida 32801

The following sets forth the officers of the Surviving Corporation after the effective date of the merger who shall hold office until their successors are duly elected and qualified:

Name	Address
Marshall J. Armstrong Chairman of the Board	81 Wyman Street Waltham, MA 02254
James B. Morrison President	201 South Orange Avenue Orlando, Florida 32801
Richard H. Levine Corporate Vice President and Chief Financial Officer	201 South Orange Avenue Orlando, Florida 32801
Martin R. Adams Corporate Vice President	950 L'Enfant Plaza Center, SW Eighth Floor Washington, D.C. 2002632801
Buddy G. Beck Corporate Vice President	950 L'Enfant Plaza Center, SW Eighth Floor Washington, D.C. 2002632801
Robert V. Wells Corporate Vice President	201 South Orange Avenue Orlando, Florida 32801
Jonathan W. Painter Treasurer	81 Wyman Street Waltham, MA 02254
Sandra L. Lambert Secretary	81 Wyman Street Waltham, MA 02254
Seth H. Hoogasian Assistant Secretary	81 Wyman Street Waltham, MA 02254
Robert V. Aghababian Assistant Secretary	81 Wyman Street Waltham, MA 02254

FIFTH: The effective date of this Certificate of Merger shall be the 15th day of March, 1995.

SIXTH: The Agreement and Plan of Merger was adopted by the Shareholders of Coleman Research Corporation, the undersigned Florida Corporation, on the 15th day of March, 1995, and was adopted by the sole Shareholder of CRC Acquisition Corp., the undersigned foreign corporation, on the 15th day of March, 1995.

SIGNED this 15th day of March, 1995.

COLEMAN RESEARCH CORPORATION

By: /s/ James B. Morrison

James B. Morrison
Its President

By: /s/ Harriett Coleman

Harriett Coleman
Its Secretary, who by
this signature also attests

(CORPORATE SEAL)

(THE "SURVIVING CORPORATION")

CRC ACQUISITION CORP.

By: /s/

Its President

By: /s/

Its Secretary, who by
this signature also attests

(CORPORATE SEAL)

(THE "MERGING CORPORATION")

STATE OF MA)

COUNTY OF MIDDLESEX)

The foregoing instrument was acknowledged before me this 15 day of March, 1995, by Marshall J. Armstrong, President of CRC Acquisition Corp., on behalf of the Corporation.

My commission expires: 11/25/99

/s/

Notary Public

(SEAL)

STATE OF FLORIDA)

COUNTY OF _____)

The foregoing instrument was acknowledged before me this ___ day of _____, 1995, by James B. Morrison, President of Coleman Research Corporation, on behalf of the Corporation.

My commission expires: _____

/s/ C. Van Dermark

Notary Public

(SEAL)

Exhibit 3.92

Annex B

BY-LAWS

OF

COLEMAN RESEARCH CORPORATION

ARTICLE I

OFFICES

Section 1. Location of Offices. - The registered office shall be located in Orlando, Florida. The Corporation may also have offices at such other places both within and without the State of Florida as the Board of Directors may from time to time determine or the business of the Corporation may require.

ARTICLE II

SHAREHOLDERS

Section 1. Place and Time for Annual Meeting. - The annual meeting of the shareholders shall be held at the registered office of the Corporation unless otherwise agreed upon by the shareholders or specified in appropriate notice. The meeting shall be held during the second calendar quarter of each year or at such time and place as the Board of Directors shall decide. The annual meeting shall be held for the purpose of electing Directors and for the transaction of such other business as may come before the meeting. Failure to elect the Board of Directors at the annual meeting shall not cause a dissolution of the Corporation, but the Directors thereof shall continue to hold office until their successors are elected and qualified. A meeting for the purpose of holding such election shall be called as soon thereafter as convenient.

Section 2. Special Meeting. - Special meetings of the shareholders, for any purpose other than the election of Directors, may be called by the Chief Executive Officer,

President, the Chairman of the Board, the Board of Directors, or as otherwise provided in the Florida Business Corporation Act, .

Section 3. Notice of Meeting. - Written or printed notice of the annual meeting stating the place, day and hour of the meeting and, in case of a special meeting, the purpose or purposes of the meeting, shall be delivered, by or at the direction of the Chief Executive Officer, President, Secretary, or the officer or person calling the annual or special meeting, not less than ten (10) nor more than sixty (60) days before the date of the meeting, either personally (including delivery to shareholder/employees by inter-company memorandum), or by telegraph, teletype, other form of electronic communication or by mail, , to each shareholder of record entitled to vote at such meeting. If mailed, such notice shall be deemed to have been given when deposited in the United States mail, addressed to the shareholder at his address as it appears on the stock transfer books of the Corporation, with postage thereon prepaid. Notice may be waived in writing, signed by the shareholder entitled to such notice, and shall be delivered to the Corporation for inclusion in the minutes or filing with the corporate records. The business transacted at any special meeting of the shareholders shall be limited to the purposes stated in the notice.

Section 4. Closing of Transfer Books and Fixing Record Date. - For the purposes of determining shareholders entitled to notice of or to vote at any meeting of the shareholders, or any adjournment thereof, or entitled to receive payment of any dividend, or in order to make a determination of shareholders for any other proper purpose, the Board of Directors of the Corporation may provide that the stock transfer books shall be closed for a stated period, but not to exceed, in any case, sixty (60) days. If the stock transfer books shall be closed for the purpose of determining shareholders entitled to notice of or to vote at a meeting of shareholders, such

books shall be closed for at least ten (10) days immediately preceding such meeting. In lieu of closing the stock transfer books, the Board of Directors may fix in advance a date as the record date for any such determination of shareholders, such date in any case to be not more than sixty (60) nor less than ten (10) days prior to the date of the meeting or action requiring a determination of the shareholders. If the stock transfer books are not closed and no record date is fixed for the determination of shareholders entitled to notice of or to vote at a meeting of shareholders or receive payment of a dividend, the date on which notice of the meeting is mailed or the date on which the resolution of the Board of Directors declaring such dividend is adopted, as the case may be, shall be the record date for such determination of shareholders. When a determination of shareholders entitled to vote at any meeting of shareholders has been made as provided in this Section 4, such determination shall apply to any adjournment not exceeding 120 days from the date fixed for the original meeting.

Section 5. Quorum. - A majority of the outstanding shares of the Corporation entitled to vote, represented in person or by proxy, shall constitute a quorum at a meeting of the shareholders. No business may be transacted without a quorum. Any business may be transacted at any meeting of the shareholders at which a quorum is present, except that no business at a special meeting of shareholders shall be transacted unless notice thereof is given as required by the provisions of Section 3 hereof. If a quorum is present, the affirmative vote of the majority of the shares represented at the meeting and entitled to vote on the subject matter shall be the act of the shareholders.

Section 6. Proxies. - A shareholder may vote either in person or by proxy executed in writing by the shareholder or by his duly authorized attorney-in-fact. The proxy shall be voted only for the meeting specified in said proxy and in no event shall a proxy be valid

after eleven (11) months from the date of its execution, unless otherwise provided in the proxy. A proxy is revocable at the pleasure of the shareholder executing it and is revocable by the transfer of shares by the shareholder executing it.

Section 7. Voting of Shares. - Each outstanding share, regardless of class, shall be entitled to one vote on each matter submitted to a vote at a meeting of shareholders, except to the extent that the voting rights of the shares are limited or denied by Statute, by the Articles of Incorporation of the Corporation or any amendments thereto, or by the certificate representing such shares.

Section 8. Action Without Meeting. - Any action required or permitted to be taken at any meeting of the shareholders may be taken without a meeting, without notice, and without a vote, if the action is taken by the holders of the outstanding stock of each voting group entitled to vote thereon having not less than the minimum number of votes with respect to each voting group that would be necessary to authorize or to take the action at a meeting at which all voting groups and shares entitled to vote thereon were present and voted. In order to be effective the action of the shareholders must be evidenced by one or more written consents describing the action taken, dated and signed by the shareholders taking the action, and the written consents must be delivered to the corporate secretary of the Corporation, within 60 days of the earliest consent, at the Corporation's principal place of business in the State of Florida. Within 10 days after the Corporation's receipt of the written consents, notice must be given to those shareholders who did not consent, fairly summarizing the material features of the authorized actions.

ARTICLE III

BOARD OF DIRECTORS

Section 1. General Powers. - The business and affairs of the Corporation shall be managed by its Board of Directors which may exercise all such powers of the Corporation and

do all such lawful acts and things as are not by Statute or by the Articles of Incorporation or by these By-laws directed or required to be exercised or done by the shareholders.

Section 2. Number, Tenure and Qualifications. - The number of directors that shall constitute the board of directors shall be determined by resolution of the board of directors, but in no event shall be less than two (2). The number of directors may be increased at anytime and from time to time by resolution of the stockholders and the board of directors. The number of directors may be decreased at any time and from time to time by the stockholders or a majority of the directors then in office, but only to eliminate vacancies existing by reason of the death, resignation, removal or expiration of the term of one or more directors. A director need not be a resident of the State of Florida or a shareholder of the Corporation.

Section 3. Regular Meeting. - A first meeting of each newly elected Board of Directors shall be held, either within or without the State of Florida, immediately after, and at the same place as, the annual meeting of the shareholders and no notice of such meeting shall be necessary to the newly elected Board of Directors in order legally to constitute the meeting provided a quorum shall be present, or it may convene at such place and time as shall be fixed by consent in writing of all the members of Board of Directors. The Board of Directors may provide, by resolution, the time and place for the holding of additional regular meetings without other notice than such resolution. Meetings of the Board of Directors may be called by the Chairman of the Board, Chief Executive Officer, or President, and may be conducted by any means of communication by which all members of the Board of Directors participating may simultaneously hear each other during the meeting.

Section 4. Special Meetings. - Special meetings of the Board of Directors may be called by or at the request of the President, Chief Executive Officer, or the Board of Directors,

and may be conducted by any means of communication by which all members of the Board of Directors participating may simultaneously hear each other during the meeting.

Section 5. Notice. - Regular meetings of the Board of Directors may be held without notice of the date, time, place or purpose of the meeting. Notice of special meetings shall be given not less than five (5) days in advance of said meeting. Notice may be delivered by mail, inter-company memorandum, facsimile transmission, telegram, telegraph, teletype, telephone or other form of electronic communication, or oral notice may be given, if communicated directly to Director.. Any Director may waive notice of any meeting. The attendance of a Director at a meeting shall constitute a waiver of notice of such meeting, except where a Director attends a meeting for the express purpose of objecting to the transaction of any business because the meeting is not lawfully called or convened. The business to be transacted, or the purpose of, any regular or special meeting of the Board of Directors need not be specified in the notice or waiver of notice of such meeting.

Section 6. Quorum. - A majority of the Board Directors shall constitute a quorum for the transaction of business. The act of a majority of the Directors present at a meeting at which a quorum is present shall be the act of the Board of Directors. If a quorum is present when a meeting is convened, the Directors present may continue to do business, taking action by a vote of the quorum, until adjournment, notwithstanding the withdrawal of enough Directors to leave less than a quorum, or the refusal of any Director present to vote.

Section 7. Vacancies and Removal. - Any vacancy occurring in the Board of Directors may be filled for the unexpired term by majority vote of the remaining Directors, if any, or by the shareholders at any meeting of the Board of Directors or the shareholders. Any directorship to be filled by reason of an increase in the number of Directors shall be filled by

election at an annual or special meeting of the shareholders called for that purpose. The shareholders may remove any Director or the entire Board of Directors, with or without cause, at a meeting of the shareholders expressly called for that purpose, by a vote of the holders of a majority of the shares present at said meeting and entitled to vote at an election of Directors.

Section 8. Compensation. - By resolution of the Board of Directors, a Director may be paid his expenses, if any, of attendance at each meeting of the Board of Directors, and may be paid a fixed sum of attendance at each meeting of the Board of Directors or a stated salary as a Director. No such payment shall preclude a Director from serving the Corporation in any other capacity and receiving compensation therefor. The Board of Directors shall fix the compensation of the officers of the Corporation.

Section 9. Committees. - The Board of Directors shall have power, by resolution or resolutions passed by a majority of the Board, to designate one or more committees, each committee to consist of one or more Directors of the Corporation which to the extent provided in the resolutions shall have and may, during the intervals between the meetings of the Board, exercise the powers of the Board of Directors in the management of the business and affairs of the Corporation, and may have power to authorize the seal of the Corporation to be affixed to all papers which may require it. Such committee or committees shall have such name or names as may be determined from time to time by resolution of the Board of Directors.

Section 10. Unanimous Consent. - Any action required or permitted to be taken at any meeting of the Board of Directors, or of a committee thereof, may be taken without a meeting, if a consent in writing, setting forth the action so taken, shall be signed by all of the Directors, or all of the members of a committee, as the case may be. Such consent shall have the same effect as a unanimous vote of the Board of Directors.

ARTICLE IV

NOTICES

Section 1. Whenever any notice whatever is required to be given under the provisions of the Florida Business Corporation Act or under the provisions of the Articles of Incorporation or these By-laws, a waiver of the notice in writing, signed by the person or persons entitled to such notice, whether before or after the time stated therein, shall be deemed equivalent to the giving of such notice.

ARTICLE V

OFFICERS

Section 1. Number. - The officers of the Corporation shall be a President and a Secretary, both of whom shall be elected by the Board of Directors. The Board may also elect or appoint a Chief Executive Officer, one or more Corporate Vice Presidents, Vice Presidents, a Treasurer and such other offices and assistant officers, as the Board of Directors may deem necessary. Any number of offices may be held by the same person.

Section 2. Election and Term of Office. - The officers of the Corporation shall be elected annually by the Board of Directors at the regular meeting of the Board held pursuant to ARTICLE III, Section 3, of these By-Laws. A failure to elect officers annually shall not affect the authority of the officers and once elected, an officer shall hold office at the pleasure of the Board of Directors until a successor is elected and qualified. In its discretion, the Board of Directors by a vote of a majority thereof may leave unfilled for such period as it may fix by resolution any offices except those of President and Secretary.

Section 3. Vacancies and Removal. - Vacancies in any office arising from any cause may be filled by the Board of Directors at any regular or special meeting. The Board of

Directors may remove any officer or assistant officer, with or without cause, at any time by an affirmative vote of a majority of the Board.

Section 4. Chief Executive Officer. - The Chief Executive Officer shall be the principal executive officer of the Corporation and shall have in his charge the general direction and promotion of its affairs with authority to do such acts and to make such contracts as are necessary or proper to carry on the business of the Corporation, and shall preside over all official meetings of the Board of Directors. He may sign, execute, and deliver, in the name of the Corporation, powers of attorney, contracts, bonds and other obligations and shall perform such other duties as may be prescribed from time to time by the Board of Directors or the By-laws.

Section 5. President. - The President, in the absence or disability of the Chief Executive Officer, shall perform the duties of the Chief Executive Officer. In addition, he shall preside over all official meetings of the Corporation in the absence of the Chief Executive Office or the Chairman of the Board, and shall also perform those duties which usually devolve upon a president of a corporation under the laws of the State of Florida. The President may, during the absence of any officer, delegate said officer's duties to any other officer or member of the Board of Directors. He may sign, execute, and deliver, in the name of the Corporation, powers of attorney, contracts, bonds and other obligations and shall perform such other duties as may be prescribed from time to time by the Board of Directors or the By-Laws.

Section 6. Corporate Vice-President. - A Corporate Vice-President, in the absence or disability of the President, shall perform the duties of the President and shall perform such other duties as may be delegated to him from time to time by the Board of Directors, Chief Executive Office, or the President.

Section 7. Vice-President. - A Vice-President shall only have the specific authority and duties granted to him by the Board of Directors, the Chief Executive Officer or the President. A Vice-President shall not in the absence or disability of the President, have the authority to perform the duties of the President.

Section 8. Secretary. - The Secretary shall issue notices of all meetings of shareholders and all meetings of the Board of Directors, shall keep the minutes of all such meetings, shall have charge of the seal of the Corporation, shall serve as custodian for all corporate records, and shall make such reports and perform such duties as a incident to his office or which may be delegated to him by the Chief Executive Officer, President, or Board of Directors.

Section 9. Treasurer. - The Treasurer shall render to the Chief Executive Officer, President, and Board of Directors at such times as may be requested an account of all transactions as Treasurer an of the financial condition of the Corporation. The Treasurer shall perform such other duties as are incident to the office or as may be delegated to that office by the President or by the Board of Directors. If required by the Board of Directors, he shall give the Corporation a bond in such sum and with such surety or sureties as shall be satisfactory to the Board for the faithful performance of the duties of his office and for the restoration to the Corporation, in case of his death, resignation, retirement or removal from office, of all books, papers, vouchers, money and other property of whatever kind in his possession or under his control belonging to the Corporation.

Section 10. Assistant Officer. - An Assistant Officer shall perform the duties of an absent of disabled officer and shall perform such other duties as may be delegated from time to time by the Board of Directors, the Chief Executive Officer, or the President.

Section 11. Salaries. - The salaries of the officers may be fixed from time to time by the Board of Directors, and no officer shall be prevented from receiving such salary by reason of the fact that he is also a Director or shareholder of the Corporation.

ARTICLE VI

CONTRACTS, LOANS, CHECKS AND DEPOSITS

Section 1. Contracts. - The Board of Directors may authorize any officer or officers, agent or agents, to enter into any contract or execute and deliver any instrument in the name of and on behalf of the Corporation, and such authority may be general or confined to specific instances.

Section 2. Loans. - No loans shall be contracted on behalf of the Corporation and no evidences of indebtedness shall be issued in its name unless authorized by a resolution of the Board of Directors. Such authority may be general or confined to specific instances.

Section 3. Checks, Drafts, etc. - All checks, drafts or other orders for the payment of money, notes or other evidences of indebtedness issued in the name of the Corporation shall be signed by such officer or officers, agent or agents of the Corporation and in such manner as shall from time to time be determined by resolution of the Board of Directors.

Section 4. Deposits. - All funds of the Corporation not otherwise employed shall be deposited from time to time to the credit of the Corporation in such banks, trust companies or other depositories as the Board of Directors may select.

ARTICLE VII

CERTIFICATE FOR SHARES

Section 1. Certificates. - Ownership of the capital shares of the Corporation shall be represented by certificates, in such form as shall be determined by the Board of Directors. Each certificate shall be signed by the Chief Executive Officer, President, or a duly authorized

Corporate Vice President and countersigned by the Secretary of the Corporation and be sealed with the seal of the Corporation or a facsimile thereof. A record of such certificates shall be kept.

Section 2. Cancellation. - All certificates transferred on the books of the Corporation shall be surrendered and cancelled. No new certificates shall be issued until the former certificate, or certificates, for the same number of shares have been surrendered and cancelled, except in case of lost or destroyed certificates, when new certificates therefor may be issued under such conditions as the Board of Directors may prescribe to protect the Corporation from any claim that may be made against it with respect to any such certificate alleged to have been lost, destroyed, or wrongfully taken.

Section 3. Transfer. - Transfer of shares of the Corporation shall be made only on the stock transfer books of the Corporation by the holder of record thereof or by his legal representatives, who shall furnish proper evidence of their authority in writing, upon the surrender for cancellation of the certificate for such shares duly endorsed or accompanied by proper evidence of succession, assignment or authority to transfer said shares. No transfer shall be made upon the books of the Corporation within ten (10) days next preceding the annual meeting of the Shareholders. Any state or federal taxes or fees payable in connection with the transfer of any such stock shall be paid by the transferor or the transferee of said stock before said assignment and transfer shall be made on the books of the Corporation.

ARTICLE VIII

FISCAL YEAR

The fiscal year of the Corporation shall be fixed by resolution of the Board of Directors.

ARTICLE IX

SEAL

The Corporate seal shall have inscribed thereon the name of the Corporation, the year of its organization and the words "Corporate Seal, Florida". The seal may be used by causing it or a facsimile thereof to be impressed or affixed or in any manner reproduced.

ARTICLE X

DIVIDENDS

The Board of Directors may from time to time declare, and the Corporation may pay in cash or property, dividends on the outstanding shares of the Corporation in the manner and upon the terms and conditions provided by Statute and by the Articles of Incorporation of the Corporation or any amendments thereto. Share dividends may be issued pro rata and without consideration to the Corporation's shareholders or the shareholders of one or more classes or series, subject to the provisions of the Articles of Incorporation. Before distribution, however, the Board of Directors may, in their discretion, set aside out of any funds available for distribution such sum or sums as is deemed proper to meet the debts of the Corporation as they become due in the usual course of business, or for such other purpose as the Board of Directors shall think conducive to the interest of the Corporation.

ARTICLE XI

AMENDMENTS

These By-Laws may be altered, amended or repealed and new By-Laws may be adopted by the Shareholders or by the Board of Directors at any meeting of the Board of Directors. However, the Board of Directors may not alter, amend or repeal Section 5 of ARTICLE II establishing what constitutes a quorum at shareholders' meetings, amendment of which shall require the affirmative vote of a majority of the stock issued and outstanding and

entitled to vote at any annual meeting of the shareholders or at any special meeting of the shareholders if notice of the proposed alteration or repeal be contained in the notice of such special meeting.

ARTICLE XII

EMERGENCY BY-LAWS

Section 1. The Emergency By-Laws provided in this ARTICLE XII shall be operative during any emergency in the conduct of the business of the Corporation resulting from an attack on the United States or any nuclear or atomic disaster or during the existence of any catastrophe or other similar emergency condition, as a result of which a quorum of the Board of Directors or a standing committee thereof cannot readily be convened for action, notwithstanding any different provision in these By-Laws or in the Articles of Incorporation of the Corporation or any amendments thereto or in the Florida Statutes. To the extent not inconsistent with the provisions of this ARTICLE XII, the By-Laws provided in all other Articles shall remain in effect during such emergency and upon its termination the Emergency By-Laws shall cease to be operative.

During any such emergency:

(a) A meeting of the Board of Directors may be called by any officer or Director of the Corporation. Notice of the time and price of the meeting shall be given by the person calling the meeting to such members of the Board of Directors as it may be feasible to reach by any available means of communication. Such notice shall be given at such time in advance of the meeting as circumstances permit in the judgment of the person calling the meeting.

(b) At any such meeting of the Board of Directors, a quorum shall consist of such number of Directors as are present at such meeting.

(c) The Board of Directors, either before or during any such emergency, may provide, and from time to time modify, lines of succession in the event that during such an emergency any or all officers or agents of the Corporation shall for any reason be rendered incapable of discharging their duties.

(d) The Board of Directors, either before or during any such emergency, may, effective in the emergency, change the head office or designate several alternative head offices or regional offices, or authorize the officers so to do.

Section 2. No officer, Director, or employee acting in accordance with these Emergency By-Laws shall be liable except for willful misconduct.

Section 3. These Emergency By-Laws shall be subject to repeal or change by further action of the Board of Directors or by action of the shareholders, but no such repeal or change shall modify the provisions of the next preceding paragraph with regard to action taken prior to the time of such repeal or change. Any amendment of these Emergency By-Laws may make any further or different provision that may be practical and necessary for the circumstances of the emergency.

ARTICLE XIII

MISCELLANEOUS

In the event the Board of Directors shall consist of only one Director, or in the event there shall be only one shareholder of the Corporation, then all references to more than one Director or shareholder or a majority of Directors or shareholders shall be inapplicable, such references in such events being deemed to refer to the sole Director or sole shareholder. In the

event there shall be only one shareholder who shall be the sole Director of the Corporation, then upon the death of such shareholder, the personal representatives of the estate of such deceased shareholder shall elect a successor Director.

In the event the Board of Directors shall consist of only two Directors, then all references in these By-Laws to a majority of the Directors shall be inapplicable.

Exhibit 3.93

AGREEMENT OF MERGER

This Agreement of Merger, dated as of February 20, 1990 (this "Merger Agreement"), is made and entered into by and among Telos Corporation, a California corporation (the "Company"); Contel Federal Systems, Inc., a Delaware corporation ("Parent"); and Telos Acquisition Company, a California corporation and a wholly-owned subsidiary of Parent ("Sub") (Company and Sub are collectively referred to in this Merger Agreement as the "Constituent Corporations").

ARTICLE I

The Constituent Corporations

1.01 (a) The Company was incorporated under the laws of the State of California on April 11, 1969.

(b) The Company is authorized to issue an aggregate of 20,000,000 shares of Common Stock ("Company Common Shares"), of which 3,988,613 shares are issued and outstanding are of the date hereof. The Company is also authorized to issue 1,000,000 shares of Preferred Stock, none of which has been issued as of the date hereof.

1.02 (a) Sub was incorporated under the laws of the State of California on November 20, 1989.

(b) Sub is authorized to issue an aggregate of 1,000 shares of common stock ("Sub Stock"), all of which are issued and outstanding.

ARTICLE II

The Merger

2.01 (a) The Merger shall become effective (the "Effective Date") upon the filing with the Secretary of State of the State of California of this Merger Agreement together with the other documents required to be filed by Section 1103 of the California Corporations Code.

(b) At the Effective Date, Sub shall be merged with and into Company and the separate corporate existence of Sub shall thereupon cease. The Company shall be the surviving corporation in the Merger and the separate corporate existence of Company, with all its purposes, objects, rights, privileges, powers, immunities and franchises, shall continue unaffected and unimpaired by the Merger.

2.02 The Company shall succeed to all of the rights, privileges, powers, immunities and franchises of Sub, all of the properties and assets of Sub and all of the debts, choses in action and other interests due or belonging to Sub and shall be subject to, and responsible for, all of the debts, liabilities and obligations of Sub with the effect set forth in the California Corporations Code.

ARTICLE III

Articles of Incorporation, Bylaws,
and Directors and Officers of the Company

3.01 The Articles of Incorporation of the Company in effect immediately prior to the Merger shall continue in full force and effect as the Articles of Incorporation of Company after the Merger until duly amended in accordance with the provisions thereof and applicable law.

3.02 The Bylaws of the Company in effect immediately prior to the Merger shall continue in full force and effect as the Bylaws of the Company after the Merger until duly amended in accordance with the provisions thereof and applicable law.

3.03 The directors and officers of the Sub immediately prior to the Merger shall become the directors and officers of the Company after the Merger until their successors have been elected and qualified or unless otherwise provided by law.

ARTICLE IV

Manner and Basis of Converting Shares
Of The Constitute Corporations

4.01 At the Effective Dates

(a) Each share of Sub Stock outstanding shall be converted into one (1) share of Common Stock of the Company. No fractional shares of the Company shall be issued.

(b) By virtue of the Merger and without any action on the part of the holder thereof, each of the Company Common Shares (except for shares described in Section 4.01(c) and shares, if any, which shall then or thereafter constitute "dissenting shares" within the meaning of Chapter 13 of the California Corporations Code) that is outstanding immediately prior to the Effective Date shall be converted into a right to receive in cash the amount of Fifteen Dollars and Fifty Cents ($15.50), without interest.

(c) Any Company Common Shares owned directly or indirectly by an subsidiary of the Company immediately prior to the Merger and any Company Common Shares owned by Parent, Sub or any other subsidiary of Parent or by Contel Corporation, a Delaware corporation, or any of its subsidiaries immediately prior to the Merger shall be cancelled and no consideration shall be delivered in exchange therefor.

(d) Each option to purchase Company Common Shares outstanding immediately prior to the Effective Date, shall be converted into a right to receive, for each Company Common Share subject to such option, an amount equal to the difference between Fifteen Dollars and Fifty Cents ($15.50) and the exercise price.

4.02 (a) As soon as practicable after the Effective Date and after surrender to an agent appointed by Parent and who shall be reasonably acceptable to the Company (the "Exchange Agent") of any certificate which prior to the Effective Date represented any Company Common

Shares, or delivery of an executed letter of transmittal by any holder of options to purchase Company Common Shares, the Exchange Agent shall cause to be distributed to the person in whose name such certificate was issued, or from whom a letter of transmittal was received, (i) in the case of Company Common Shares, cash in the amount of Fifteen Dollars and Fifty Cents ($15.50), without interest, times the number of shares previously represented by the surrendered certificate, or (ii) in the case of any option to purchase Company Common Shares, cash (without interest) equal to the product of (x) the difference between Fifteen Dollars and Fifty Cents ($15.50) and the exercise price per share of Company Common Shares subject to such option and (y) the number of such shares subject to such option. Each certificate which immediately prior to the Effective Date represented any shares of Sub Common Stock shall be deemed at and after the Effective Date to represent only the Company Common Shares into which such shares of Sub Common Stock shall have been converted hereunder.

ARTICLE V

Other Provisions

5.01 This Merger Agreement shall be governed by the laws of California.

5.02 This Merger Agreement, together with the Agreement and Plan of Merger dated as of December 2, 1989 by and among the Constituent Corporations and the Parent contains the entire agreement of the parties hereto, and supersedes any prior written or oral agreements between them concerning the subject matter contained herein.

5.03 This Merger Agreement may be executed in any number of counterparts and each such counterpart shall be deemed to be an original instrument, but all of such counterparts together shall constitute but one agreement.

IN WITNESS WHEREOF, the parties have duly executed this Merger Agreement as of the date first written above.

TELOS CORPORATION

By: /s/ Lin Conger

President

By: /s/ Richard Hansen

Secretary

CONTEL FEDERAL SYSTEMS, INC

By: /s/ Stuart C. Johnson

President

By: /s/ Patricia Friedline

Secretary

TELOS ACQUISITION COMPANY

By: /s/ Stuart C. Johnson

President

By: /s/ Patricia Friedline

Secretary

TELOS ACQUISITION COMPANY
OFFICERS' CERTIFICATE
OF
APPROVAL OF MERGER

The undersigned, Lin Conger and Richard Hansen and each of them, do hereby certify that:

1. They are President and Secretary, respectively, of Telos Corporation, a California corporation (the "Company"),

2. This Certificate is attached to the Agreement of Merger, dated as of February 20, 1990, in the form duly approved by the Board of Directors of the Company, providing for the merger of Telos Acquisition Company, a California corporation with and into the Company.

3. The Company has one class of 20,000,000 authorized shares of Common Stock, par value $.01 per share, of which 3,988,613 are issued and outstanding as of the date hereof. The Company also has 1,000,000 authorized shares of Preferred Stock, par value $.01 per share, none of which has been issued as of the date hereof.

4. The principal terms of the Agreement of Merger in the form attached were approved by a majority of the issued and outstanding shares of stock entitled to vote thereon, which equaled or exceeded the vote required, and the percentage vote required of said shares for such approval is more than fifty (50) percent.

IN WITNESS WHEREOF, the undersigned have executed this Certificate as of the 20th day of February, 1990.

/s/ Lin Conger

Lin Conger, President

/s/ Richard Hansen

Richard Hansen, Secretary

Each of the undersigned declares under penalty of perjury that he has read the foregoing Certificate and knows the contents thereof and that the same is true of his own knowledge.

Executed at Santa Monica, California on February 20, 1990.

/s/ Lin Conger

Lin Conger, President

/s/ Richard Hansen

Richard Hansen, Secretary

CERTIFICATE OF AMENDMENT
OF
ARTICLES OF INCORPORATION
OF
TELOS CORPORATION

LIN CONGER and RICHARD HANSEN certify that:

1. They are the president and the secretary, respectively, of TELOS CORPORATION, a California corporation.

2. The articles of incorporation of this corporation are amended as follows:

Article IV is added to the articles of incorporation to read in its entirety as follows:

"IV: The liability of the directors of the Corporation for monetary damages shall be eliminated to the fullest extent permissible under California law."

Article V is added to the articles of incorporation to read in its entirety as follows:

"V: The Corporation is authorized to provide indemnification of agents (as defined in Section 317 of the California Corporations Code) through bylaw provisions, agreements with agents, or otherwise, in excess of the indemnification otherwise permitted by Section 317 of the Corporations Code, subject only to the limits set forth in Section 204 of the Corporations Code with respect to actions for breach of duty to the Corporation or its shareholders."

3. The foregoing amendments of the articles of incorporation have been duly approved by the board of directors.

4. The foregoing amendments of the articles have been duly approved by the required vote of shareholders in accordance with section 902 of the Corporations Code. The total number of outstanding shares of the corporation entitled to vote at the date of the meeting was 3,701.779. The number of shares voting in favor of the amendments equaled or exceeded the vote required. The percentage vote required was more than 50%

Date: September 15, 1989

/s/ Lin Conger

LIN CONGER, President

/s/ Richard Hansen

RICHARD HANSEN, Secretary

We further declare under penalty of perjury under the laws of the State of California that the matters set forth in the foregoing certificate are true and correct of our own knowledge.

September 15, 1989

/s/ Lin Conger

LIN CONGER, President

/s/ Richard Hansen

RICHARD HANSEN, Secretary

TELOS ACQUISITION COMPANY

OFFICERS' CERTIFICATE

OF

APPROVAL OF MERGER

The undersigned, Stuart C. Johnson and Patricia Friedline, and each of them, do hereby certify that:

1. They are President and Assistant Secretary, respectively, of Telos Acquisition Company, a California corporation (the "Company"),

2. This Certificate is attached to the Agreement of Merger, dated as of February 20, 1990, in the form duly approved by the Board of Directors of the Company, providing for the merger of the Company with and into Telos Corporation, a California corporation.

3. The Company has only one class of 1,000 authorized shares of common stock, par value $.01 per share, and the total number of outstanding shares is 1,000,

4. The principal terms of the Agreement of Merger in the form attached were approved by 100 percent of the outstanding shares of said single class of shares, which equaled or exceeded the vote required, and the percentage vote required of said class of shares for such approval is more than 50 percent.

IN WITNESS WHEREOF, the undersigned have executed this Certificate as of the 20th day of Februry, 1990.

/s/ Stuart C. Johnson

Stuart C. Johnson, President

/s/ Patricia Friedline

Patricia Friedline, Assistant Secretary

Each of the undersigned declares under penalty of perjury that he has read the foregoing Certificate and knows the contents thereof and that the same is true of his own knowledge.

Executed at Chantilly,. Virginia on February 20, 1990.

/s/ Stuart C. Johnson

Stuart C. Johnson, President

/s/ Patricia Friedline

Patricia Friedline, Assistant Secretary

RESTATED
ARTICLES OF INCORPORATION
OF
TELOS COMPUTING, INC.

LIN CONGER and RICHARD HANSEN certify that:

1. They are the president and the secretary, respectively, of TELOS COMPUTING, INC., a California corporation.

2. The articles of incorporation of this corporation are amended and restated to read as follows:

I.

The name of this corporation is TELOS CORPORATION.

II.

The purpose of this corporation is to engage in any lawful act or activity for which a corporation may be organized under the General Corporation Law of California other than the banking business, the trust company business or the practice of a profession permitted to be incorporated by the California Corporations Code.

III.

The Corporation is authorized to issue two classes of shares of stock to be designated respectively as "Common Stock" and "Preferred Stock." The total number of shares of Common Stock which the Corporation is authorized to issue shall be 20,000,000 shares and each such share shall have a par value of one cent ($.01). The total number of shares of Preferred Stock which the Corporation is authorized to issue shall be 1,000,000 shares and each such share shall have a par value of one cent ($.01). The Preferred Stock may be issued in one or more series, and authority is hereby expressly vested in the Board of Directors pursuant to Sections 202(e) and 401 of the General Corporation Law of California (or in any successor statutes), by resolution or resolutions adopted by such Board of Directors, to determine the designation and to fix the number of shares of any such series. The Board of Directors is further authorized to determine or alter the rights, preferences, privileges and restrictions granted to or imposed upon any wholly unissued series of Preferred Stock or the holders thereof, and to increase or decrease (but not below the number of shares of any such series then outstanding) the number of shares of any such series of Preferred Stock subsequent to the issue of shares of that series. Upon the amendment of this article to read as herein set forth, each outstanding share of capital stock is split up and converted into 3.36 shares of Common Stock.

3. The foregoing amendment and restatement of articles of incorporation has been duly approved by the board of directors.

4. The foregoing amendment and restatement of articles has been duly approved by the required vote of shareholders in accordance with section 902 of the Corporations Code. The total number of outstanding shares of the corporation is 752,570. The number of shares voting in favor of the amendment equaled or exceeded the vote required. The percentage vote required was more than 50%.

Date: October 4, 1985

/s/ Lin Conger

LIN CONGER, President

/s/ Richard Hansen

RICHARD HANSEN, Secretary

We further declare under penalty of perjury under the laws of the State of California that the matters set forth in the Certificate are true and correct of our own knowledge.

/s/ Lin Conger

LIN CONGER, President

/s/ Richard Hansen

RICHARD HANSEN, Secretary

Exhibit 3.94

AMENDMENT TO THE BYLAWS OF
TELOS CORPORATION
(A CALIFORNIA CORPORATION)

Article III, Section 3, shall be deleted and the following shall be inserted in lieu thereof:

Section 3: The authorized number of directors of the corporation shall be three (3) until changed by an amendment to these bylaws duly adopted by the vote or written consent of the board of directors and approved by the Corporation.

TELOS CORPORATION

JOINT WRITTEN CONSENT OF THE SOLE SHAREHOLDER
AND DIRECTORS IN LIEU OF A MEETING
MARCH 20, 2000

The undersigned, being the sole shareholder and all of the directors of Telos Corporation, a California corporation (the "Corporation"), hereby waive all notice otherwise required and consent, pursuant to California General Corporation Law, to the adoption of the following resolutions to the same extent as if duly adopted at a duly called and noticed meeting of the shareholders and the Board of Directors at which a quorum was present and voted affirmatively therefore.

ARTICLE I. AMENDMENT OF BYLAWS

RESOLVED, that Article III of the bylaws of the Corporation be amended in the form attached hereto, thereby setting the authorized number of directors of the Corporation to a fixed number of three (3), such amendment being effective as of March 20, 2000; and

RESOLVED, that the following persons are hereby elected to each serve as a member of the Board of Directors until his death, resignation, or removal, or until his successor is duly elected and qualified:

David S. Aldrich
William L.P. Brownley

RESOLVED, that the Board of Directors is now constituted as follows:

John B. Wood
David S. Aldrich
William L.P. Brownley

ARTICLE II. Election of Officers

RESOLVED, that the persons named below are elected as officers of the Corporation, in the capacities indicated opposite their names, each to serve at the discretion of the Board of Directors until his/her death, resignation, or removal, or until his/her successor is duly elected and qualified:

David S. Aldrich	President
William L.P. Brownley	Vice President
Andrea L. Ayoub	Secretary
Thomas J. Ferrara	Treasurer

ARTICLE III. Minutes

RESOLVED, that the Secretary be and hereby is directed to place this Joint Written Consent, when fully executed, into the minutes and records of the Corporation.

The action taken by this Consent shall have the same force and effect as if taken by the undersigned at a special meeting of the sole shareholder and Directors, duly noticed, called, and constituted pursuant to the Bylaws of the Corporation and the laws of the State of California. This Consent may be executed in one or more counterparts, via facsimile or otherwise, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.

The actions evidenced by this Consent shall be effective as of March 20, 2000.

/s/ John B. Wood
- ----------
John B. Wood, Director

Telos Corporation (a Maryland Corporation)
Sole Shareholder

By: /s/ David S. Aldrich

David S. Aldrich, CEO and President

BYLAWS

OF

TELOS CORPORATION

(A CALIFORNIA CORPORATION)

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BYLAWS

OF

TELOS CORPORATION

(A California corporation)

ARTICLE IV. OFFICES

Section 1. PRINCIPAL EXECUTIVE OFFICE.

The board of directors is hereby granted full power and authority to fix and locate and to change the principal executive office of the corporation from one location to another within or outside the State of California. If the principal executive office is located outside this state, and the corporation has one or more business offices in this state, the board of directors shall fix and designate a principal business office in the State of California, the location of which principal business office may be changed from time to time by the board of directors. Until so changed, the principal executive office of the corporation shall be located within the County of Los Angeles, State of California.

Section 2. OTHER OFFICES.

Other business offices may at any time be established by the board of directors at any place or places within or outside the State of California.

ARTICLE V. MEETINGS OF SHAREHOLDERS

Section 1. PLACE OF MEETINGS.

All annual or other meetings of shareholders shall be held at the principal executive office of the corporation, or at any other place within or without the State of California which may be designated either by the board of directors or by the written consent of all persons entitled to vote thereat and not present at the meeting, given either before or after the meeting, and filed with the secretary of the corporation.

Section 2. ANNUAL MEETING.

The annual meeting of shareholders shall be held at such date and time as shall be designated by the board of directors, provided, however, that such meeting shall be held not later than 15 months after the previous annual meeting. At such meeting directors shall be elected, reports of the affairs of the corporation shall be considered, and any other business may be transacted which is within the powers of the shareholders.

Written notice of each annual meeting shall be given to each shareholder entitled to vote, either personally or by mail or other means of written communication, charges prepaid, addressed to such shareholder at his address appearing on the books of the corporation or given by him to the corporation for the purpose of notice. If any notice or report addressed to the shareholder at the address of such shareholder appearing on the books of the corporation is returned to the corporation by the United States Postal Service is unable to deliver the notice or report to the shareholder at such address, all future notices or reports shall be deemed to have been duly given without further mailing if the same shall be available for the shareholder upon written demand of the shareholder at the principal executive office of the corporation for a period of one year from the date of the giving of the notice or report to all other shareholders. If a shareholder gives no address, notice shall be deemed to have been given to him if sent by mail or other means of written communication addressed to the place where the principal executive office of the corporation is situated, or if published at least once in some newspaper of general circulation in the county in which said principal executive office is located.

All such notices shall be given to each shareholder entitled thereto not less than ten days nor more than sixty days before each annual meeting. Any such notice shall be deemed to have been given at the time when delivered personally or deposited in the mail or sent by other means of written communication. An affidavit of mailing of any such notice in accordance with the foregoing provisions, executed by the secretary assistant secretary or any transfer agent of the corporation shall be prima facie evidence of the giving of the notice.

Such notices shall specify:

(a) the place, date, and hour of such meeting;

(b) those matters which the board, at the time of the giving of the notice, intends to present for action by the shareholders;

(c) if directors are to be elected, the names of nominees intended at the time of the notice to be presented by management for election;

(d) the general nature of a proposal, if any, to take action with respect to approval of (i) a contract or other transaction with an interested director, (ii) amendment of the articles of incorporation, (iii) a reorganization of the corporation as defined in Section 181 of the General Corporation Law, (iv) voluntary dissolution of the corporation, or (v) a distribution in dissolution other than in accordance with the liquidation rights of outstanding preferred shares, if any; and

(e) such other matters, if any, as may be expressly required by statute.

Section 3. SPECIAL MEETINGS.

Special meetings of the shareholders, for the purpose of taking any action permitted by the shareholders under the General Corporation Law and the articles of incorporation of this corporation, may be called at any time by the president, the board of directors or by any two or more members thereof, or by one or more shareholders holding not less than one-fifth of the voting power of the corporation. Upon request in writing that a special meeting of shareholders

be called for any proper purpose, directed to the chairman of the board, president, vice president or secretary by any person (other than the board) entitled to call a special meeting of shareholders, the officer shall cause notice to be given to shareholders entitled to vote that a meeting will be held at a time requested by the person calling the meeting, not less than thirty-five nor more than sixty days after receipt of the request. Except in special cases where other express provision is made by statute, notice of such special meetings shall be given in the same manner and shall specify the same information as for annual meetings of shareholders. In addition to the matters required by items (a) and, if applicable, (c) of the preceding Section, notice of any special meeting shall specify the general nature of the business to be transacted, and no other business may be transacted at such meeting.

Section 4. QUORUM.

The presence in person or by proxy of the persons entitled to vote a majority of the voting shares at any meeting shall constitute a quorum for the transaction of business. The shareholders present at a duly called or held meeting at which a quorum is present may continue to do business until adjournment, notwithstanding the withdrawal of enough shareholders to leave less than a quorum, if any action taken (other than adjournment) is approved by at least a majority of the shares required to constitute a quorum.

Section 5. ADJOURNED MEETING AND NOTICE THEREOF.

Any meeting of shareholders whether or not a quorum is present may be adjourned for time to time by the vote of a majority of the shares, the holders of which are either present in person or represented by proxy, but in the absence of a quorum no other business may be transacted at such meeting, except as provided in Section 4 above.

When any meeting of shareholders is adjourned for thirty days or more, or if after adjournment a new record date is fixed for the adjourned meeting, notice of the adjourned meeting shall be given as in the case of an original meeting. Except as provided above, it shall not be necessary to give any notice of the time and place of the adjourned meeting or of the business to be transacted thereat, other than by announcement of the time and place thereof at the meeting at which such adjournment is taken.

Section 6. RECORD DATE.

Unless a record date for voting purposes is fixed by the board of directors as provided in Section 1 of Article VI of these bylaws, only persons in whose names shares entitled to vote stand on the stock records of the corporation at the close of business on the business day next preceding the day on which notice is given or, if notice is waived, at the close of business on the business day next preceding the day on which the meeting of shareholders is held, shall be entitled to vote at such meeting, and such day shall be the record date for such meeting.

Section 7. VOTING.

Voting at meetings of shareholders may be by voice or by ballot; provided, however, that all elections for directors must be by ballot upon demand made by a shareholder at any election before the voting begins. If a quorum is present, except with respect to election of directors, the

affirmative vote of the majority of the shares represented a t the meeting and entitled to vote on any matter shall be the act of the shareholders, unless the vote of a greater number or voting by classes is required by the General Corporation Law or the next sentence, every shareholder entitled to vote at any election for directors shall have the right to cumulate his votes and give one candidate a number of votes equal to the number of directors to be elected multiplied by the number of votes to which his shares are entitled, or to distribute his votes on the same principal among as many candidates as he shall think fit. No shareholder shall be entitled to cumulative votes unless the name of the candidate or candidates for whom such votes would be cast has been placed in nomination prior to the voting and any such shareholder has given notice at the meeting, prior to the voting, of such shareholder's intention to cumulate his votes. The candidates receiving the highest number of votes of shares entitled to be voted for them, up to the number of directors to be elected, shall be elected.

Section 8. VALIDATION OF DEFECTIVELY CALLED OR NOTICED MEETINGS.

The transactions of any meeting of shareholders, either annual or special, however called and noticed and wherever held, shall be as valid as though undertaken at a meeting duly held after regular call and notice, if a quorum is present either in person or by proxy, and if, either before or after the meeting, each of the shareholders entitled to vote, not present in person or by proxy, or who, through present, has at the beginning of the meeting properly objected to the transaction of any business because the meeting was not lawfully called or convened, or properly objected to particular matters of business legally required to be included in the notice, but not so included, signs a written waiver of notice, a consent to the holding of such meeting or an approval of the minutes thereof.

The waiver of notice or consent need not specify either the business to be transacted or the purpose of any annual or special meeting of shareholders, except that if action is taken or proposed to be taken for approval of any of those matters specified in (d) of the fourth paragraph of Section 2 of this Article II, the waiver of notice or consent shall state the general nature of the proposal. All such waivers, consents and approvals shall be filed with the corporate records or made a part of the minutes of the meeting.

Section 9. ACTION WITHOUT MEETING; WRITTEN CONSENT.

Directors may be elected without a meeting by a consent in writing, setting forth the action so taken, signed by all of the persons who would be entitled to vote for the election of directors; provided that, without notice, a director may be elected at any time to fill a vacancy on the board of directors not created by the removal of the director that has not been filled by the directors by the written consent of persons holding a majority of the outstanding shares entitled to vote for the election of directors.

Any other action which, under any provision of the General Corporation Law, may be taken at a meeting of the shareholders may be taken without a meeting, and without notice except as hereinafter set forth, if a consent in writing, setting forth the action so taken, is signed by the holders of outstanding shares having not less than the minimum number of votes that would be necessary to authorize or take such action at a meeting at which all shares entitled to vote thereon were present and voted.

When the approval of shareholders is given without a meeting by less than unanimous written consent, unless the consents of all shareholders entitled to vote have been solicited in writing, the secretary shall give prompt notice of the corporate action approved by the shareholders without a meeting. In the case of any proposed shareholder approval of (i) a contract or other transaction with an interested director, (ii) indemnification of an agent of the corporation as authorized by Section 17, of the Article III, of these bylaws, (iii) a reorganization of the corporation as defined in Section 181 of the General Corporation Law, or (iv) a distribution in dissolution other than in accordance with the rights of outstanding preferred shares, if any, the notice shall be given at least ten days before the consummation of any action authorized by that approval. Such notice shall be given in the same manner as notice of a meeting of shareholders.

Unless, as provided in Section 1 of Article VI of these bylaws, the board of directors has fixed a record date for the determination of shareholders entitled to notice of and to give such written consent, the record date for such determination shall be the day on which the first written consent is given. All such written consents shall be filled with the secretary of the corporation.

Any shareholder giving a written consent, or the shareholder's proxyholders, or a transferee of the shares or a personal representative of the shareholder or their respective proxyholders, may revoke the consent by a writing received by the corporation prior to the time that written consents of the number of shares required to authorize the proposed action have been filed with the secretary of the corporation, but may not do so thereafter. Such revocation is effective upon its receipt by the secretary of the corporation.

Section 10. PROXIES.

Every person entitled to vote or execute consent shall have the right to do so either in person or by one or more agents authorized by a written proxy executed by such person or his duly authorized agent and filed with the secretary of the corporation. Any proxy duly executed is not revoked, and continues in full force and effect, until (i) an instrument revoking it or a duly executed proxy bearing a later date is filed with the secretary of corporation prior to the vote pursuant thereto, (ii) the person executing the proxy attends the meeting and votes in person, or (iii) written notice of the death or incapacity of the maker of such proxy is received by the corporation before the vote pursuant thereto is counted; provided that no such proxy shall be valid after the expiration of eleven months from the date of its execution, unless the proxy specifies a longer length of time for which such proxy is to continue in force.

Section 11. INSPECTORS OF ELECTION.

In advance of any meeting of shareholders, the board of directors may appoint any persons other than nominees for office as inspectors of election to act at such meeting or any adjournment thereof. If inspectors of election be not so appointed, the chairman of any such meeting may, and on the request of any shareholder or his proxy shall, make such appointment at the meeting. The number of inspectors shall be either one or three. If appointed at the meeting on the request of one or more shareholders of proxies, the majority of shares represented in person or by proxy shall determine whether one or three inspectors are to be appointed. In case any person appointed as inspector fails to appear or fails or refuses to act, the vacancy may, and

on the request of any shareholder or a shareholder's proxy shall, be filled by appointment by the board of directors in advance of the meeting, or at the meeting by the chairman of the meeting.

The duties of such inspectors shall be as prescribed by Section 707 of the General Corporation Law and shall include: determining the number of shares outstanding and the voting power of each, the shares represented at the meeting, the existence of a quorum, the authenticity, validity and effect of proxies; receiving votes, ballots or consents; hearing and determining all challenges and questions in any way arising in connection with the right to vote; counting and tabulating all votes or consents; determining when the polls shall close; determining the result; and such acts as may be proper to conduct the election or vote with fairness to all shareholders. In the determination of the validity and effect of proxies the dates contained on the forms of proxy shall presumptively determine the order of execution of the proxies, regardless of the postmark dates of the envelopes in which they are mailed.

The inspectors of election shall perform their duties impartially, in good faith, to the best of their ability and as expeditiously as is practical. If there are three inspectors of election, the decision, act or certificate of a majority is effective in all respects as the decision, act of certificate of all. Any report or certificate made by the inspectors of election is prima facie evidence of the facts stated therein.

ARTICLE VI. DIRECTORS

Section 1. POWERS.

Subject to limitations in the articles of incorporation and to the provisions of the General Corporation Law as to action to be authorized or approved by the shareholders, all corporate powers shall be exercised by or under the authorization of, and the business and affairs of the corporation shall be controlled by, the board of directors. The board may delegate the management of the day-to-day operations of the business of the corporation to a management company or other person provided that the business and affairs of the corporation shall be managed and all corporate powers shall be exercised under the ultimate direction of the board.

Section 2. COMMITTEES OF THE BOARD.

By resolution adopted by a majority of the authorized number of directors, the board may designate an executive and other committees, each consisting of two or more directors, to serve at the pleasure of the board, and prescribe the manner in which proceedings of such committee shall be conducted. Unless the board of directors shall otherwise prescribe the manner of proceedings of any such committee, meetings of such committee may be regularly scheduled in advance and may be called at any time by any two members thereof; otherwise, the provisions of these bylaws with respect to notice and conduct of meetings of the board shall govern. Any such committee, to the extent provided in a resolution of the board, shall have all of the authority of the board, except with respect to:

(a) the approval of any action for which the General Corporation Law or the articles of incorporation also require shareholder approval;

(b) the filling of vacancies on the board or in any committee;

(c) the fixing of compensation;

(d) the adoption, amendment or repeal of bylaws;

(e) the amendment or repeal of any resolution of the board;

(f) any distribution to the shareholders, except at a rate or in a periodic amount or within a price range determined by the board; and

(g) the appointment of other committees of the board or members thereof.

Section 3. NUMBER AND QUALIFICATION OF DIRECTORS.

The authorized number of directors of the corporation shall be not less than five (5) nor more than nine (9). The exact number of directors within the limits specified shall be seven (7) until changed by an amendment to these bylaws duly adopted by the board of directors. Such indefinite number may be changed, or a definite number fixed without provision for an indefinite number, by an amendment to these bylaws duly adopted by the vote or written consent of the board of directors, provided, however, that a bylaw reducing the minimum number of directors to a number less than five cannot be adopted if the votes cast against its adoption at a meeting or the shares not consenting in the case of action by written consent are equal to more than 16-2/3 percent of the outstanding shares entitled to vote. No amendment may change the stated maximum number of authorized directors to a number greater than two times the stated minimum number of directors minus one.

Section 4. ELECTION AND TERM OF OFFICE.

The directors shall be elected at each annual meeting of shareholders but, if any such annual meeting is not held or the directors are not elected thereat, the directors may be elected at any special meeting of shareholders held for that purpose. All directors shall hold office until their respective successors are elected, subject to the General Corporation Law and the provisions of these bylaws with respect to vacancies on the board.

Section 5. VACANCIES.

A vacancy in the board of directors shall be deemed to exist in case of the death, resignation or removal of any director, if a director has been declared of unsound mind by order of court or convicted of a felony, if the authorized number of directors be increased, or if the shareholders fail, at any annual or special meeting of shareholders at which any director or directors are elected, to elect the full authorized number of directors to be voted for at that meeting.

Vacancies in the board of directors, except for a vacancy created by the removal of a director, may filled by a majority of the remaining directors, through less than a quorum, or by a sole remaining director, and each director so elected shall hold office until his successor is elected at an annual or a special meeting of the shareholders. A vacancy in the board of directors created by the removal of a director may only be filled by the vote of a majority of the shares

entitled to vote represented at a duly held meeting at which a quorum is present, or by the written consent of the number of shareholders otherwise required for action by written consent.

The shareholders may elect a director or directors at any time to fill any vacancy or vacancies not filled by the directors. Any such election by written consent shall require the consent of holders of the number of shares otherwise required for action by written consent.

Any director may resign effective upon giving written notice to the chairman of the board, the president, the secretary or the board of directors of the corporation, unless the notice specifies a later time for the effectiveness of such resignation. If the board of directors accepts the resignation of a director tendered to take effect at a future time, board or the shareholders shall have the power to elect a successor to take office when the resignation is to become effective.

No reduction of the authorized number of directors shall have the effect of removing any director prior to the expiration of his term of office.

Section 6. REMOVAL.

Any or all of the directors may be removed without cause if such removal is approved by the vote of the outstanding shares entitled to vote, except that no director may be removed (unless the entire board is removed) when the votes cast against removal, or not consenting in writing to such removal, would be sufficient to elect such director if voted cumulatively at an election at which the same total number of votes were cast (or, if such action is taken by written consent, all shares entitled to vote were voted) and the entire number of directors authorized at the time of the director's most recent election were then being elected.

Section 7. PLACE OF MEETINGS AND MEETINGS BY TELEPHONE.

Regular meetings of the board of directors shall be held at any place within or without the State of California which has been designated from time to time by resolution of the board or by written consent of all members of the board. In the absence of such designation, regular meetings shall be held at the principal executive office of the corporation. Special meetings of the board may be held either at a place so designated or at the principal executive office. Any meeting, regular or special, may be held by conference telephone or similar communication equipment, so long as all directors participating in the meeting can hear one another and all such directors shall be deemed to be present at the meeting.

Section 8. ANNUAL MEETING.

Immediately following each annual meeting of shareholders the board of directors shall hold a regular meeting at the place of said annual meeting or at such other place as shall be fixed by the board of directors for the purpose of organization, election of officers, and the transaction of other business. Call and notice of such meetings are hereby dispensed with.

Section 9. OTHER REGULAR MEETINGS.

Other regular meetings of the board of directors shall be held on call of the President or at such time as shall from time to time be fixed by the board of directors. Such regular meetings may be held without notice.

Section 10. SPECIAL MEETINGS.

Special meetings of the board of directors for any purpose or purposes may be called at any time by the chairman of the board, the president, any vice president, the secretary or by any two directors.

Written notice of the time and place of special meetings shall be delivered personally to each director or communicated to each director by telephone, or by telegraph or mail, charges prepaid, addressed to him at his address as it is shown upon the records of the corporation or, if it is not so shown on such records or is not readily ascertainable, at the place at which the meetings of the directors are regularly held. In case such notice is mailed it shall be deposited in the United States mail at least four days prior to the time of the holding of the meeting. In case such notice is telegraphed or delivered, personally or by telephone, it shall be delivered to the telegraph company or so delivered at least forty-eight hours prior to the time of the holding of the meeting. Such mailing, telegraphing or delivery, personally or by telephone, as above provided, shall be due, legal and personal notice to such director.

Any notice shall state the date, place and hour of the meeting and the general nature of the business to be transacted, and no other business may be transacted at the meeting.

Section 11. ACTION WITHOUT MEETING.

Any action required or permitted to be taken by the board of directors may be taken without a meeting if all the members of the board shall individually or collectively consent in writing to such action. Such written consent or consents shall be filed with the minutes of the proceedings of the board and shall have the same force and effect as a unanimous vote of such directors.

Section 12. ACTION AT A MEETING: QUORUM AND REQUIRED VOTE.

Presence of a majority of the authorized number of directors at a meeting of the board of directors constitutes a quorum for the transaction of business, except as hereinafter provided or modified by the articles of incorporation. Every act or decision done or made by a majority of the directors present at a meeting duly held at which a quorum is present shall be regarded as the act of the board of directors, unless a greater number, or the same number after disqualifying one or more directors from voting, is required by law, by the articles of incorporation or by these bylaws. A meeting at which a quorum is initially present may continue to transact business notwithstanding the withdrawal of a director, provided that any action taken is approved by at least a majority of the required quorum for such meeting.

Section 13. VALIDATION OF DEFECTIVELY CALLED OR NOTICED MEETINGS.

The transactions of any meeting of the board of directors, however called and noticed and wherever held, shall be as valid as though undertaken at a meeting duly held after regular call

and notice, if a quorum is present and if, either before or after the meeting, each of the directors not present or who, though present, has prior to the meeting or at its commencement, protested the lack of proper notice to him, signs a written waiver of notice or a consent to holding such meeting or an approval of the minutes thereof. All such waivers, consents or approvals shall be filed with the corporate records or made a part of the minutes of the meeting.

Section 14. ADJOURNMENT.

A quorum of the directors may adjourn any directors' meeting to meet again at a stated day and hour; provided, however, that in the absence of a quorum a majority of the directors present at any directors' meeting, either regular or special, may adjourn from time to time until the time fixed for the next regular meeting of the board.

Section 15. NOTICE OF ADJOURNMENT.

If the meeting is adjourned for more than 24 hours, notice of any adjournment to another time or place shall be given prior to the time of the adjourned meeting to the directors who were not present at the time of adjournment. Otherwise notice of the time and place of holding an adjourned meeting need not be given to absent directors if the time and place be fixed at the meeting adjourned.

Section 16. FEES AND COMPENSATION.

Directors and members of committees may receive such compensation, if any, for their services, and such reimbursement for expenses, as may be fixed or determined by resolution of the board.

Section 17. INDEMNIFICATION OF AGENTS OF THE CORPORATION; PURCHASE OF LIABILITY INSURANCE.

(a) Upon and in the event of a determination by the board of directors of this corporation, this corporation shall have the power to indemnify any person who is or was a director, officer, employee, or other agent of this corporation, or is or was serving s such of another corporation, partnership, joint venture, trust, or other enterprise, at the request of this corporation against expenses, judgments, fines, settlements and other amounts actually and reasonably incurred in connection with any threatened, pending, or completed action or proceeding, whether civil, criminal, administrative, or investigative, to the fullest extent permitted under law, including but not limited to Section 317 of the California Corporations Code, as that section now exists or may hereafter from time to time be amended to provide.

(b) Upon and in the event of a determination by the board of directors of this corporation to purchase liability insurance, this corporation shall have the power to purchase and maintain insurance on behalf of any agent of the corporation against any liability asserted against or incurred by the agent in such capacity or arising out of the agent's status as such whether or not this corporation would have the power to indemnify the agent against such liability under the provisions of this section.

ARTICLE VII. OFFICERS

Section 1. OFFICERS.

The officers of the corporation shall consist of a president, a secretary and a chief financial officer. The corporation may also have, at the discretion of the board of directors, a chairman of the board, one or more vice presidents, one or more assistant secretaries, one or more assistant treasurers, and such additional officers as may be appointed in accordance with Section 3 of this Article. Any number of offices may be held by the same person; except those of president and secretary.

Section 2. ELECTION.

The officers of the corporation, except such officers as may be appointed in accordance with Section 3 or Section 5 of this Article, shall be chosen annually by the board of directors, and each such officer shall hold office until he shall resign, be removed or otherwise disqualified to serve, or until his successor shall be elected and qualified.

Section 3. SUBORDINATE OFFICERS.

The president may appoint such other officers as the business of the corporation may require, each of whom shall hold office for such period, have such authority and perform such duties as are provided in the bylaws or as the president may from time to time determine.

Section 4. REMOVAL AND RESIGNATION.

Any officer may be removed, either with or without cause, by the board of directors, at any regular or special meeting thereof, or, except in case of an officer chosen by the board of directors, by any officer upon whom such power of removal may be conferred by the board of directors (subject, in each case, to the rights, if any, of an officer under any contract of employment).

Any officer may resign at any time by giving written notice to the board of directors, the president or the secretary of the corporation, without prejudice, however, to the rights, if any, of the corporation under any contract to which such officer is a party. Any such resignation shall take effect at the date of the receipt of such notice or at any later time specified therein, and, unless otherwise specified therein, the acceptance of such resignation shall not be necessary to make it effective.

Section 5. VACANCIES.

A vacancy in any office because of death, resignation, removal, disqualification or any other cause shall be filled in the manner prescribed in the bylaws for regular appointment to such office.

Section 6. CHAIRMAN OF THE BOARD.

The chairman of the board, if there shall be such an officer, shall, if present, preside at all meetings of the board of directors and exercise and perform such other powers and duties as may be from time to time assigned to him by the board of directors or prescribed by the bylaws.

Section 7. PRESIDENT.

Subject to such supervisory powers, if any, as may be given by the board of directors to the chairman of the board, if there be such an officer, the president shall be the chief executive officer of the corporation and shall, subject to the control of the board of directors, have general supervision, direction and control of the business and affairs of the corporation. He shall preside at all meetings of the shareholders and, in the absence of the chairman of the board, or if there be none, at all meetings of the board of directors. He shall be ex officio a member of all the standing committees, including the executive committee, if any, and shall have the general powers and duties of management usually vested in the office of president of a corporation, and shall have such other powers and duties as may be prescribed by the board of directors.

Section 8. VICE PRESIDENT.

In the absence or disability of the president, the most senior vice president, if any, in order of rank as fixed by the board of directors or, if not ranked, the vice president designated by the board of directors, shall perform all the duties of the president, and when so acting shall have all the powers of, and be subject to all the restrictions upon, the powers of the president. The vice presidents shall also perform such other duties as from time to time may be prescribed for them respectively by the board of directors.

Section 9. SECRETARY.

The secretary shall record or cause to be recorded, and shall keep or cause to be kept, at the principal executive office and such other place as the board of directors may order minutes of actions taken at all meetings of directors and shareholders, with the time and place of holding, whether regular or special, and, if special, how authorized, the notice thereof given, the names of those present at directors' meetings, the number of shares present or represented at shareholders' meetings and the proceedings thereof.

The secretary shall keep, or cause to be kept, at the principal executive office or at the office of the corporation's transfer agent, a share register or a duplicate share register, showing the names of the shareholders and their addresses, the number and classes of shares held by each, the number and date of certificates issued for the same, and the number and date of cancellation of every certificate surrendered for cancellation.

The secretary shall give, or cause to be given, notice of all meetings of the shareholders and of the board of directors required by the General Corporation Law or the bylaws to be given, and he shall keep the seal of the corporation in safe custody, and shall have such other powers and perform such other duties as may be prescribed by the board of directors.

Section 10. CHIEF FINANCIAL OFFICER.

The chief financial officer, who in the absence of a named treasurer shall also be deemed to be the treasurer when a treasurer may be required and shall be authorized and empowered to sign as treasurer, shall keep and maintain, or cause to be kept and maintained, adequate and correct accounts of the properties and business transactions of the corporation. The books of account shall at all reasonable times be open to inspection by any director.

The chief financial officer shall deposit all moneys and other valuables in the name and to the credit of the corporation with such depositaries as may be designated by the board of directors, shall disburse the funds of the corporation as may be ordered by the board of directors, shall render to the president directors, whenever they request, an account of all of his transactions as treasurer and of the financial condition of the corporation, and shall have such other powers and perform such other duties as may be prescribed by the board of directors.

ARTICLE VIII. RECORDS AND REPORTS

Section 1. MAINTENANCE AND INSPECTION OF SHARE REGISTER.

The corporation shall keep at its principal executive office, or at the office of its transfer agent or registrar, if either be appointed, a record of its shareholders, giving the names and addresses of all shareholders and the number and class of shares held by each shareholder.

A shareholder or shareholders of the corporation holding at least five percent in the aggregate of the outstanding voting shares of the corporation or holding at least one percent of such voting shares and having filed a Schedule 14B with the United States Securities and Exchange Commission relating to the election of directors of the corporation may (i) inspect and copy the record of shareholders' names and addresses and shareholdings during usual business hours on five days prior written demand on the corporation, and (ii) obtain from the transfer agent of the corporation, on written demand and on the tender of such transfer agent's usual charges for such list, a list of the shareholders' names and addresses, who are entitled to vote for the election of directors, and their shareholdings, as of the most recent record date for which that list has been compiled or as of a date specified by the shareholder after the date of demand. This list shall be made available to any such shareholder by the transfer agent on or before the later of five business days after the demand is received or the date specified in the demand as the date as of which the list is to be compiled.

The record of shareholders shall also be open to inspection and copying on the written demand of any shareholder or holder of a voting trust certificate, at any time during usual business hours, for a purpose reasonably related to the holder's interests as a shareholder or as the holder of a voting trust certificate. Any inspection and copying under this Section 1 may be made in person or by an agent or attorney of the shareholder or holder of a voting trust certificate making the demand.

Section 2. MAINTENANCE AND INSPECTION OF BYLAWS.

The corporation shall keep at its principal executive office, or if its principal executive office is not in the State of California, at its principal business office in the State of California, the original or a copy of the bylaws as amended to date, which shall be open to inspection by the

shareholders at all reasonable times during office hours. If the principal executive office of the corporation is outside the State of California and the corporation has no principal business office in this state, the Secretary shall, upon the written request of any shareholder, furnish to that shareholder a copy of the bylaws as amended to date.

Section 3. MAINTENANCE AND INSPECTION OF OTHER CORPORATE RECORDS.

The accounting books and records and minutes of proceedings of the shareholders and the board of directors and any committee or committees of the board of directors shall be kept at such place or places designated by the board of directors, or, in the absence of such designation, at the principal executive office of the corporation. The minutes shall be kept in written form and the accounting books and records shall be kept either in written form or in any other form capable of being converted into written form. The minutes and accounting books and records shall be open to inspection upon the written demand of any shareholder or holder of a voting trust certificate, at any reasonable time during usual business ours, for a purpose reasonably related to the holder's interests as a shareholder or as the holder of a voting trust certificate. The inspection may be made in person or by an agent or attorney, and shall include the right to copy and make extracts. These rights of inspection shall extend to the records of each subsidiary corporation of the corporation.

Section 4. INSPECTION BY DIRECTORS.

Every director shall have the absolute right at any reasonable time to inspect all books, records, and documents of every kind and the physical properties of the corporation and each of its subsidiary corporations. This inspection by a director may be made in person or by an agent or attorney and the right of inspection includes the right to copy and make extracts of documents.

Section 5. ANNUAL REPORT TO SHAREHOLDERS.

The board of directors of the corporation shall not be required to cause an annual report to be sent to the shareholders pursuant to Section 1501 of the California Corporation Code so long as there are less than 100 holders of record of its shares (determined as provided in Section 605 of the California Corporations Code). If there are at least 100 holders of record of the corporation's shares (determined as provided in Section 605 of the California Corporations Code) or if the board of directors so resolves by a vote of a majority of the directors, the board of directors shall cause an annual report to be sent to the shareholders not later than 120 days after the close of the fiscal year and at least 15 days prior to the annual meeting of shareholders to be held during the next fiscal year. Such report shall contain a balance sheet as of the end of such fiscal year and an income statement and statement of changes in financial position for such fiscal year, accompanied by any report thereon of independent accountants or, if there is no such report, the certificate of an authorized officer of the corporation that such statements were prepared without audit from the books and records of the corporation. Nothing herein shall be interpreted as prohibiting the board of directors from issuing other periodic reports to the shareholders of the corporation as the board of directors considers appropriate.

Section 6. FINANCIAL STATEMENTS.

A copy of any annual financial statement and any income statement of the corporation for each quarterly period of each fiscal year, and any accompanying balance sheet of the corporation as of the end of each such period, that has been prepared by the corporation shall be kept on file in the principal executive office of the corporation for twelve months and each such statement shall be exhibited at all reasonable times to any shareholder demanding an examination of any such statement or a copy shall be mailed to any such shareholder.

If a shareholder or shareholders holding at least five percent of the outstanding shares of any class of stock of the corporation makes a written request to the corporation for an income statement of the corporation for the three-month, six-month or nine-month period of the then current fiscal year ended more than thirty days before the date of the request, and a balance sheet of the corporation as of the end of that period, the chief financial officer shall cause that statement to be prepared, if not already prepared, and shall deliver personally or mail that statement or statements to the person making the request within thirty days after the receipt of the request. If the corporation has not sent to the shareholders its annual report for the last fiscal year, this report shall likewise be delivered or mailed to the shareholder or shareholders within thirty days after the request.

The corporation shall also, on the written request of any shareholder, mail to the shareholder a copy of the last annual, semi-annual or quarterly income statement which it has prepared, and a balance sheet as of the end of that period.

The quarterly income statements and balance sheets referred to in this section shall be accompanied by the report, if any, of any independent accountants engaged by the corporation or the certificate of an authorized officer of the corporation that the financial statements were prepared without audit from the books and records of the corporation.

ARTICLE IX. GENERAL CORPORATE MATTERS

Section 1. RECORD DATE.

The board of directors may fix a time in the future as a record date for the determination of the shareholders entitled to notice of and to vote at any meeting of shareholders or entitled to give consent to corporate action in writing without a meeting, to receive any report, to receive any dividend or distribution, or any allotment of rights, or to exercise rights in respect to any change, conversion, or exchange of shares. The record date so fixed shall be not more than sixty days nor less than ten days prior to the date of any meeting or any other event for the purposes of which it is fixed. When a record date is so fixed, only shareholders of record on that date are entitled to notice of and to vote at any such meeting, to give consent without a meeting, to receive any report, to receive a dividend, distribution, or allotment of rights, or to exercise the rights, as the case may be, notwithstanding any transfer of any shares on the books of the corporation after the record date, except as otherwise provided in the articles of incorporation or bylaws.

Section 2. CHECKS, DRAFTS, ETC.

All checks, drafts or other orders for payment of money, or notes or other evidences of indebtedness, issued in the name of or payable to the corporation, shall be signed or endorsed by such person or persons and in such manner as, from time to time, shall be determined by resolution of the board of directors.

Section 3. CORPORATE CONTRACTS AND INSTRUMENTS; HOW EXECUTED.

The board of directors, except as otherwise provided in the bylaws, may authorize any officer or officers, agent or agents, to enter into any contract or execute any instrument in the name of and on behalf of the corporation, and such authority may be general or confined to specific instances; and, unless so authorized by the board of directors, no officer, agent or employee shall have any power or authority to bind the corporation by any contract or engagement or to pledge its credit or to render it liable for any purpose or to any amount.

ARTICLE X. AMENDMENTS

Section 1. POWER OF SHAREHOLDERS.

New bylaws may be adopted or these bylaws may be amended or repealed by the affirmative vote of a majority of the outstanding shares entitled to vote, or by the written assent of the shareholders entitled to vote such shares, except as otherwise provided by law or by the articles of incorporation.

Section 2. POWER OF DIRECTORS.

Subject to the right of shareholders as provided in Section 1 of this Article VII to adopt, amend or repeal bylaws, bylaws, other than a bylaw or amendment thereof changing the fixed range of number of directors, may be adopted, amended or repealed by the board of directors.

ARTICLE XI. SPECIAL RESTRICTIONS ON TRANSFER OF SHARES

Section 1. UNRESTRICTED TRANSFERS.

Shares of this corporation may be transferred without restriction by testamentary disposition or by intestate succession or pursuant to the corporate merger, consolidation or reorganization of any corporate shareholder.

Section 2. TRANSFER BY INTER VIVOS GIFT.

Shares of this corporation may be transferred by inter vivos gift to the spouse or to any of the issue of the shareholder thereof. Shares may not otherwise be transferred by inter vivos gift without the owner thereof having first obtained the prior written consent of the persons (including himself) then holding ninety percent (90%) of the outstanding shares of this corporation.

Section 3. HYPOTEHCATION.

None of the shares of this corporation shall in any way be hypothecated without the owner thereof having first obtained the prior written consent of the person (including himself) then holding ninety percent (90%) of the outstanding shares of this corporation.

Section 4. SALE OR TRANSFER.

Before there can be a valid sale or transfer of any of the common shares of the corporation by any holder thereof, he must have received a bona fide offer to purchase and he shall offer said shares to the corporation in the following manner:

(a) Such offering shareholder shall deliver a notice in writing by mail or otherwise to the secretary of the corporation stating the price, terms, and conditions of such proposed sale or transfer, the number of shares to be sold or transferred, the name of the offeree, and his intention so to sell or transfer such shares. Within 10 days thereafter, the corporation shall have the prior right to purchase all or any full number of such shares so offered at the price and upon the terms and conditions stated in such notice.

(b) If less than all but not all of the shares referred to in said notice to the secretary are subscribed to as aforesaid by the corporation, the shareholder desiring to sell or transfer may elect to disregard said subscriptions and dispose of all shares of stock referred to in said notice to the secretary to the designated offeree, provided, however, that he shall not sell or transfer such shares at a lower price or on terms more favorable to the purchaser or transferee than those specified in said notice to the secretary.

(c) Within the limitations herein provided, this corporation may purchase its shares from any offering shareholder; provided, however, that at no time shall this corporation be permitted to purchase all of its outstanding voting shares. Any sale or transfer of the common shares of the corporation shall be null and void unless the terms, conditions and provisions of this Article VIII, Section 4 of these Bylaws are strictly observed and followed.

Section 5. CONSIDERATION MUST BE MONEY.

Any transfer by sale of shares which, under provisions of Section 4 of this Article must first be offered to the corporation, must be a transfer for consideration payable solely in money, either as a lump sum at the time of the sale or in installments.

Section 6. NOTATION ON SHARES.

The share certificates issued by his corporation shall contain the following notation: "Sale, transfer, or hypothecation of the shares represented by this certificate is subject to the provisions and restrictions of the Bylaws of the issuing corporation, and, in particular, is subject to the provisions of Article VIII of such Bylaws, all of the provisions of which are incorporated herein."

Exhibit 3.95

AGREEMENT OF MERGER

This Agreement of Merger is made and entered into as of August 17, 1995 ("Merger Agreement"), between Troll Technology Corporation, a California corporation ("Company"), and TTC Acquisition Company, a California corporation ("Sub" or the "Surviving Corporation;" Company and Sub being hereinafter collectively referred to as the "Constituent Corporations").

INTENDING TO BE LEGALLY BOUND, and in consideration of the premises and mutual covenants and agreements contained herein, the Constituent Corporations hereby agree as follows:

ARTICLE I

THE MERGER

1.1 Merger of Company With and Into Sub.

(a) Agreement to Acquire Company. Upon the terms and subject to the conditions of this Merger Agreement and an Agreement and Plan of Merger, dated as of June 30, 1995 (the "Agreement"), among Jefferson Partners Capital Corporation, a Canadian corporation and the owner of all the outstanding shares of common stock of Sub ("Parent"), Company, the shareholders of Company and Sub, Company shall be acquired by Parent through a merger (the "Merger") of Company with and into Sub.

(b) Effective Date. The Merger shall become effective upon the filing of this Merger Agreement and officers' certificates of each Constituent Corporation with the Secretary of State of the State of California pursuant to Section 1103 of the California General Corporation Law (the "GCL"). The date and time of such filing is hereinafter referred to as the "Effective Date."

(c) Surviving Corporation. At the Effective Date, Company shall be merged with and into Sub and the separate corporate existence of Company shall thereupon cease. Sub shall be the surviving corporation in the Merger.

1.2 Effect of the Merger; Additional Actions.

(a) Effects. The Merger shall have the effects set forth in Section 1107 of the GCL. Without limiting such effects, the Surviving Corporation shall have the name "Troll Technology Corporation" and shall have all the rights, privileges, immunities and franchises, of a public as well as of a private nature, of each of the Constituent Corporations; and all property, real, personal and mixed, tangible and intangible, and all debts due on whatever account, and all other choses in action, and all and every other interest, of or belonging to or due to each of the Constituent Corporations, shall be taken and deemed to be vested in the Surviving Corporation without further act or deed. Subject to the provisions of this Agreement, the Surviving Corporation shall thereafter be responsible and liable for all liabilities and obligations of each of the Constituent Corporations; and any claim existing or action or proceeding pending by or against either of the Constituent Corporations may be prosecuted as if such Merger had not taken

place or the Surviving Corporation may be substituted in its place. Neither the rights of creditors nor any liens upon the assets and properties of either of the Constituent Corporations shall be impaired by the Merger.

(b) Additional Actions. If, at any time after the Effective Date, the Surviving Corporation shall consider or be advised that any deeds, bills of sale, assignments, assurances or any other actions or things are necessary or desirable (i) to vest, perfect or confirm of record or otherwise in the Surviving Corporations its rights, title or interest in, to or under any of the rights, properties or assets of either Constituent Corporation acquired or to be acquired by the Surviving Corporation as a result of, or in connection with, the Merger or (ii) to otherwise carry out the purposes of this Merger Agreement, each Constituent Corporation and its officers and directors shall be deemed to have granted to the Surviving Corporation an irrevocable power of attorney to execute and deliver all such deeds, bills of sale, assignments and assurances and to take and do all such other actions and things as may be necessary or desirable to vest, perfect or confirm any and all right, title and interest in, to and under such rights, properties or assets in the Surviving Corporation or otherwise to carry out the purposes of this Merger Agreement; and the officers and directors of the Surviving Corporation are fully authorized in the name of each Constituent Corporation or otherwise to take any and all such actions.

ARTICLE II

ARTICLES OF INCORPORATION, BYLAWS AND DIRECTORS AND OFFICERS OF THE SURVIVING CORPORATION

2.1 Amendment of Company's Articles of Incorporation.

(a) Authorized Stock at Merger. At the Effective Date, Article I of the Articles of Incorporation of Sub shall be amended in its entirety to read as follows:

"The name of this corporation is Troll Technology Corporation"

(b) Articles of Incorporation of Surviving Corporation. The Articles of Incorporation of Sub in effect immediately prior to the Effective Date, as amended as provided in Section 2.1(a), shall be the Articles of Incorporation of the Surviving Corporation unless and until amended or repealed as provided by applicable law and such Articles of Incorporation.

2.2 Bylaws of the Surviving Corporation. The Bylaws of Sub in effect immediately prior to the Effective Date shall be the Bylaws of the Surviving Corporation unless and until amended or repealed as provided by applicable law, the Articles of Incorporation of the Surviving Corporation and such Bylaws.

2.3 Officers and Directors of Surviving Corporation. The directors of Sub immediately prior to the Effective Date shall be the directors of the Surviving Corporation, and the officers of Company immediately prior to the Effective Date shall be the officers of the Surviving Corporation, in each case until their successors shall have been elected, qualified or until otherwise provided by law.

ARTICLE III

EFFECT OF THE MERGER ON THE CAPITAL STOCK OF THE CONSTITUENT CORPORATIONS; EXCHANGE OF CERTIFICATES

3.1 Effect on Capital Stock. As of the Effective Date, by virtue of the Merger and without any action on the part of the holder of any shares of capital stock of Sub or Company:

(a) Capital Stock of Sub. All issued and outstanding shares of capital stock of Sub shall continue to be issued and outstanding and shall be converted into 1,000 shares of Common Stock of the Surviving Corporation. Each stock certificate of Sub evidencing ownership of any such shares shall continue to evidence ownership of such shares of capital stock of the Surviving Corporation.

(b) Cancellation of Company Stock. All shares of common stock, without par value, of Company ("Corporation Common Stock") that are owned directly or indirectly by Company or by any Subsidiary of Company and any shares of Corporation Common Stock that are owned by Parent, Sub or any other Subsidiary of Parent shall be cancelled and retired, and no stock of Parent or other consideration shall be delivered in exchange therefor and all rights in respect thereof shall cease to exist without any conversion thereof or payment therefor. In this Merger Agreement, a "Subsidiary" of a Person means, at any time, any corporation or other Person, if at such time the first mentioned Person owns, directly or indirectly, securities or other ownership interests in such corporation or other Person, having ordinary voting power to elect a majority of the board of directors or persons performing similar functions for such corporation or other Person. In this Merger Agreement, a "Person" means an individual, partnership, corporation, trust, unincorporated association, limited liability company, joint venture or other entity or governmental body, authority, agency or entity.

(c) Conversion of Corporation Common Stock. At the Effective Date, all the issued and outstanding shares of Corporation Common Stock (other than shares to be cancelled pursuant to Section 3.1(b) and shares, if any, held by persons exercising dissenters' rights in accordance with Chapter 13 of the GCL ("Dissenting Shares")), automatically and without any action on the part of the holders thereof, shall cease to be outstanding and shall be converted into the right to receive in the aggregate after the Effective Date on a pro rata basis, (i) an amount in cash equal to $854,370.56 (or approximately $3,666 per share of Corporation Common Stock); (ii) 475,000 Common Shares in the capital of Parent ("Common Shares") (approximately 2,038 Common Shares per share of Corporation Common Stock); and (III) Warrants to purchase 500,000 Common Shares ("Warrants") (Warrants to purchase approximately 2,145 Common Shares per share of Corporation Common Stock).

All such shares of Corporation Common Stock, when so converted, shall no longer be outstanding and shall automatically be cancelled and retired and shall cease to exist, and each holder of a certificate representing any such shares shall cease to have any rights with respect thereto, except the right to receive the consideration provided in this Section 3.1(c) to be issued or paid in consideration therefor upon the surrender of such certificate in accordance with the Agreement, without interest.

(d) Dissenters' Rights. If holders of Corporation Common Stock are entitled to dissenters' rights in connection with the Merger under Chapter 13 of the GCL, any Dissenting Shares shall not be converted into the right to receive cash. Common Shares and Warrants as provided in Section 3.1(c), but shall be converted into the right to receive such consideration as may be determined to be due with respect to such Dissenting Share pursuant to the laws of the State of California.

(e) Fractional Shares. No certificate or scrip representing fractional Common Shares or Warrants shall be issued upon the surrender for exchange of certificates representing Corporation Common Stock, and such fractional share interests will not entitle the owner thereof to vote or to enjoy any other rights of a shareholder of Parent.

3.2 No Further Ownership Rights in Corporation Common Stock. All cash paid and Common Shares and Warrants issued upon the surrender for exchange of shares of Corporation Common Stock in accordance with the terms hereof (including any cash paid pursuant to Sections 3.1(e)) shall be deemed to have been issued in full satisfaction of all rights pertaining to such shares of Corporation Common Stock, subject, however, to the Surviving Corporation's obligation to pay any dividends or make any other distributions with a record date prior to the Effective Date which may have been declared or made by Company on such shares of Corporation Common Stock in accordance with the terms of this Merger Agreement and the Agreement or prior to the date hereof and which remain unpaid at the Effective Date, and there shall be no further registration of transfers on the stock transfer books of the Surviving Corporation or its transfer agent of the shares of Corporation Common Stock which were outstanding immediately prior to the Effective Date. If, after the Effective Date, Certificates are presented to the Surviving Corporation for any reason, they shall be cancelled and exchanged as provided in this Article III.

ARTICLE IV

TERMINATION

4.1 Termination by Mutual Agreement. Notwithstanding the approval of this Merger Agreement by the shareholders of Company and Sub, this Merger Agreement may be terminated at any time prior to the Effective Date by mutual agreement of the Boards of Directors of Company and Sub.

4.2 Termination of Agreement and Plan of Merger. Notwithstanding the approval of this Merger Agreement by the shareholders of Company and Sub, this Merger Agreement shall terminate forthwith in the event that the Agreement shall be terminated as therein provided.

4.3 Effects of Termination. In the event of the termination of this Merger Agreement, this Merger Agreement shall forthwith become void and there shall be no liability on the part of either Company or Sub or their respective officers or directors, except as otherwise provided in the Agreement.

ARTICLE V

GENERAL PROVISIONS

5.1 Amendment. This Merger Agreement may be amended by the parties hereto any time before or after approval hereof by the shareholders of Company and Sub, but, after such approval, no amendment shall be made which by law requires the further approval of such shareholders without obtaining such approval. This Merger Agreement may not be amended except by an instrument in writing signed on behalf of each of the parties hereto.

5.2 Counterparts. This Merger Agreement may be executed in one or more counterparts, each of which shall be deemed to be an original, but all of which together shall constitute one agreement.

5.3 Interpretation. The headings contained in this Merger Agreement are for reference purposes only and shall not affect in any way the meaning or interpretation of this Merger Agreement.

5.4 Miscellaneous. This Merger Agreement, (a) together with the Agreement, constitutes the entire agreement of the parties and supersedes all other prior agreements and understandings, both written and oral, among the parties, or any of them, with respect to the subject matter hereof; (b) is not intended to confer upon any other person any rights or remedies hereunder; and (c) shall be governed in all respects, including as to validity, interpretation and effect, by the laws of the State of California (without giving effect to the provisions thereof relating to conflicts of law).

5.5 Parties in Interest. This Merger Agreement shall be binding upon and inure solely to the benefit of each party hereto, and nothing in this Merger Agreement, expressed or implied, is intended to confer upon any other person any rights or remedies of any nature whatsoever under or by reason of this Merger Agreement.

IN WITNESS WHEREOF, the parties have each caused this Merger Agreement to be signed by their respective officers thereunto duly authorized as of the date first written above.

TTC ACQUISITION COMPANY

By: /s/ Gary B. Rubinoff

Name: Gary Rubinoff
Title: President

/s/ Gary B. Rubinoff

Secretary

TROLL TECHNOLOGY CORPORATION

By: /s/ Tom Storli

Name: Tom J. Storli
Title: President

/s/ Jeffery Hopkins

Secretary

CERTIFICATE OF APPROVAL
OF
AGREEMENT OF MERGER

The undersigned hereby certify as follows:

1. They are the President and Secretary, respectively, of Troll Technology Corporation, a California corporation (the "Corporation").

2. The Agreement of Merger in the form attached was duly approved by the board of directors and shareholders of Corporation.

3. The shareholder approval was effected by an action by unanimous written consent without a meeting by the holders of outstanding shares of Corporation having an aggregate number of votes which equaled or exceeded the number of votes required for approval of the Agreement of Merger.

4. Corporation has only one class of shares outstanding and entitled to vote, and the number of shares outstanding is 233. The percentage vote of such class required to approve such Agreement of Merger is 50 plus one vote.

/s/ Tom Storli

Tom J. Storli, President

/s/ Jeffery Hopkins

Jeffery G. Hopkins, Secretary

The undersigned declare under penalty of perjury under the laws of the State of California that the matters set forth in this certificate are true and correct of our own knowledge.

Executed at Valencia, California, on August 17, 1995

/s/ Tom Storli

Tom J. Storli, President

/s/ Jeffery Hopkins

Jeffery G. Hopkins, Secretary

CERTIFICATE OF APPROVAL
OF
AGREEMENT OF MERGER

The undersigned hereby certifies as follows:

5. He is the President and Secretary of TTC Acquisition Company, a California corporation (the "Corporation").

6. The Agreement of Merger in the form attached was duly approved by the board of directors and shareholders of the Corporation.

7. The shareholder approval was by the holder of one hundred percent (100%) of the outstanding shares of the Corporation.

8. The Corporation has only one class of shares and the number of shares outstanding if 1,000.

9. No vote of the shareholders of Jefferson Partners Capital Corporation, the parent corporation of the Corporation, was required to approve the Agreement of Merger.

/s/ Gary B. Rubinoff

Gary Rubinoff, President

/s/ Gary B. Rubinoff

Gary Rubinoff, Secretary

The undersigned declare under penalty of perjury under the laws of the State of California that the matters set forth in this certificate are true and correct of our own knowledge.

Executed at Toronto, Ontario, Canada, on August 9, 1995

/s/ Gary B. Rubinoff

Gary Rubinoff, President

/s/ Gary B. Rubinoff

Gary Rubinoff, Secretary

ARTICLES OF INCORPORATION

OF

TTC ACQUISITION COMPANY

ARTICLE VI

The name of this corporation is: TTC ACQUISITION COMPANY.

ARTICLE VII

The purpose of this corporation is to engage in any lawful act or activity for which a corporation may be organized under the General Corporation Law of California other than the banking business, the trust company business or the practice of a profession permitted to be incorporated by the California Corporations Code.

ARTICLE VIII

The name and complete business address in the State of California of this corporation's initial agent for service of process is:

CT Corporation System

ARTICLE IX

This corporation is authorized to issue only one class of shares of stock which shall be designated common stock; and the total number of shares which this corporation is authorized to issue is 1000 Shares.

ARTICLE X

(a) The liability of directors of this corporation for monetary damages shall be eliminated to the fullest extent permissible under California law.

(b) This corporation is authorized to provide indemnification of agents (as defined in Section 317 of the California Corporations Code) through bylaw provisions, agreements with agents, vote of shareholders or disinterested directors, or otherwise, to the fullest extent permissible under California law.

(c) Any amendment, repeal or modification of any provision of this Article V shall not adversely affect any right or protection of an agent of this corporation existing at the time of such amendment, repeal or modification.

Dated: June 28, 1995

/s/ Deborah A. Moore

Deborah Abernathy Moore, Incorporator

Exhibit 3.96

BYLAWS

OF

TTC ACQUISITION COMPANY

(A CALIFORNIA CORPORATION)

BYLAWS

OF

TTC ACQUISITION COMPANY

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BYLAWS

OF

TTC ACQUISITION COMPANY

ARTICLE I

CORPORATE OFFICES

1.1 PRINCIPAL OFFICE

The Board of Directors shall fix the location of the principal executive office of the corporation at any place within or outside the State of California. If the principal executive office is located outside California and the corporation has one or more business offices in California, then the Board of Directors shall fix and designate a principal business office in California.

1.2 OTHER OFFICES

The Board of Directors may at any time establish branch or subordinate offices at any place or places.

ARTICLE II

MEETINGS OF SHAREHOLDERS

2.1 PLACE OF MEETINGS

Meetings of shareholders shall be held at any place within or outside the State of California designated by the Board of Directors. In the absence of any such designation, shareholders' meetings shall be held at the principal executive office of the corporation or at any place consented to in writing by all persons entitled to vote at such meeting, given before or after the meeting and filed with the Secretary of the corporation.

2.2 ANNUAL MEETING

An annual meeting of shareholders shall be held each year on a date and at a time designated by the Board of Directors. At that meeting, directors shall be elected. Any other proper business may be transacted at the annual meeting of shareholders.

2.3 SPECIAL MEETINGS

Special meetings of the shareholders may be called at any time, subject to the provisions of Sections 2.4 and 2.5 of these Bylaws, by the Board of Directors, the Chairman of the Board, the President or the holders of shares entitled to cast not less than ten percent (10%) of the votes at that meeting.

If a special meeting is called by anyone other than the Board of Directors of the President or the Chairman of the Board, then the request shall be in writing, specifying the time of such meeting and the general nature of the business proposed to be transacted, and shall be delivered personally or sent by registered mail or by other written communication to the Chairman of the Board, the President, any Vice President or the Secretary of the corporation. The officer receiving the request forthwith shall cause notice to be given to the shareholders entitled to vote, in accordance with the provisions of Sections 2.4 and 2.5 of these Bylaws, that a meeting will be held at the time requested by the person or persons calling the meeting, so long as that time is not less than thirty-five (35) nor more than sixty (60) days after the receipt of the request. If the notice is not given within twenty (20) days after receipt of the request, then the person or persons requesting the meeting may give the notice. Nothing contained in this paragraph of this Section 2.3 shall be construed as limiting, fixing or affecting the time when a meeting of shareholders called by action of the Board of Directors may be held.

2.4 NOTICE OF SHAREHOLDERS' MEETINGS

All notices of meetings of shareholders shall be sent or otherwise given in accordance with Section 2.5 of these Bylaws not less than ten (10) (or, if sent by third-class mail pursuant to Section 2.5 of these Bylaws, not less than thirty (30)) nor more than sixty (60) days before the date of the meeting to each shareholder entitled to vote thereat. Such notice shall state the place, date, and hour of the meeting and (i) in the case of a special meeting, the general nature of the business to be transacted, and no business other than that specified in the notice may be transacted, or (ii) in the case of the annual meeting, those matters which the Board of Directors, at the time of the mailing of the notice, intends to present for action by the shareholders, but, subject to the provisions of the next paragraph of this Section 2.4, any proper matter may be presented at the meeting for such action. The notice of any meeting at which Directors are to be elected shall include the names of nominees intended at the time of the notice to be presented by the Board for election.

If action is proposed to be taken at any meeting for approval of (i) a contract or transaction in which a director has a direct or indirect financial interest, pursuant to Section 310 of the California Corporations Code (the "Code"), (ii) an amendment of the Articles of Incorporation, pursuant to Section 902 of the Code, (iii) a reorganization of the corporation, pursuant to Section 1201 of the Code, (iv) a voluntary dissolution of the corporation, pursuant to Section 1900 of the Code, or (v) a distribution in dissolution other than in accordance with the rights of any outstanding preferred shares, pursuant to Section 2007 of the Code, then the notice shall also state the general nature of that proposal.

2.5 MANNER OF GIVING NOTICE; AFFIDAVIT OF NOTICE

Notice of a shareholders' meeting shall be given either personally or by first-class mail, or, if the corporation has outstanding shares held of record by five hundred (500) or more persons (determined as provided in Section 605 of the Code) on the record date for the shareholders' meeting, notice may be sent by third-class mail, or other means of written communication, addressed to the shareholder at the address of the shareholder appearing on the books of the corporation or given by the shareholder to the corporation for the purpose of notice; or if no such address appears or is given, at the place where the principal executive office of the corporation is

located or by publication at least once in a newspaper of general circulation in the county in which the principal executive office is located. The notice shall be deemed to have been given at the time when delivered personally or deposited in the mail or sent by other means of written communication.

If any notice (or any report referenced in Article VII of these Bylaws) addressed to a shareholder at the address of such shareholder appearing on the books of the corporation is returned to the corporation by the United States Postal Service marked to indicate that the United States Postal Service is unable to deliver the notice to the shareholder at that address, all future notices or reports shall be deemed to have been duly given without further mailing if the same shall be available to the shareholder upon written demand of the shareholder at the principal executive office of the corporation for a period of one (1) year from the date of the giving of the notice.

An affidavit of mailing of any notice or report in accordance with the provisions of this Section 2.5, executed by the Secretary, Assistant Secretary or any transfer agent, shall be prima facie evidence of the giving of the notice or report.

2.6 QUORUM

Unless otherwise provided in the Articles of Incorporation of the corporation, a majority of the shares entitled to vote, represented in person or by proxy, shall constitute a quorum at a meeting of the shareholders. The shareholders present at a duly called or held meeting at which a quorum is present may continue to transact business until adjournment notwithstanding the withdrawal of enough shareholders to leave less than a quorum, if any action taken (other than adjournment) is approved by at least a majority of the shares required to constitute a quorum.

In the absence of a quorum, any meeting of shareholders may be adjourned from time to time by the vote of a majority of the shares represented either in person or by proxy, but no other business may be transacted, except as provided in the last sentence of the preceding paragraph.

2.7 ADJOURNED MEETING; NOTICE

Any shareholders' meeting, annual or special, whether or not a quorum is present, may be adjourned from time to time by the vote of the majority of the shares represented at that meeting, either in person or by proxy.

When any meeting of shareholders, either annual or special, is adjourned to another time or place, notice need not be given of the adjourned meeting if its time and place are announced at the meeting at which the adjournment is taken. However, if the adjournment is for more than forty-five (45) days from the date set for the original meeting or if a new record date for the adjourned meeting is fixed, a notice of the adjourned meeting shall be given to each shareholder of record entitled to vote at the adjourned meeting in accordance with the provisions of Sections 2.4 and 2.5 of these Bylaws. At any adjourned meeting the corporation may transact any business which might have been transacted at the original meeting.

2.8 VOTING

The shareholders entitled to vote at any meeting of shareholders shall be determined in accordance with the provisions of Section 2.11 of these Bylaws, subject to the provisions of Sections 702 through 704 of the Code (relating to voting shares held by a fiduciary, in the name of a corporation, or in joint ownership).

Elections for directors and voting on any other matter at a shareholders' meeting need not be by ballot unless a shareholder demands election by ballot at the meeting and before the voting begins.

Except as provided in the last paragraph of this Section 2.8, or as may be otherwise provided in the Articles of Incorporation, each outstanding share, regardless of class, shall be entitled to one vote on each matter submitted to a vote of the shareholders. Any holder of shares entitled to vote on any matter may vote part of the shares in favor of the proposal and refrain from voting the remaining shares or may vote them against the proposal other than elections to office, but, if the shareholder fails to specify the number of shares such shareholder is voting affirmatively, it will be conclusively presumed that the shareholder's approving vote is with respect to all shares which the shareholder is entitled to vote.

The affirmative vote of the majority of the shares represented and voting at a duly held meeting at which a quorum is present (which shares voting affirmatively also constitute at least a majority of the required quorum) shall be the act of the shareholders, unless the vote of a greater number or voting by classes is required by the Code or by the Articles of Incorporation.

At a shareholders' meeting at which directors are to be elected, a shareholder shall be entitled to cumulate votes either (i) by giving one candidate a number of votes equal to the number of directors to be elected multiplied by the number of votes to which that shareholder's shares are normally entitled or (ii) by distributing the shareholder's votes on the same principle among as many candidates as the shareholder thinks fit, if the candidate or candidates' names have been placed in nomination prior to the voting and the shareholder has given notice prior to the voting of the shareholder's intention to cumulate the shareholder's votes. If any one shareholder has given such a notice, then every shareholder entitled to vote may cumulate votes for candidates in nomination. The candidates receiving the highest number of affirmative votes, up to the number of directors to be elected, shall be elected; votes against any candidate and votes withheld shall have no legal effect.

2.9 VALIDATION OF MEETINGS; WAIVER OF NOTICE; CONSENT

The transactions of any meeting of shareholders, either annual or special, however called and noticed, and wherever held, are as valid as though they had been taken at a meeting duly held after regular call and notice, if a quorum be present either in person or by proxy, and if, either before or after the meeting, each of the persons entitled to vote, not present in person or by proxy, signs a written waiver of notice or a consent to, the holding of the meeting or an approval of the minutes thereof. Neither the business to be transacted at nor the purpose of any annual or special meeting of shareholders need be specified in any written waiver of notice or consent to the holding of the meeting or approval of the minutes thereof, except that if action is taken or

proposed to be taken for approval of any of those matters specified in the second paragraph of Section 2.4 of these Bylaws, the waiver of notice or consent or approval shall state the general nature of the proposal. All such waivers, consents, and approvals shall be filed with the corporate records or made a part of the minutes of the meeting.

Attendance of a person at a meeting shall constitute a waiver of notice of and presence at that meeting, except when the person objects, at the beginning of the meeting, to the transaction of any business because the meeting is not lawfully called or convened and except that attendance at a meeting is not a waiver of any right to object to the consideration of matters required by the Code to be included in the notice of such meeting but not so included, if such objection is expressly made at the meeting.

2.10 SHAREHOLDER ACTION BY WRITTEN CONSENT WITHOUT A MEETING

Any action which may be taken at any annual or special meeting of shareholders may be taken without a meeting and without prior notice, if a consent in writing, setting forth the action so taken, shall be signed by the holders of outstanding shares having not less than the minimum number of votes that would be necessary to authorize or take such action at a meeting at which all shares entitled to vote thereon were present and voted.

Directors may not be elected by written consent except by unanimous written consent of all shares entitled to vote for the election of directors. However, a director may be elected at any time to fill any vacancy on the Board of Directors, provided that it was not created by removal of a director and that it has not been filled by the directors, by the written consent of the holders of a majority of the outstanding shares entitled to vote for the election of directors.

All such consents shall be maintained in the corporate records. Any shareholder giving a written consent, or the shareholder's proxy holders, or a transferee of the shares, or a personal representative of the shareholder, or their respective proxy holders, may revoke the consent by a writing received by the Secretary of the corporation before written consents of the number of shares required to authorize the proposed action have been filed with the Secretary.

If the consents of all shareholders entitled to vote have not been solicited in writing, the Secretary shall give prompt notice of any corporate action approved by the shareholders without a meeting by less than unanimous written consent to those shareholders entitled to vote who have not consented in writing. Such notice shall be given in the manner specified in Section 2.5 of these Bylaws. In the case of approval of (i) a contract or transaction in which a director has a direct or indirect financial interest, pursuant to Section 310 of the Code, (ii) indemnification of a corporate "agent," pursuant to Section 317 of the Code, (iii) a reorganization of the corporation, pursuant to Section 1201 of the Code, and (iv) a distribution in dissolution other than in accordance with the rights of outstanding preferred shares, pursuant to Section 2007 of the Code, the notice shall be given at least ten (10) days before the consummation of any action authorized by that approval, unless the consents of all shareholders entitled to vote have been solicited in writing.

2.11 RECORD DATE FOR SHAREHOLDER NOTICE; VOTING; GIVING CONSENTS

In order that the corporation may determine the shareholders entitled to notice of any meeting or to vote, the Board of Directors may fix, in advance, a record date, which shall not be more than sixty (60) days nor less than ten (10) days prior to the date of such meeting nor more than sixty (60) days before any other action. Shareholders at the close of business on the record date are entitled to notice and to vote, as the case may be, notwithstanding any transfer of any shares on the books of the corporation after the record date, except as otherwise provided in the Articles of Incorporation or the Code.

A determination of shareholders of record entitled to notice of or to vote at a meeting of shareholders shall apply to any adjournment of the meeting unless the Board of Directors fixes a new record date for the adjourned meeting, but the Board of Directors shall fix a new record date if the meeting is adjourned for more than forty-five (45) days from the date set for the original meeting.

If the Board of Directors does not so fix a record date:

1. The record date for determining shareholders entitled to notice of or to vote at a meeting of shareholders shall be at the close of business on the business day next preceding the day on which notice is given or, if notice is waived, at the close of business on the business day next preceding the day on which the meeting is held.

2. The record date for determining shareholders entitled to give consent to corporate action in writing without a meeting, (i) when no prior action by the Board has been taken, shall be the day on which the first written consent is given, or (ii) when prior action by the Board has been taken, shall be at the close of business on the day on which the Board adopts the resolution relating thereto, or the sixtieth (60th) day prior to the date of such other action, whichever is later.

The record date for any other purpose shall be as provided in Section 8.1 of these Bylaws.

2.12 PROXIES

Every person entitled to vote for directors, or on any other matter, shall have the right to do so either in person or by one or more agents authorized by a written proxy signed by the person and filed with the, Secretary of the corporation. A proxy shall be deemed signed if the shareholder's name or other authorization is placed on the proxy (whether by manual signature, typewriting, telegraphic or electronic transmission or otherwise) by the shareholder or the shareholder's attorney-in-fact. A validly executed proxy which does not state that it is irrevocable shall continue in full force and effect unless (i) the person who executed the proxy revokes it prior to the time of voting by delivering a writing to the corporation stating that the proxy is revoked or by executing a subsequent proxy and presenting it to the meeting or by attendance at such meeting and voting in person, or (ii) written notice of the death or incapacity of the maker of that proxy is received by the corporation before the vote pursuant to that proxy is counted; provided, however, that no proxy shall be valid after the expiration of eleven (11) months from the date thereof, unless otherwise provided in the proxy. The dates contained on the forms of proxy presumptively determine the order of execution, regardless of the postmark

dates on the envelopes in which they are mailed. The revocability of a proxy that states on its face that it is irrevocable shall be governed by the provisions of Sections 705(e) and 705(f) of the Code.

2.13 INSPECTORS OF ELECTION

In advance of any meeting of shareholders, the Board of Directors may appoint inspectors of election to act at the meeting and any adjournment thereof. If inspectors of election are not so appointed or designated or if any persons so appointed fail to appear or refuse to act, then the Chairman of the meeting may, and on the request of any shareholder or a shareholder's proxy shall, appoint inspectors of election (or persons to replace those who so fail to appear) at the meeting. The number of inspectors shall be either one (1) or three (3). If appointed at a meeting on the request of one (1) or more shareholders or proxies, the majority of shares represented in person or by proxy shall determine whether one (1) or three (3) inspectors are to be appointed.

The inspectors of election shall determine the number of shares outstanding and the voting power of each, the shares represented at the meeting, the existence of a quorum, and the authenticity, validity, and effect of proxies, receive votes, ballots or consents, hear and determine all challenges and questions in any way arising in connection with the right to vote, count and tabulate all votes or consents, determine when the polls shall close, determine the result and do any other acts that may be proper to conduct the election or vote with fairness to all shareholders.

ARTICLE III

DIRECTORS

3.1 POWERS

Subject to the provisions of the Code and any limitations in the Articles of Incorporation and these Bylaws relating to action required to be approved by the shareholders or by the outstanding shares, the business and affairs of the corporation shall be managed and all corporate powers shall be exercised by or under the direction of the Board of Directors. The Board may delegate the management of the day-to-day operation of the business of the corporation to a management company or other person provided that the business and affairs of the corporation shall be managed and all corporate powers shall be exercised under the ultimate direction of the Board.

3.2 NUMBER OF DIRECTORS

The authorized number of directors of the corporation shall be not less than one (1) and no more than three (3) until changed, by a resolution amending such number, duly adopted by the Board of Directors or by the shareholders; provided, however, that an amendment reducing the fixed number of directors cannot be adopted if the votes cast against its adoption at a meeting, or the shares not consenting in the case of an action by written consent, are equal to more than sixteen and two-thirds percent (16-2/3%) of the outstanding shares.

No reduction of the authorized number of directors shall have the effect of removing any director before that director's term of office expires.

3.3 ELECTION AND TERM OF OFFICE OF DIRECTORS

At each annual meeting of shareholders, directors shall be elected to hold office until the next annual meeting. Each director, including a director elected to fill a vacancy, shall hold office until the expiration of the term for which elected and until a successor has been elected and qualified, except in the case of the death, resignation, or removal of such a director.

3.4 REMOVAL

The entire Board of Directors or any individual director may be removed from office without cause by the affirmative vote of a majority of the outstanding shares entitled to vote on such removal; provided, however, that unless the entire Board is removed, no individual director may be removed when the votes cast against such director's removal, or not consenting in writing to such removal, would be sufficient to elect that director if voted cumulatively at an election at which the same total number of votes cast were cast (or, if such action is taken by written consent, all shares entitled to vote were voted) and the entire number of directors authorized at the time of such director's most recent election were then being elected.

3.5 RESIGNATION AND VACANCIES

Any director may resign effective upon giving oral or written notice to the Chairman of the Board, the President, the Secretary or the Board of Directors, unless the notice specifies a later time for the effectiveness of such resignation. If the resignation of a director is effective at a future time, the Board of Directors may elect a successor to take office when the resignation becomes effective.

Vacancies on the Board of Directors may be filled by a majority of the remaining directors, or if the number of directors then in office is less than a quorum by (i) unanimous written consent of the directors then in office, (ii) the affirmative vote of a majority of the directors then in office at a meeting held pursuant to notice or waivers of notice, or (iii) a sole remaining director; however, a vacancy created by the removal of a director by the vote or written consent of the shareholders or by court order may be filled only by the affirmative vote of a majority of the shares represented and voting at a duly held meeting at which a quorum is present (which shares voting affirmatively also constitute at least a majority of the required quorum), or by the unanimous written consent of all shares entitled to vote thereon. Each director so elected shall hold office until the next annual meeting of the shareholders and until a successor has been elected and qualified, or until his or her death, resignation or removal.

A vacancy or vacancies in the Board of Directors shall be deemed to exist (i) in the event of the death, resignation or removal of any director, (ii) if the Board of Directors by resolution declares vacant the office of a director who has been declared of unsound mind by an order of court or convicted of a felony, (iii) if the authorized number of directors is increased, or (iv) if the shareholders fail, at any meeting of shareholders at which any director or directors are elected, to elect the full authorized number of directors to be elected at that meeting.

The shareholders may elect a director or directors at any time to fill any vacancy or vacancies not filled by the directors, but any such election by written consent, other than to fill a vacancy created by removal, shall require the consent of the holders of a majority of the outstanding

shares entitled to vote thereon. A director may not be elected by written consent to fill a vacancy created by removal except by unanimous consent of all shares entitled to vote for the election of directors.

3.6 PLACE OF MEETINGS; MEETINGS BY TELEPHONE

Regular meetings of the Board of Directors may be held at any place within or outside the State of California that has been designated from time to time by resolution of the Board. In the absence of such a designation, regular meetings shall be held at the principal executive office of the corporation. Special meetings of the Board may be held at any place within or outside the State of California that has been designated in the notice of the meeting or, if not stated in the notice or if there is no notice, at the principal executive office of the corporation.

Members of the Board may participate in a meeting through the use of conference telephone or similar communications equipment, so long as all directors participating in such meeting can hear one another. Participation in a meeting pursuant to this paragraph constitutes presence in person at such meeting.

3.7 REGULAR MEETINGS

Regular meetings of the Board of Directors may be held without notice if the time and place of such meetings are fixed by the Board of Directors.

3.8 SPECIAL MEETINGS; NOTICE

Subject to the provisions of the following paragraph, special meetings of the Board of Directors for any purpose or purposes may be called at any time by the Chairman of the Board, the President; any Vice President, the Secretary or any two (2) directors.

Notice of the time and place of special meetings shall be delivered personally or by telephone to each director or sent by first-class mail, telegram, charges prepaid, or by telecopier, addressed to each director at that director's address as it is shown on the records of the corporation. If the notice is mailed, it shall be deposited in the United States mail at least four (4) days before the time of the holding of the meeting. If the notice is delivered personally or by telephone or by telecopier or telegram, it shall be delivered personally or by telephone or by telecopier or to the telegraph company at least forty-eight (48) hours before the time of the holding of the meeting. Any oral notice given personally or by telephone may be communicated either to the director or to a person at the office of the director who the person giving the notice has reason to believe will promptly communicate it to the director. The notice need not specify the purpose of the meeting.

3.9 QUORUM

A majority of the authorized number of directors shall constitute a quorum for the transaction of business, except to adjourn as provided in Section 3.11 of these Bylaws. Every act or decision done or made by a majority of the directors present at a meeting duly held at which a quorum is present is the act of the Board of Directors, subject to the provisions of Section 310 of the Code (as to approval of contracts or transactions in which a director has a direct or indirect material

financial interest), Section 311 of the Code (as to appointment of committees), Section 317(e) of the Code (as to indemnification of directors), the Articles of Incorporation, and other applicable law.

A meeting at which a quorum is initially present may continue to transact business notwithstanding the withdrawal of directors, if any action taken is approved by at least a majority of the required quorum for such meeting.

3.10 WAIVER OF NOTICE

Notice of a meeting need not be given to any director who signs a waiver of notice or a consent to holding the meeting or an approval of the minutes thereof, whether before or after the meeting, or who attends the meeting without protesting, prior thereto or at its commencement, the lack of notice to such director. All such waivers, consents, and approvals shall be filed with the corporate records or made a part of the minutes of the meeting. A waiver of notice need not specify the purpose of any regular or special meeting of the Board of Directors.

3.11 ADJOURNMENT

A majority of the directors present, whether or not a quorum is present, may adjourn any meeting to another time and place.

3.12 NOTICE OF ADJOURNMENT

If the meeting is adjourned for more than twenty-four (24) hours, notice of any adjournment to another time and place, shall be given prior to the time of the adjourned meeting to the directors who were not present at the time of the adjournment.

3.13 BOARD ACTION BY WRITTEN CONSENT WITHOUT A MEETING

Any action required or permitted to be taken by the Board of Directors may be taken without a meeting, if all members of the Board individually or collectively consent in writing to such action. Such written consent or consents shall be filed with the minutes of the proceedings of the Board. Such action by written consent shall have the same force and effect as a unanimous vote of the Board of Directors.

3.14 FEES AND COMPENSATION OF DIRECTORS

Directors and members of committees may receive such compensation, if any, for their services and such reimbursement of expenses as may be fixed or determined by resolution of the Board of Directors. This Section 3.14 shall not be construed to preclude any director from serving the corporation in any other capacity as an officer, agent, employee or otherwise and receiving compensation for those services.

3.15 APPROVAL OF LOANS TO OFFICERS

If these Bylaws have been approved by the corporation's shareholders in accordance with the Code, the corporation may, upon the approval of the Board of Directors alone, make loans of

money or property to, or guarantee the obligations of, any officer of the corporation or of its parent, if any, whether or not a director, or adopt an employee benefit plan or plans authorizing such loans or guaranties provided that (i) the Board of Directors determines that such a loan or guaranty or plan may reasonably be expected to benefit the corporation, (ii) the corporation has outstanding shares held of record by 100 or more persons (determined as provided in Section 605 of the Code) on the date of approval by the Board of Directors, and (iii) the approval of the Board of Directors is by a vote sufficient without counting the vote of any interested director or directors. Notwithstanding the foregoing, the corporation shall have the power to make loans permitted by the Code.

ARTICLE IV

COMMITTEES

4.1 COMMITTEES OF DIRECTORS

The Board of Directors may, by resolution adopted by a majority of the authorized number of directors, designate one or more committees, each consisting of two (2) or more directors, to serve at the pleasure of the Board. The Board, may designate one or more directors as alternate members of any committee, who may replace any absent member at any meeting of the committee. The appointment of members or alternate members of a committee requires the vote of a majority of the authorized number of directors. Any such committee shall have authority to act in the manner and to the extent provided in the resolution of the Board and may have all the authority of the Board, except with respect to:

1. The approval of any action which, under the Code, also requires shareholders' approval or approval of the outstanding shares.

2. The filling of vacancies on the Board of Directors or in any committee.

3. The fixing of compensation of the directors for serving on the Board or on any committee.

4. The amendment or repeal of these Bylaws or the adoption of new Bylaws.

5. The amendment or repeal of any resolution of the Board of Directors which by its express terms is not so amendable or repealable.

6. A distribution to the shareholders of the corporation, except at a rate, in a periodic amount or within a price range set forth in the Articles of Incorporation or determined by the Board of Directors.

7. The appointment of any other committees of the Board of Directors or the members thereof.

4.2 MEETINGS AND ACTION OF COMMITTEES

Meetings and actions of committees shall be governed by, and held and taken in accordance with, the provisions of Article III of these Bylaws, Section 3.6 (place of meetings), Section 3.7 (regular meetings), Section 3.8 (special meetings and notice), Section 3.9 (quorum), Section 3.10 (waiver of notice), Section 3.11 (adjournment), Section 3.12 (notice of adjournment), and Section 3.13 (action without meeting), with such changes in the context of those Bylaws as are necessary to substitute the committee and its members for the Board of Directors and its members; provided, however, that the time of regular meetings of committees may be determined either by resolution of the Board of Directors or by resolution of the committee, that special meetings of committees' may also be called by resolution of the Board of Directors, and that notice of special meetings of committees shall also be given to all alternate members, who shall have the right to attend all meetings of the committee. The Board of Directors may adopt rules for the government of any committee not inconsistent with the provisions of these Bylaws.

ARTICLE V.

OFFICERS

5.1 OFFICERS

The officers of the corporation shall be a President, a Secretary, and a Treasurer. The corporation may also have, at the discretion of the Board of Directors, a Chairman of the Board, one or more Vice Presidents, one or more Assistant Secretaries, one or more Assistant Treasurers, and such other officers as may be appointed in accordance with the provisions of Section 5.3 of these Bylaws. Any number of offices may be held by the same person.

5.2 APPOINTMENT OF OFFICERS

The officers of the corporation, except such officers as may be appointed in accordance with the provisions of Section 5.3 or Section 5.5 of these Bylaws, shall be chosen by the Board and serve at the pleasure of the Board, subject to the rights, if any, of an officer under any contract of employment.

5.3 SUBORDINATE OFFICERS

The Board of Directors may appoint, or may empower the Chairman of the Board or the President to appoint, such other officers as the business of the corporation may require, each of whom shall hold office for such period, have such authority, and perform such duties as are provided in these Bylaws or as the Board of Directors may from time to time determine.

5.4 REMOVAL AND RESIGNATION OF OFFICERS

Subject to the rights, if any, of an officer under any contract of employment, all officers serve at the pleasure of the Board of Directors and any officer may be removed, either with or without cause, by the Board of Directors at any regular or special meeting of the Board or, except in case of an officer chosen by the Board of Directors, by any officer upon whom such power of removal may be conferred by the Board of Directors.

Any officer may resign at any time by giving written notice to the corporation. Any resignation shall take effect at the date of the receipt of that notice or at any later time specified in that notice; and, unless otherwise specified in that notice, the acceptance of the resignation shall not be necessary to make it effective. Any resignation is without prejudice to the rights, if any, of the corporation under any contract to which the officer is a party.

5.5 VACANCIES IN OFFICES

A vacancy in any office because of death, resignation, removal, disqualification or any other cause shall be filled in the manner prescribed in these Bylaws for regular appointments to that office.

5.6 CHAIRMAN OF THE BOARD

The Chairman of the Board, if such an officer be elected, shall, if present, preside at meetings of the Board of Directors and exercise and perform such other powers and duties as may from time to time be assigned by the Board of Directors or as may be prescribed by these Bylaws. If there is no President, then the Chairman of the Board shall also be the chief executive officer of the corporation and shall have the powers and duties prescribed in Section 5.7 of these Bylaws.

5.7 PRESIDENT

Subject to such supervisory powers, if any, as may be given by the Board of Directors to the Chairman of the Board, if there be such an officer, the President shall be the chief executive officer of the corporation and shall, subject to the control of the Board of Directors, have general supervision, direction, and control of the business and the officers of the corporation. The President shall preside at all meetings of the shareholders and, in the absence or nonexistence of a Chairman of the Board, at all meetings of the Board of Directors. The President shall have the general powers and duties of management usually vested in the office of President of a corporation, and shall have such other powers and duties as may be prescribed by the Board of Directors or these Bylaws.

5.8 VICE PRESIDENTS

In the absence or disability of the President, the Vice Presidents, if any, in order of their rank as fixed by the Board of Directors or, if not ranked, a Vice President designated by the Board of Directors, shall perform all the duties of the President and when so acting shall have all the powers of, and be subject to all the restrictions upon, the President. The Vice Presidents shall have such other powers, and perform such other duties as from time to time may be prescribed for them respectively by the Board of Directors, these Bylaws, the President or the Chairman of the Board.

5.9 SECRETARY

The Secretary shall keep or cause to be kept, at the principal executive office of the corporation or such other place as the Board of Directors may direct, a book of minutes of all meetings and actions of Directors, committees of directors and shareholders. The minutes shall show the time and place of each meeting, whether regular or special (and, if special, how

authorized and the notice given), the names of those present at directors' meetings or committee meetings, the number of shares present or represented at shareholders' meetings, and the proceedings thereof.

The Secretary shall keep, or cause to be kept, at the principal executive office of the corporation or at the office of the corporation's transfer agent or registrar, as determined by resolution of the Board of Directors, a share register, or a duplicate share register, showing the names of all shareholders and their addresses, the number and classes of shares held by each, the number and date of certificates evidencing such shares, and the number and date of cancellation of every certificate surrendered for cancellation.

The Secretary shall give, or cause to be given, notice of all meetings of the shareholders and of the Board of Directors required to be given by law or by these Bylaws. The Secretary shall keep the seal of the corporation, if one be adopted, in safe custody and shall have such other powers and perform such other duties as may be prescribed by the Board of Directors or by these Bylaws.

5.10 TREASURER/CHIEF FINANCIAL OFFICER

The Treasurer/Chief Financial Officer shall keep and maintain, or cause to be kept and maintained, adequate and correct books and records of accounts of the properties and business transactions of the corporation, including accounts of its assets, liabilities, receipts, disbursements, gains, losses, capital, retained earnings, and shares. The books of account shall at all reasonable times be open to inspection by any director.

The Treasurer/Chief Financial Officer shall deposit all money and other valuables in the name and to the credit of the corporation with such depositaries as may be designated by the Board of Directors. The Treasurer/Chief Financial Officer shall disburse the funds of the corporation as may be ordered by the Board of Directors, shall render to the President and directors, whenever they request it, an account of all of his or her transactions as Treasurer/Chief Financial Officer and of the financial condition of the corporation, and shall have such other powers and perform such other duties as may be prescribed by the Board of Directors or these Bylaws.

ARTICLE VI.

INDEMNIFICATION OF DIRECTORS, OFFICERS, EMPLOYEES, AND OTHER, AGENTS

6.1 INDEMNIFICATION OF DIRECTORS AND OFFICERS

The corporation shall, to the maximum extent and in the manner permitted by the Code, indemnify each of its directors and officers against expenses (as defined in Section 317(a) of the Code), judgments, fines, settlements, and other amounts actually and reasonably incurred in connection with any proceeding (as defined in Section 317(a) of the Code), arising by reason of the fact that such person is or was a director or officer of the corporation. For purposes of this Article VI, a "director" or "officer" of the corporation includes any person (i) who is or was a director or officer of the corporation, (ii) who is or was serving at the request of the corporation

as a director or officer of another foreign or domestic corporation, partnership, joint venture, trust or other enterprise, or (iii) who was a director or officer of a corporation which was a predecessor corporation of the corporation or of another enterprise at the request of such predecessor corporation.

6.2 INDEMNIFICATION OF OTHERS

The corporation shall have the power, to the extent and in the manner permitted by the Code, to indemnify each of its employees and agents (other than directors) against expenses (as defined in Section 317(a) of the Code), judgments, fines, settlements, and other amounts actually and reasonably incurred in connection with any proceeding (as defined in Section 317(a) of the Code), arising by reason of the fact that such person is or was an employee or agent of the corporation. For purposes of this Article VI, an "employee" or "agent" of the corporation (other than a director or officer) includes any person (i) who is or was an employee or agent of the corporation, (ii) who is or was serving at the request of the corporation as an employee or agent of another foreign or domestic corporation, partnership, joint venture, trust or other enterprise, or (iii) who was an employee or agent of a corporation which was a predecessor corporation of the corporation or of another enterprise at the request of such predecessor corporation.

6.3 PAYMENT OF EXPENSES IN ADVANCE

Expenses and attorneys' fees incurred in defending any civil or criminal action or proceeding for which indemnification is required pursuant to Section 6.1, or if otherwise authorized by the Board of Directors, shall be paid by the corporation in advance of the final disposition of such action or proceeding upon receipt of an undertaking by or on behalf of the indemnified party to repay such amount if it shall ultimately be determined that the indemnified party is not entitled to be indemnified as authorized in this Article VI.

6.4 INDEMNITY NOT EXCLUSIVE

The indemnification provided by this Article VI shall not be deemed exclusive of any other rights to which those seeking indemnification may be entitled under any Bylaw, agreement, vote of shareholders or directors or otherwise, both as to action in an official capacity and as to action in another capacity while holding such office. The rights to indemnity hereunder shall continue as to a person who has ceased to be a director, officer, employee, or agent and shall inure to the benefit of the heirs, executors, and administrators of the person.

6.5 INSURANCE INDEMNIFICATION

The corporation shall have the power to purchase and maintain insurance on behalf of any person who is or was a director, officer, employee or agent of the corporation against any liability asserted against or incurred by such person in such capacity or arising out of that person's status as such, whether or not the corporation would have the power to indemnify that person against such liability under the provisions of this Article VI.

6.6 CONFLICTS

No indemnification or advance shall be made under this Article VI, except where such indemnification or advance is mandated by law or the order, judgment or decree of any court of competent jurisdiction, in any circumstance where it appears:

(1) That it would be inconsistent with a provision of the Articles of Incorporation, these Bylaws, a resolution of the shareholders or an agreement in effect at the time of the accrual of the alleged cause of the action asserted in the proceeding in which the expenses were incurred or other amounts were paid, which prohibits or otherwise limits indemnification; or

(2) That it would be inconsistent with any condition expressly imposed by a court in approving a settlement.

6.7 RIGHT TO BRING SUIT

If a claim under this Article is not paid in full by the corporation within 90 days after a written claim has been received by the corporation (either because the claim is denied or because no determination is made), the claimant may at any time thereafter bring suit against the corporation to recover the unpaid amount of the claim and, if successful in whole or in part, the claimant shall also be entitled to be paid the expenses of prosecuting such claim. The corporation shall be entitled to raise as a defense to any such action that the claimant has not met the standards of conduct that make it permissible under the Code for the corporation to indemnify the claimant for the claim. Neither the failure of the corporation (including its Board of Directors, independent legal counsel, or its shareholders) to have made a determination prior to the commencement of such action that indemnification of the claimant is permissible in the circumstances because he or she has met the applicable standard of conduct, if any, nor an actual determination by the corporation (including its Board of Directors, independent legal counsel, or its shareholders) that the claimant has not met the applicable standard of conduct, shall be a defense to such action or create a presumption for the purposes of such action that the claimant has not met the applicable standard of conduct.

6.8 INDEMNITY AGREEMENTS

The Board of Directors is authorized to enter into a contract with any director, officer, employee or agent of the corporation, or any person who is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, including employee benefit plans, or any person who was a director, officer, employee or agent of a corporation which was a predecessor corporation of the corporation or of another enterprise at the request of such predecessor corporation, providing for indemnification rights equivalent to or, if the Board of Directors so determines and to the extent permitted by applicable law, greater than, those provided for in this Article VI.

6.9 AMENDMENT, REPEAL OR MODIFICATION

Any amendment, repeal or modification of any provision of this Article VI shall not adversely affect any right or protection of a director or agent of the corporation existing at the time of such amendment, repeal or modification.

ARTICLE VII.

RECORDS AND REPORTS

7.1 MAINTENANCE AND INSPECTION OF SHARE REGISTER

The corporation shall keep either at its principal executive office or at the office of its transfer agent or registrar (if either be appointed), as determined by resolution of the Board of Directors, a record of its shareholders listing the names and addresses of all shareholders and the number and class of shares held by each shareholder.

A shareholder or shareholders of the corporation holding at least five percent (5%) in the aggregate of the outstanding voting shares of the corporation or who hold at least one percent (1%) of such voting shares and have filed a Schedule 14B with the United States Securities and Exchange Commission relating to the election of directors, shall have an absolute right to do either or both of the following (i) inspect and copy the record of shareholders' names, addresses, and shareholdings during usual business hours upon five (5) days' prior written demand upon the corporation, or (ii) obtain from the transfer agent for the corporation, upon written demand and upon the tender of such transfer agent's usual charges for such list (the amount of which charges shall be stated to the shareholder by the transfer agent upon request), a list of the shareholders' names and addresses who are entitled to vote for the election of directors, and their shareholdings, as of the most recent record date for which it has been compiled or as of a date specified by the shareholder subsequent to the date of demand. The list shall be made available on or before the later of five (5) business days after the demand is received or the date specified therein as the date as of which the list is to be compiled.

The record of shareholders shall also be open to inspection and copying by any shareholder or holder of a voting trust certificate at any time during usual business hours upon written demand on the corporation, for a purpose reasonably related to the holder's interests as a shareholder or holder of a voting trust certificate.

Any inspection and copying under this Section 7.1 may be made in person or by an agent or attorney of the shareholder or holder of a voting trust certificate making the demand.

7.2 MAINTENANCE AND INSPECTION OF BYLAWS

The corporation shall keep at its principal executive office or, if its principal executive office is not in the State of California, at its principal business office in California, the original or a copy of these Bylaws as amended to date, which shall be open to inspection by the shareholders at all reasonable times during office hours. If the principal executive office of the corporation is outside the State of California and the corporation has no principal business office in such state, then it shall, upon the written request of any shareholder, furnish to such shareholder a copy of these Bylaws as amended to date.

7.3 MAINTENANCE AND INSPECTION OF OTHER CORPORATE RECORDS

The accounting books and records and the minutes of proceedings of the shareholders and the Board of Directors, and committees of the Board of Directors shall be kept at such place or

places as are designated by the Board of Directors or, in absence of such designation, at the principal executive office of the corporation. The minutes shall be kept in written form, and the accounting books and records shall be kept either in written form or in any other form capable of berg converted into written form.

The minutes and accounting books and records shall be open to inspection upon the written demand on the corporation of any shareholder or holder of a voting trust certificate at any reasonable time during usual business hours, for a purpose reasonably related to such holder's interests as a shareholder or as the holder of a voting trust certificate. Such inspection by a shareholder or holder of a voting trust certificate may be made in person or by an agent or attorney and the right of inspection includes the right to copy and make extracts. Such rights of inspection shall extend to the records of each subsidiary corporation of the corporation.

7.4 INSPECTION BY DIRECTORS

Every director shall have the absolute right at any reasonable time to inspect and copy all books, records, and documents of every kind and to inspect the physical properties of the corporation and each of its subsidiary corporations, domestic or foreign. Such inspection by a director may be made in person or by an agent or attorney and the right of inspection includes the right to copy and make extracts.

7.5 ANNUAL REPORT TO SHAREHOLDERS; WAIVER

The Board of Directors shall cause an annual report to be sent to the shareholders not later than one hundred twenty (120) days after the close of the fiscal year adopted by the corporation. Such report shall be sent to the shareholders at least fifteen (15) days (or, if sent by third-class mail, thirty-five (35) days) prior to the annual meeting of shareholders to be held during the next fiscal year and in the manner specified in Section 2.5 of these Bylaws for giving notice to shareholders of the corporation.

The annual report shall contain a balance sheet as of the end of the fiscal year and an income statement and statement of changes in financial, position for the fiscal year, accompanied by any report thereon of independent accountants or, if there is no such report, the certificate of an authorized officer of the corporation that the statements were prepared without audit from the books and records of the corporation.

The foregoing requirement of an annual report shall be waived so long as the shares of the corporation are held by fewer than one hundred (100) holders of record.

7.6 FINANCIAL STATEMENTS

If no annual report for the fiscal year has been sent to shareholders, then the corporation shall, upon the written request of any shareholder made more than one hundred twenty (120) days after the close of such fiscal year, deliver or mail to the person making the request, within thirty (30) days thereafter, a copy of a balance sheet as of the end of such fiscal year and an income statement and statement of changes in financial position for such fiscal year.

A shareholder or shareholders holding at least five percent (5%) of the outstanding shares of any class of the corporation may make a written request to the corporation for an income statement of the corporation for the three-month, six-month or nine-month period of the current fiscal year ended more than thirty (30) days prior to the date of the request and a balance sheet of the corporation as of the end of that period. The statements shall be delivered or mailed to the person making the request within thirty (30) days thereafter. A copy of the statements shall be kept on file in the principal office of the corporation for twelve (12) months and it shall be exhibited at all reasonable times to any shareholder demanding an examination of the statements or a copy shall be mailed to the shareholder. If the corporation has not sent to the shareholders its annual report for the last fiscal year, the statements referred to in the first paragraph of this Section 7.6 shall likewise be delivered or mailed to the shareholder or shareholders within thirty (30) days after the request.

The quarterly income statements and balance sheets referred to in this section shall be accompanied by the report thereon, if any, of any independent accountants engaged by the corporation or the certificate of an authorized officer of the corporation that the financial statements were prepared without audit from the books and records of the corporation.

7.7 REPRESENTATION OF SHARES OF OTHER CORPORATIONS

The Chairman of the Board, the President, any Vice President, the Chief Financial Officer, the Secretary or Assistant Secretary of this corporation, or any other person authorized by the Board of Directors or the President or a Vice President, is authorized to vote, represent, and exercise on behalf of this corporation all rights incident to any and all shares of any other corporation or corporations standing in the name of this corporation. The authority herein granted may be exercised either by such person directly or by any other person authorized to do so by proxy or power of attorney duly executed by such person having the authority.

ARTICLE VIII.

GENERAL MATTERS

8.1 RECORD DATE FOR PURPOSES OTHER THAN NOTICE AND VOTING

For purposes of determining the shareholders entitled to receive payment of any dividend or other distribution or allotment of any rights or entitled to exercise any rights in respect of any other lawful action (other than with respect to notice or voting at a shareholders meeting or action, by shareholders by written consent without a meeting), the Board of Directors may fix, in advance, a record date, which shall not be more than sixty (60) days prior to any such action. Only shareholders of record at the close of business on the record date are entitled to receive the dividend, distribution or allotment of rights, or to exercise the rights, as the case may be, notwithstanding any transfer of any shares on the books of the corporation after the record date, except as otherwise provided in the Articles of Incorporation or the Code.

If the Board of Directors does not so fix a record date, then the record date for determining shareholders for any such purpose shall be at the close of business on the day on which the Board

adopts the resolution relating thereto or the sixtieth (60th) day prior to the date of that action, whichever is later.

8.2 CHECKS; DRAFTS; EVIDENCES OF INDEBTEDNESS

From time to time, the Board of Directors shall determine by resolution which person or persons may sign or endorse all checks, drafts, other orders for payment of money, notes or other evidences of indebtedness that are issued in the name of or payable to the corporation, and only the persons so authorized shall sign or endorse those instruments.

8.3 CORPORATE CONTRACTS AND INSTRUMENTS: HOW EXECUTED

The Board of Directors, except as otherwise provided in these Bylaws, may authorize any officer or officers, or agent or agents, to enter into any contract or execute any instrument in the name of and on behalf of the corporation; such authority may be general or confined to specific instances. Unless so authorized or ratified by the Board of Directors or within the agency power of an officer, no officer, agent or employee shall have any power or authority to bind the corporation by any contract or engagement or to pledge its creditor to render it liable for any purpose or for any amount.

8.4 CERTIFICATES FOR SHARES

A certificate or certificates for shares of the corporation shall be issued to each shareholder when any of such shares are fully paid. The Board of Directors may authorize the issuance of certificates for shares partly paid provided that these certificates shall state the total amount of the consideration to be paid for them and the amount actually paid. All certificates shall be signed in the name of the corporation by the Chairman of the Board or the Vice Chairman of the Board or the President or a Vice President and by the Treasurer/Chief Financial Officer or an Assistant Treasurer or the Secretary or an Assistant Secretary, certifying the number of shares and the class or series of shares owned by the shareholder. Any or all of the signatures on the certificate may be by facsimile.

In case any officer, transfer agent or registrar who has signed or whose facsimile signature has been placed on a certificate has ceased to be such officer, transfer agent or registrar before such certificate is issued, it may be issued by the corporation with the same effect as if that person were an officer, transfer agent or registrar at the date of issue.

8.5 LOST CERTIFICATES

Except as provided in this Section 8.5, no new certificates for shares shall be issued to replace a previously issued certificate unless the latter is surrendered to the corporation or its transfer agent or registrar and cancelled at the same time. The Board of Directors may, in case any share certificate or certificate for any other security is lost, stolen or destroyed (as evidenced by a written affidavit or affirmation of such fact), authorize the issuance of replacement certificates on such terms and conditions as the Board may require; the Board may require indemnification of the corporation secured by a bond or other adequate security sufficient to protect the corporation against any claim that may be made against it, including any expense or

liability, on account of the alleged loss, theft or destruction of the certificate or the issuance of the replacement certificate.

8.6 CONSTRUCTION; DEFINITIONS

Unless the context requires otherwise, the general provisions, rules of construction, and definitions in the Code shall govern the construction of these Bylaws. Without limiting the generality of this provision, the singular number includes the plural, the plural number includes the singular, and the term "person" includes both a corporation and a natural person.

ARTICLE IX.

AMENDMENTS

9.1 AMENDMENT BY SHAREHOLDERS

New Bylaws may be adopted or these Bylaws may be amended or repealed by the vote or written consent of holders of a .majority of the outstanding shares entitled to vote; provided, however, that if the Articles of Incorporation of the corporation set forth the number of authorized Directors of the corporation, then the authorized number of Directors may be changed only by an amendment of the Articles of Incorporation.

9.2 AMENDMENT BY DIRECTORS

Subject to the rights of the shareholders as provided in Section 9.1 of these Bylaws, Bylaws, other than a Bylaw or an amendment of a Bylaw changing the authorized number of directors (except to fix the authorized number of directors pursuant to a Bylaw providing for a variable number of directors, if any), may be adopted, amended or repealed by the Board of Directors.

9.3 RECORD OF AMENDMENTS

Whenever an amendment or new Bylaw is adopted, it shall be copied in the book of minutes with the original Bylaws. If any Bylaw is repealed, the fact of repeal, with the date of the meeting at which the repeal was enacted or written consent was filed, shall be stated in said book.

ARTICLE X.

INTERPRETATION

Reference in these Bylaws to any provision of the California Corporations Code shall be deemed to include all amendments thereof.

SECRETARY'S CERTIFICATE OF ADOPTION OF BYLAWS
OF
TTC ACQUISITION COMPANY

I, the undersigned, do hereby certify:

1. That I am the duly elected and acting Secretary of TTC Acquisition Company, a California corporation.

2. That the foregoing Bylaws constitute the Bylaws of said corporation as adopted by the Directors of said corporation by unanimous written consent on June 28, 1995.

3. The foregoing Bylaws were also adopted by the shareholders of said corporation by unanimous written consent on June 28, 1995.

IN WITNESS WHEREOF, I have hereunto subscribed my name this 28th day of June, 1995.

Gary Rubinoff
Secretary

Exhibit 3.97

CERTIFICATE OF INCORPORATION
OF
WESCAM AIR OPS INC.

FIRST: The name of the Corporation is Wescam Air Ops Inc.

SECOND: The address of the registered office of the corporation in the State of Delaware shall be located at 103 Springer Building, 3411 Silverside Road, Wilmington, DE 19810, New Castle County, and the name of its registered agent at such address is Organization Services, Inc.

THIRD: The purposes of the Corporation are to engage in any lawful act or activity for which corporations may be organized under the General Corporation Law of Delaware.

FOURTH: The total number of shares of all classes of stock which the Corporation shall have authority to issue in One Thousand (1,000) shares of Common Stock with a $1.00 par value per share:

FIFTH: The name and mailing address of the sole incorporator is as follows:

Name	Address
Stuart M. Berkson	227 West Monroe Street Chicago, IL 60606-5096

SIXTH: The Corporation is to have perpetual existence.

SEVENTH: At all elections of directors of the Corporation, or at elections held under any circumstances, each stockholder entitled to vote on the election of directors shall designate a person to be elected as a director. Each designated director shall only be elected to the Board of Directors by a unanimous vote of the shares present in person or represented by proxy at the meeting and entitled to vote on the election of directors. For all elections of directors by written consent, the designated directors shall be elected by a unanimous act of the stockholders entitled to vote on the election of directors.

EIGHTH: In furtherance and not in limitation of the powers conferred by statute, the Board of Directors is expressly authorized to make, alter or repeal the By-Laws of the Corporation.

NINTH: Meetings of stockholders may be held within or without the State of Delaware as the By-Laws may provide. The books of the Corporation may be kept (subject to any provisions contained in the statutes) outside the State of Delaware at such place or places as may be designated from time to time by the Board of Directors or in the By-Laws of the Corporation. Elections of directors need not be by written ballot unless the By-Laws of the Corporation shall so provide.

TENTH: The Corporation reserves the right to amend, alter, change or repeal any provision contained in this Certificate of Incorporation, in the manner now or thereinafter prescribed by statute, and all rights conferred upon stockholders herein are granted subject to this reservation.

ELEVENTH: A director of the corporation shall not be personally liable to the corporation or its stockholders for monetary damages for breach of fiduciary duty as a director, except for liability (i) for any breach of the director's duty of loyalty to the corporation or its stockholders, (ii) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (iii) under Section 174 of the Delaware General Corporation Law, as the same exists or hereafter may be amended, or (iv) for any transaction from which the director derived an improper personal benefit.

TWELFTH: Whenever a compromise or arrangement is proposed between this corporation and its creditors or any class of them and/or between this corporation and its stockholders or any class of them, any court of equitable jurisdiction within the State of Delaware may, on the application in a summary way of this corporation or of any creditor or stockholder thereof, or on the application of any receiver or receivers appointed for this corporation under the provisions of Section 291 of Title 8 of the Delaware Code, or on the application of trustees in dissolution or of any receiver or receivers appointed for this corporation under the provisions of Section 279 of Title 8 of the Delaware Code, order a meeting of the creditors or class of creditors, and/or of the stockholders or class of stockholders of this corporation, as the case may be, to be summoned in such manner as the said court directs. If a majority in number representing three-fourths in value of the creditors or class of creditors, and/or of the stockholders or class of stockholders of this corporation, as the case may be, agree to any compromise or arrangement and to any reorganization of this corporation as a consequence of such compromise or arrangement, the said compromise or arrangement and the said reorganization shall, if sanctioned by the court to which the said application has been made, be binding on all the creditors or class of creditors, and/or on all the stockholders or class of stockholders, of this corporation as the case may be, and also on this corporation.

If the Delaware General Corporation Law hereafter is amended to authorize the further elimination or limitation of the liability of directors, then the liability of directors shall be eliminated or limited to the full extent authorized by the General Corporation Law of the State of Delaware, as so amended.

Any repeal or modification of this Article shall not adversely affect any right or protection of a director of the corporation existing at the time of such repeal or modification.

I, THE UNDERSIGNED, being the sole incorporator hereinbefore named, for the purpose of forming a corporation pursuant to the General Corporation Law of the State of Delaware, do make this certificate, hereby declaring and certifying that the facts stated are true, and accordingly have hereunto set my hand and seal this 20th day of March 2001.

/s/ Stuart M. Berkson

Stuart M. Berkson,
Sole Incorporator on behalf of
Wescam Air Ops Inc.

Exhibti 3.98

BY-LAWS

OF

WESCAM AIR OPS INC.

ARTICLE I
OFFICES

Section 1.1. Registered Office. The registered office of the corporation shall be maintained in the City of Wilmington, State of Delaware, and the registered agent in charge thereof is Organization Services, Inc.

Section 1.2. Other Offices. The corporation may also have offices at such other places as the Board of Directors may from time to time determine or the business of the corporation may require.

ARTICLE II
STOCKHOLDERS' MEETINGS

Section 2.1. Place of Meetings. All meetings of the stockholders, whether annual or special, shall be held at the offices of the corporation, or at such other place as may be fixed from time to time by the Board of Directors.

Section 2.2. Annual Meetings. An annual meeting of the stockholders, commencing with the year 2001, shall be held on the first Monday in May in each year, but if a legal holiday then on the next secular day following, at 10:00 A.M., at which they shall elect a Board of Directors, and transact such other business as may properly be brought before the meeting.

Section 2.3. Notice of Meeting. Written notice of the annual meeting stating the place, date and hour of the meeting, shall be given not less than ten nor more than sixty days before the date of the meeting to each stockholder entitled to vote at such meeting. If mailed, notice is given when deposited in the United States mail, postage prepaid, directed to the stockholder at his address as it appears on the records of the corporation.

Section 2.4. Stockholders' List. At least ten days before every meeting of stockholders, a complete list of the stockholders entitled to vote at said meeting, arranged in alphabetical order and showing the address of each stockholder and the number of shares registered in the name of each stockholder, shall be prepared by the Secretary. Such list shall be open to the examination of any stockholder, for any purpose germane to the meeting, during ordinary business hours, for a period of at least ten days prior to the meeting at the place where the meeting is to be held. The list shall also be produced and kept at the time and place of the meeting during the whole time thereof, and may be inspected by any stockholder who is present.

Section 2.5. Special Meetings. Special meetings of the stockholders, for any purpose or purposes, unless otherwise prescribed by statute or by the Certificate of Incorporation, may be called by the President and shall be called by the Secretary at the request in writing of a majority of the Board of Directors, or at the request in writing of stockholders owning at least 75% of the number of shares of the corporation issued and outstanding and entitled to vote. Such request shall state the purpose or purposes of the proposed meeting.

Section 2.6. Notice of Special Meetings. Written notice of a special meeting, stating the place, date and hour of the meeting and the purpose or purposes for which the meeting is called, shall be given not less than ten nor more than sixty days before the date of the meeting to each stockholder entitled to vote at such meeting. If mailed, notice is given when deposited in the United States mail, postage prepaid, directed to the stockholder at his address as it appears on the records of the corporation.

Section 2.7. Quorum. The holders of a majority of the shares issued and outstanding and entitled to vote thereat, present in person or represented by proxy, shall be requisite and shall constitute a quorum at all meetings of the stockholders for the transaction of business except as otherwise provided by statute, by the Certificate of Incorporation or by these By-Laws. If, however, such quorum shall not be present or represented at any meeting of the stockholders, the stockholders entitled to vote thereat, present in person or represented by proxy, shall have the power to adjourn the meeting from time to time, without notice other than announcement at the meeting, of the place, date and hour of the adjourned meeting, until a quorum shall again be present or represented by proxy. At the adjourned meeting at which a quorum shall be present or represented by proxy, the corporation may transact any business which might have been transacted at the original meeting. If the adjournment is for more than thirty days, or if after the adjournment, a new record date is fixed for the adjourned meeting, a notice of the adjourned meeting shall be given to each stockholder of record entitled to vote at the meeting.

Section 2.8. Voting. When a quorum is present at any meeting, and subject to the provisions of the General Corporation Law of the State of Delaware, the Certificate of Incorporation or by these By-Laws in respect of the vote that shall be required for a specified action, the vote of the holders of a majority of the shares having voting power, present in person or represented by proxy, shall decide any question brought before such meeting, unless the question is one upon which, by express provision of the statutes or of the Certificate of Incorporation or of these By-Laws, a different vote is required in which case such express provision shall govern and control the decision of such question. Each stockholder shall have one vote for each share of stock having voting power registered in his name on the books of the corporation, except as otherwise provided in the Certificate of Incorporation.

Section 2.9. Proxies. Each stockholder entitled to vote at a meeting of stockholders or to express consent or dissent to corporate action in writing without a meeting may authorize another person or persons to act for him by proxy, but no such proxy shall be voted or acted upon after three years from its date, unless the proxy provides for a longer period.

A stockholder may execute a writing authorizing another person or persons to act for him as proxy by transmitting or authorizing the transmission of a telegram, cablegram, or other means of electronic transmission, provided that the telegram, cablegram or other means of electronic transmission either sets forth or is submitted with information from which it can be determined that the telegram, cablegram or other electronic transmission was authorized by the stockholder.

Section 2.10. Majority Consent. Whenever the vote of stockholders at a meeting thereof is required or permitted to be taken for or in connection with any corporate action by any provisions of the statutes or of the Certificate of Incorporation or these By-Laws, the meeting, notice of the meeting, and vote of stockholders may be dispensed with if stockholders owning stock having not less than the minimum number of votes which, by statute, the Certificate of Incorporation or these By-Laws, is required to authorize such action at a meeting at which all shares entitled to vote thereon were present and voted shall consent in writing to such corporate action being taken; provided that prompt notice of the taking of such action must be given to those stockholders who have not consented in writing.

ARTICLE III
DIRECTORS

Section 3.1. General Powers. The business and affairs of the corporation shall be managed by or under the direction of the Board of Directors which may exercise all such powers of the corporation and do all such acts and things as are not by the General Corporation Law of the State of Delaware nor by the Certificate of Incorporation nor by these By-Laws directed or required to be exercised or done by the stockholders.

Section 3.2. Number of Directors. The number of directors which shall constitute the whole Board shall be not less than two nor more than five. The directors shall be elected at the annual meeting of the stockholders, and each director shall hold office until his successor is elected and qualified or until his earlier resignation or removal.

Section 3.3. Vacancies. If the office of any director or directors becomes vacant by reason of death, resignation, retirement, disqualification, removal from office, or otherwise, or a new directorship is created, the holders of a plurality of shares issued and outstanding and entitled to vote in elections of directors, shall choose a successor or successors, or a director to fill the newly created directorship, who shall hold office for the unexpired term or until the next election of directors.

Section 3.4. Place of Meetings. The Board of Directors may hold its meetings outside of the State of Delaware, at the office of the corporation or at such other places as they may from time to time determine, or as shall be fixed in the respective notices or waivers of notice of such meetings.

Section 3.5. Committees of Directors. The Board of Directors may, by resolution or resolutions passed by a majority of the whole Board, designate one or more committees, each committee to consist of one or more of the directors of the corporation. The Board may designate one or more directors as alternate members of any committee, who may replace any

absent or disqualified member at any meeting of the committee. Any such committee, to the extent provided in the resolution of the Board of Directors, shall have and may exercise all the powers and authority of the Board of Directors in the management of the business and affairs of the corporation, and may authorize the seal of the corporation to be affixed to all papers which may require it; but no such committee' shall have the power of authority in reference to amending the Certificate of Incorporation, adopting an agreement of merger or consolidation, recommending to the stockholders the sale, lease or exchange of all or substantially all of the corporation's property and assets, recommending to the stockholders a dissolution of the corporation or a revocation of a dissolution, or amendment to the By-Laws, of the corporation; and, unless the resolution, By-Laws, or Certificate of Incorporation expressly so provide, no such committee shall have the power or authority to declare a dividend or to authorize the issuance of stock. Such committee or committees shall have such name or names as may be determined from time to time by resolution adopted by the Board of Directors. The committees shall keep regular minutes of their proceedings and report the same to the Board of Directors when required.

Section 3.6. Compensation of Directors. Directors, as such, may receive such stated salary for their services and/or such fixed sums and expenses of attendance for attendance at each regular or special meeting of the Board of Directors as may be established by resolution of the Board; provided that nothing herein contained shall be construed to preclude any director from serving the corporation in any other capacity and receiving compensation therefor. Members of special or standing committees shay be allowed like compensation for attending committee meetings.

Section 3.7. Annual Meeting. The annual meeting of the Board of Directors shall be held within ten days after the annual meeting of the stockholders in each year. Notice of such meeting, unless waived, shall be given by mail or telegram to each director elected at such annual meeting, at his address as the same may appear on the records of the corporation, or in the absence of such address, at his residence or usual place of business, at least three days before the day on which such meeting is to be held. Said meeting may be held at such place as the Board may fix from time to time or as may be specified or fixed in such notice or waiver thereof.

Section 3.8. Special Meetings. Special meetings of the Board of Directors may be held at any time on the call of the President or at the request in writing of any one director. Notice of any such meeting, unless waived, shall be given by mail or telegram to each director at his address as the same appears on the records of the corporation not less than one day prior to the day on which such meeting is to be held if such notice is by telegram, and not less than two days prior to the day on which the meeting is to be held if such notice is by mail. If the Secretary shall fail or refuse to give such notice, then the notice may be given by the officer or any one of the directors making the call. Any such meeting may be held at such place as the Board may fix from time to time or as may be specified or fixed in such notice or waiver thereof. Any meeting of the Board of Directors shall be a legal meeting without any notice thereof having been given, if all the directors shall be present thereat, and no notice of a meeting shall be required to be given to any director who shall attend such meeting.

Section 3.9. Action Without Meeting. Any action required or permitted to be taken at any meeting of the Board of Directors or any committee thereof may be taken without a

meeting, if a written consent to such action is signed by all members of the Board or of such committee, as the case may be, and such written consent is filed with the minutes of proceedings of the Board of Directors.

Members of the Board of Directors, or any committee designated by the Board, may participate in a meeting of the Board or committee by means of conference telephone or similar communications equipment by means of which all persons participating in the meeting can hear each other, and participation in a meeting pursuant to this section shall constitute presence in person at such meeting.

Section 3.10. Quorum and Manner of Acting. Except as otherwise provided in these By-Laws, a majority of the total number of directors as at the time specified by the By-Laws shall constitute a quorum at any regular or special meeting of the Board of Directors. Except as otherwise provided by statute, by the Certificate of Incorporation or by these By-Laws, the vote of a majority of the directors present at any meeting at which a quorum is present shall be the act of the Board of Directors. In the absence of a quorum, a majority of the directors present may adjourn the meeting from time to time until a quorum shall be present. Notice of any adjourned meeting need not be given, except that notice shall be given to all directors if the adjournment is for more than thirty days or if after the adjournment a new record date is fixed for the adjourned meeting.

ARTICLE IV
OFFICERS

Section 4.1. Executive Officers. The executive officers of the corporation shall be a President, such number of Vice Presidents, if any, as the Board of Directors may determine, a Secretary and a Treasurer. One person may hold any number of said offices.

Section 4.2. Election, Term of Office and Eligibility. The executive officers of the corporation shall be appointed by the Board of Directors. Each officer, except such officers as may be appointed in accordance with the provisions of Section 4.3, shall hold office until his successor shall have been duly chosen and qualified or until his death, resignation or removal. None of the officers need be members of the Board.

Section 4.3. Subordinate Officers. The Board of Directors may appoint such Assistant Secretaries, Assistant Treasurers, Controller and other officers, and such agents as the Board may determine, to hold office for such period and with such authority and to perform such duties as the Board may from time to time determine. The Board may, by specific resolution, empower the chief executive officer of the corporation or the Executive Committee to appoint any such subordinate officers or agents.

Section 4.4. Removal. The President, any Vice President, the Secretary and/or the Treasurer may be removed at any time, either with or without cause. Any subordinate officer appointed pursuant to Section 4.3 may be removed at any time, either with or without cause.

Section 4.5. The President. The President shall be the chief executive officer of the corporation. He shall have executive authority to see that all orders and resolutions of the

Board of Directors are carried into effect and, subject to the control vested in the Board of Directors by statute, by the Certificate of Incorporation, or by these By-Laws, shall administer and be responsible for the management of the business and affairs of the corporation. He shall preside at all meetings of the stockholders and the Board of Directors; and in general shall perform all duties incident to the office of the President and such other duties as from time to time may be assigned to him by the Board of Directors.

Section 4.6. The Vice Presidents. In the event of the absence or disability of the President, each Vice President, in the order designated, or in the absence of any designation; then in the order of their appointment, shall perform the duties of the President. The Vice Presidents shall also perform such other duties as from time to time may be assigned to them by the Board of Directors or by the chief executive officer of the corporation.

Section 4.7. The Secretary. The Secretary shall:

(a) Keep the minutes of the meetings of the stockholders and of the Board of Directors;

(b) See that all notices are duly given in accordance with the provisions of these By-Laws or as required by law;

(c) Be custodian of the records and of the seal of the corporation and see that the seal or a facsimile or equivalent thereof is affixed to or reproduced on all documents, the execution of which on behalf of the corporation under its seal is duly authorized;

(d) Have charge of the stock record books of the corporation;

(e) In general, perform all duties incident to the office of Secretary, and such other duties as are provided by these By-Laws and as from time to time are assigned to him by the Board of Directors or by the chief executive officer of the corporation.

Section 4.8. The Assistant Secretaries. If one or more Assistant Secretaries shall be appointed pursuant to the provisions of Section 4.3 respecting subordinate officers, then, at the request of the Secretary, or in his absence or disability, the Assistant Secretary designated by the Secretary (or in the absence of such designations, then any one of such Assistant Secretaries) shall perform the duties of the Secretary and when so acting shall have all the powers of, and be subject to all the restrictions upon, the Secretary.

Section 4.9. The Treasurer. The Treasurer shall:

(a) Receive and be responsible for all funds of and securities owned or held by the corporation and, in connection therewith, among other things: keep or cause to be kept full and accurate records and accounts for the corporation; deposit or cause to be deposited to the credit of the corporation all moneys, funds and securities so received in such bank or other depositary as the Board of Directors or an officer designated by the Board may from time to time establish;

and disburse or supervise the disbursement of the funds of the corporation as may be properly authorized.

(b) Render to the Board of Directors at any meeting thereof, or from time to time when ever the Board of Directors or the chief executive officer of the corporation may require, financial and other appropriate reports on the condition of the corporation;

(c) In general, perform all the duties incident to the office of Treasurer and such other duties as from time to time may be assigned to him by the Board of Directors or by the chief executive officer of the corporation.

Section 4.10. The Assistant Treasurers. If one or more Assistant Treasurers shall be appointed pursuant to the provisions of Section 4.3 respecting subordinate officers, then, at the request of the Treasurer, or in his absence or disability, the Assistant Treasurer designated by the Treasurer (or in the absence of such designation, then any one of such Assistant Treasurers) shall perform all the duties of the Treasurer and when so acting shall have all the powers of and be subject to all the restrictions upon, the Treasurer.

Section 4.11. Salaries. The salaries of the officers shall be fixed from time to time by the Board of Directors, and no officer shall be prevented from receiving such salary by reason of the fact that he is also a director of the corporation.

Section 4.12. Bonds. If the Board of Directors or the chief executive officer shall so require, any officer or agent of the corporation shall give bond to the corporation in such amount and with such surety as the Board of Directors or the chief executive officer, as the case may be, may deem sufficient, conditioned upon the faithful performance of their respective duties and offices.

Section 4.13. Delegation of Duties. In case of the absence of any officer of the corporation or for any other reason which may seem sufficient to the Board of Directors, the Board of Directors may, for the time being, delegate his powers and duties, or any of them, to any other officer or to any director.

ARTICLE V
SHARES OF STOCK

Section 5.1. Regulation. Subject to the terms of any contract of the corporation, the Board of Directors may make such rules and regulations as it may deem expedient concerning the issue, transfer, and registration of certificates for shares of the stock of the corporation, including the issue of new certificates for lost, stolen or destroyed certificates, and including the appointment of transfer agents and registrars.

Section 5.2. Stock Certificates. Certificates for shares of the stock of the corporation shall be respectively numbered serially for each class of stock, or series thereof, as they are issued, shall be impressed with the corporate seal or a facsimile thereof, and shall be signed by the President or a Vice President, and by the Secretary or Treasurer, or an Assistant

Secretary or an Assistant Treasurer, provided that such signatures may be facsimiles on any certificate countersigned by a transfer agent other than the corporation or its employee. Each certificate shall exhibit the name of the corporation, the class (or series of any class) and number of shares represented thereby, and the name of the holder. Each certificate shall be otherwise in such form as may be prescribed by the Board of Directors.

Section 5.3. Restriction on Transfer of Securities. A restriction on the transfer or registration of transfer of securities of the corporation may be imposed either by the Certificate of Incorporation or by these By-Laws or by an agreement among any number of security holders or among such holders and the corporation. No restriction so imposed shall be binding with respect to securities issued prior to the adoption of the restriction unless the holders of the securities are parties to an agreement or voted in favor of the restriction.

A restriction on the transfer of securities of the corporation is permitted by this Section if it:

(a) Obligates the holder of the restricted securities to offer to the corporation or to any other holders of securities of the corporation or to any other person or to any combination of the foregoing a prior opportunity, to be exercised within a reasonable time, to acquire the restricted securities; or

(b) Obligates the corporation or any holder of securities of the corporation or any other person or any combination of the foregoing to purchase the securities which are the subject of an agreement respecting the purchase and sale of the restricted securities; or

(c) Requires the corporation or the holders of any class of securities of the corporation to consent to any proposed transfer of the restricted securities or to approve the proposed transferee of the restricted securities; or

(d) Prohibits the transfer of the restricted securities to designated persons or classes of persons; and such designation is not manifestly unreasonable; or

(e) Restricts transfer or registration of transfer in any other lawful manner.

Unless noted conspicuously on the security, a restriction, even though permitted by this Section, is ineffective except against a person with actual knowledge of the restriction.

Section 5.4. Transfer of Shares. Subject to the restrictions permitted by Section 5.3, shares of the capital stock of the corporation shall be transferable on the books of the corporation by the holder thereof in person or by his duly authorized attorney, upon the surrender or cancellation of a certificate or certificates for a like number of shares. As against the corporation, a transfer of shares can be made only on the books of the corporation and in the manner hereinabove provided, and the corporation shall be entitled to treat the registered holder of any share as the owner thereof and shall not be bound to recognize any equitable or other claim to or interest in such share on the part of any other person, whether or not it shall have

express or other notice thereof, save as expressly provided by the statutes of the State of Delaware.

Section 5.5. Fixing Date for Determination of Stockholders of Record. (a) In order that the corporation may determine the stockholders entitled to notice of or to vote at any meeting of stockholders or any adjournment thereof, the Board of Directors may fix a record date, which record date shall not precede the date upon which the resolution fixing the record date is adopted by the Board of Directors, and which record date shall not be more than sixty nor less than ten days before the date of such meeting. If no record is fixed by the Board of Directors, the record date for determining stockholders entitled to notice of or to vote at a meeting of stockholders shall be at the close of business on the day next preceding the day on which notice is given, or, if notice is waived, at the close of business on the day next preceding the day on which the meeting is held. A determination of stockholders of record entitled to notice of or to vote at a meeting of stockholders shall apply to any adjournment of the meeting; providing, however, that the Board of Directors may fix a new record date for the adjourned meeting.

(b) In order that the corporation may determine the stockholders entitled to consent to corporate action in writing without a meeting, the Board of Directors may fix a record date, which record date shall not precede the date upon which the resolution fixing the record date is adopted by the Board of Directors. If no record date has been fixed by the Board of Directors, the record date for determining stockholders entitled to consent to corporate action in writing without a meeting, when no prior action by the Board of Directors is required by the General Corporation Law of the State of Delaware, shall be the first date on which a signed written consent setting forth the action taken or proposed to be taken is delivered to the corporation by delivery to its registered office in the State of Delaware, its principal place of business, or an officer or agent of the corporation having custody of the book in which proceedings of meetings by stockholders are recorded. Delivery made to a corporation's registered office shall be by hand or by certified or registered mail, return receipt requested. If no record date has been fixed by the Board of Directors and prior action by the Board of Directors is required by the General Corporation Law of the State of Delaware, the record date for determining stockholders entitled to consent to corporate action in writing without a meeting shall be at the close of business on the day on which the Board of Directors adopts the resolution taking such prior action.

(c) In order that the corporation may determine the stockholders entitled to receive payment of any dividend or other distribution or allotment of any rights or the stockholders entitled to exercise any rights in respect of any change, conversion or exchange of stock, or for the purpose of any other lawful action, the Board of Directors may fix a record date, which record date shall not precede the date upon which the resolution fixing the record date is adopted, and which record date shall be not more than sixty days prior to such action. If no record date is fixed, the record date for determining stockholders for any such purpose shall be at the close of business on the day on which the Board of Directors adopts the resolution relating thereto.

Section 5.6. Lost Certificate. Any stockholder claiming that a certificate representing shares of stock has been lost, stolen or destroyed may make an affidavit or

affirmation of the fact and, if the Board of Directors so requires, advertise the same in a manner designated by the Board, and give the corporation a bond of indemnity in form and with security for an amount satisfactory to the Board (or, an officer or officers designated by the Board), whereupon a new certificate may be issued of the same tenor and representing the same number, class and/or series of shares as were represented by the certificate alleged to have been lost, stolen or destroyed.

ARTICLE VI
BOOKS AND RECORDS

Section 6.1. Location. The books, accounts and records of the corporation may be kept at such place or places within or without the State of Delaware as the Board of Directors may from time to time determine.

Section 6.2. Inspection. The books, accounts, and records of the corporation shall be open to inspection by any member of the Board of Directors at all times; and open to inspection by the stockholders at such times, and subject to such regulations as the Board of Directors may prescribe, except as otherwise provided by statute.

Section 6.3. Corporate Seal. The corporate seal shall contain two concentric circles between which shall be the name of the corporation and the word "Delaware" and in the center shall be inscribed the words "Corporate Seal."

ARTICLE VII
DIVIDENDS AND RESERVES

Section 7.1. Dividends. The Board of Directors of the corporation, subject to any restrictions contained in the Certificate of Incorporation and other lawful commitments of the corporation, may declare and pay dividends upon the shares of its capital stock either out of the surplus of the corporation, as defined in and computed in accordance with the General Corporation Law of the State of Delaware, or in case there shall be no such surplus, out of the net profits of the corporation for the fiscal year in which the dividend is declared and/or the preceding fiscal year. If the capital of the corporation, computed in accordance with the General Corporation Law of the State of Delaware, shall have been diminished by depreciation in the value of its property, or by losses, or otherwise, to an amount less than the aggregate amount of the capital represented by the issued and outstanding stock of all classes having a preference upon the distribution of assets, the Board of Directors of the corporation shall not declare and pay out of such net profits any dividends upon any shares of any classes of its capital stock until the deficiency in the amount of capital represented by the issued and outstanding stock of all classes having a preference upon the distribution of assets shall have been repaired.

Section 7.2. Reserves. The Board of Directors of the corporation may set apart, out of any of the funds of the corporation available for dividends, a reserve or reserves for any proper purpose and may abolish any such reserve.

ARTICLE VIII
MISCELLANEOUS PROVISIONS

Section 8.1. Fiscal Year. The fiscal year of the corporation shall end on the 31st day of October of each year.

Section 8.2. Depositories. The Board of Directors or an officer designated by the Board shall appoint banks, trust companies, or other depositories in which shall be deposited from time to time the money or securities of the corporation.

Section 8.3. Checks, Drafts and Notes. All checks, drafts, or other orders for the payment of money and all notes or other evidences of indebtedness issued in the name of the corporation shall be signed by such officer or officers or agent or agents as shall from time to time be designated by resolution of the Board of Directors or by an officer appointed by the Board.

Section 8.4. Contracts and Other Instruments. The Board of Directors may authorize any officer, agent or agents to enter into any contract or execute and deliver any instrument in the name and on behalf of the corporation and such authority may be general or confined to specific instances.

Section 8.5. Notices. Whenever under the provisions of the statute or of the Certificate of Incorporation or of these By-Laws notice is required to be given to any director or stockholder, it shall not be construed to mean personal notice, but such notice may be given in writing, by mail, by depositing the same in a post office or letter box, in a postpaid sealed wrapper, or by delivery to a telegraph company, addressed to such director or stockholder at such address as appears on the records of the corporation, or, in default of other address, to such director or stockholder at the General Post Office in the City of Dover, Delaware, and such notice shall be deemed to be given at the time when the same shall be thus mailed or delivered to a telegraph company.

Section 8.6. Waivers of Notice. Whenever any notice is required to be given under the provisions of the statutes or of the Certificate of Incorporation or of these By-Laws, a waiver thereof in writing signed by the person or persons entitled to said notice, whether before or after the time stated therein, shall be deemed equivalent to notice. Attendance of a person at a meeting shall constitute a waiver of notice of such meeting, except when the person attends a meeting for the express purpose of objecting, at the beginning of the meeting, to the transaction of any business because the meeting is not lawfully called or convened. Neither the business to be transacted at, nor the purpose of, any regular or special meeting of the stockholders, directors or members of a committee of directors need be specified in any written waiver of notice.

Section 8.7. Stock in Other Corporations. Any shares of stock in any other corporation which may from time to time be held by this corporation may be represented and voted at any meeting of shareholders of such corporation by the President or a Vice President, or by any other person or persons thereunto authorized by the Board of Directors, or by any proxy designated by written instrument of appointment executed in the name of this corporation by its

President or a Vice President. Shares of stock belonging to the corporation need not stand in the name of the corporation, but may be held for the benefit of the corporation in the individual name of the Treasurer or of any other nominee designated for the purpose by the Board of Directors. Certificates for shares so held for the benefit of the corporation shall be endorsed in blank or have proper stock powers attached so that said certificates are at all times in due form for transfer, and shall be held for safekeeping in such manner as shall be determined from time to time by the Board of Directors.

Section 8.8. Indemnification. (a) Each person who was or is a party or is threatened to be made a party to or is involved in any action, suit or proceeding, whether civil, criminal, administrative or investigative (hereinafter a "proceeding"), by reason of the fact that he, or a person of whom he is the legal representative, is or was a director or officer of the corporation or is or was a director or officer of the corporation who is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation or of a partnership, joint venture, trust or other enterprise, including service with respect to employee benefit plans, shall be indemnified and held harmless by the corporation to the fullest extent authorized by the laws of Delaware as the same now or may hereafter exist (but, in the case of any change, only to the extent that such change authorizes the corporation to provide broader indemnification rights than said law permitted the corporation to provide prior to such change) against all costs, charges, expenses, liabilities and losses (including attorneys' fees, judgments, fines, ERISA excise taxes or penalties and amounts paid or to be paid in settlement) reasonably incurred or suffered by such person in connection therewith and such indemnification shall continue as to a person who has ceased to be a director or officer and shall inure to the benefit of his heirs, executors and administrators. The right to indemnification conferred in this Section shall be a contract right and shall include the right to be paid by the corporation the expenses incurred in defending any such proceeding in advance of its final disposition upon receipt by the corporation of an undertaking, by or on behalf of such director or officer, to repay all amounts so advanced if it shall ultimately be determined that the director or officer is not entitled to be indemnified under this Section or otherwise. The corporation may, by action of its Board of Directors, provide indemnification to employees and agents of the corporation with the same scope and effect as the foregoing indemnification of directors and officers.

(b) If a claim under subsection (a) of this Section is not paid in full by the corporation within thirty days after a written claim has been received by the corporation, the claimant may at any time thereafter bring suit against the corporation to recover the unpaid amount of the claim and, if successful in whole or in part, the claimant shall also be entitled to be paid the expense of prosecuting such claim. It shall be a defense to any action (other than an action brought to enforce a claim for expenses incurred in defending any proceeding in advance of its final disposition where the required undertaking has been tendered to the corporation) that the claimant has failed to meet a standard of conduct which makes it permissible under Delaware law for the corporation to indemnify the claimant for the amount claimed, but the burden of proving such defense shall be on the corporation. Neither the failure of the corporation (including its Board of Directors, independent legal counsel, or its stockholders) to have made a determination prior to the commencement of such action that indemnification of the claimant is permissible in the circumstances because he has met such standard of conduct, nor an actual determination by the corporation (including its Board of Directors, independent legal counsel, or its stockholders) that the claimant has not met such standard of conduct, nor the termination of

any proceeding by judgment, order, settlement, conviction or upon a plea of nolo contendere or its equivalent, shall be a defense to the action or create a presumption that the claimant has failed to meet the required standard of conduct.

(c) The right to indemnification and the payment of expenses incurred in defending a proceeding in advance of its final disposition conferred in this Section shall not be exclusive of any other right which any person may have or hereafter acquire under any statute, provision of the Certificate of Incorporation, by-law, agreement, vote of stockholders or disinterested directors or otherwise.

(d) The corporation may maintain insurance, at its expense, to protect itself and any director, officer, employee or agent of the corporation or another corporation, partnership, joint venture, trust or other enterprise against any expense, liability or loss, whether or not the corporation would have the power to indemnify such person against such expense, liability or loss under Delaware law.

(e) To the extent that any director, officer, employee or agent of the corporation is by reason of such position, or a position with another entity at the request of the corporation, a witness in any proceeding, he shall be indemnified against all costs and expenses actually and reasonably incurred by him or on his behalf in connection therewith.

(f) Any amendment, repeal or modification of any provision of this Section by the stockholders or the directors of the corporation shall not adversely affect any right or protection of a director or officer of the corporation existing at the time of such amendment, repeal or modification.

Section 8.9. Amendment of By-Laws. The stockholders, by the affirmative vote of the holders of a majority of the stock issued and outstanding and having voting power may, at any annual or special meeting if notice of such alteration or amendment of the By-Laws is contained in the notice of such meeting, adopt, amend, or repeal these By-Laws, and alterations or amendments of By-Laws made by the stockholders shall not be altered or amended by the Board of Directors.

The Board of Directors, by the affirmative vote of a majority of the whole Board, may adopt, amend, or repeal these By-Laws at any meeting, except as provided in the above paragraph. By-Laws made by the Board of Directors may be altered or repealed by the stockholders.

Exhibit 3.99

CERTIFICATE OF FORMATION
OF
WESCAM AIR OPS LLC

This Certificate of Formation of Wescam Air Ops LLC ("the Company") dated January 23, 2002, is being duly executed and filed by William R. Pomierski, as an authorized person to form a limited liability company under the Delaware Limited Liability Company Act.

FIRST. The name of the limited liability company formed hereby is Wescam Air Ops LLC.

SECOND. The address of the registered office of the Company in the State of Delaware is 103 Springer Building, 3411 Silverside Road, Wilmington, Delaware 19810, New Castle County.

THIRD. The name and address of the registered agent for service of process on the Company in the State of Delaware is Organization Services, Inc. located at 103 Springer Building, 34 11 Silverside Road, Wilmington, Delaware 19810, New Castle County.

IN WITNESS WHEREOF, the undersigned has executed this Certificate of Formation as of the date first above written.

/s/ William R. Pomierski

William R. Pomierski, as an Authorized
Person on behalf of Wescam Air Ops LLC

Exhibit 3.100

WESCAM AIR OPS LLC
LIMITED LIABILITY COMPANY AGREEMENT

This Limited Liability Company Agreement (this "Agreement") for Wescam Air Ops LLC, a Delaware limited liability company (the "Company"), is adopted as of the 25th day of January, 2001, by Wescam Incorporated, a Florida corporation (the "Member").

1. FORMATION. The Company has been formed as a Delaware limited liability company pursuant to the Delaware Limited Liability Company Act (the "Act") by filing a Certificate of Formation with the Delaware Secretary of State in accordance with the Act, and the rights and liabilities of the Member shall be as provided in the Act, except as otherwise provided herein.

2. NAME. The Company shall be conducted under the name of Wescam Air Ops LLC or such other name as from time to time may be determined by the Member.

3. PRINCIPAL PLACE OF BUSINESS. The principal place of business of the Company shall be at such place or places as from time to time may be determined by the Member.

4. TERM. The Company shall commence on the date hereof and shall continue in perpetuity unless terminated pursuant to the terms hereof.

5. PURPOSE. The purpose of the Company shall be the transaction of any or all lawful business for which limited liability companies may be organized under the Act. The Company shall have all powers necessary or desirable to accomplish the aforesaid purposes.

6. QUALIFICATION AND REGISTRATION. The Company and its Member shall, as soon as practicable, take all action necessary to qualify the Company to do business and to execute all certificates or other documents, and perform all filings and recordings, as are required by the laws of the State of Delaware and the other jurisdictions in which the Company does business. The registered office of the Company in the State of Delaware shall be located at 103 Springer Building, 3411 Silverside Road, Wilmington, Delaware. The name of its registered agent at such address is Organization Services, Inc.

7. CAPITAL CONTRIBUTIONS.

(a) Initial Contribution. The initial capital contribution of the Member shall consist of those assets and liabilities more particularly described on Schedule A, which is attached hereto and made a part hereof.

(b) Additional Capital Contributions. The Member shall not be obligated to make additional capital contributions to the Company. Any additional capital contributions may be made by the Member in its sole discretion.

(c) Capital Account. The Company may maintain a capital account for the Member. The Member's capital account shall consist of the Member's initial capital

contribution, increased by additional capital contributions and by the Member's share of Company profits and decreased by distributions to the Member and by the Member's share of Company losses. No advance of money to the Company by the Member shall be credited to the Member's capital account.

8. TAX MATTERS, ALLOCATIONS AND DISTRIBUTIONS.

(a) Classification. Except as otherwise required by applicable provisions of tax law, solely for federal income tax purposes and for purposes of certain state tax laws, the Company shall be disregarded as an entity separate from the Member.

(b) Allocations. Each item of Company income, gain, loss, deduction, and credit shall be treated as if realized directly by, and shall be allocated 100% to, the Member.

(c) Distributions. Distributions of cash or other assets shall be made in the amounts and at the times determined by the Member. No distribution shall be made to the extent prohibited by the Act.

(d) Tax Records. The Member shall cause the Company to maintain separate books and records for the Company in accordance with Section 9 of this Agreement. The Member's contributions to the Company and distributions from the Company shall be recorded in such books and records together with Company income, gain, loss, deduction and credit and all other matters relative to the Company's business as are usually entered into books and records of account maintained by persons engaged in business of a like character.

9. ACCOUNTING AND REPORTS.

(a) Books of Account. The Company shall maintain or cause to be maintained at all times true and proper books, records, reports and accounts in accordance with generally accepted accounting principles consistently applied, in which shall be entered fully and accurately all transactions of the Company and each Member shall have access thereto at all reasonable times. The Company shall keep vouchers, statements, receipted bills and invoices and all other records in connection with the Company's business.

(b) Accounting and Reports. The books of account shall be closed promptly after the end of each fiscal year. Promptly thereafter, the Company shall make such written reports to the Member as it determines, which may include a balance sheet of the Company as of the end of such year, a statement of income and expenses for such year, a statement of the Member's capital account as of the end of such year, and such other statements with respect to the status of the Company and distribution of the profits and losses therefrom as are considered necessary by the Member.

(c) Fiscal Year. The fiscal year of the Company shall be the same as the fiscal year of the Member.

(d) Banking. An account or accounts in the name of the Company shall be maintained in such bank or banks as the Member may from time to time select. All monies and funds of the Company, and all instruments for the payment of money to the Company, shall, when received, be deposited in said bank account or accounts, or prudently invested in marketable securities or other negotiable instruments. All checks, drafts and orders upon said account or accounts shall be signed in the Company name by such persons in such manner as the Member may from time to time determine.

(e) Tax Returns. The Company shall provide for the preparation and filing of all necessary tax returns or other filings required under any governmental authority in accordance with procedures approved by the Member.

10. MANAGEMENT AND DUTIES.

(a) Responsibility of Member. The Member shall have full, exclusive and complete discretion in the management and control of the business and affairs of the Company for the purpose herein stated, and shall make all decisions affecting the Company's business and affairs, except as otherwise expressly limited herein. The Member shall have full authority to bind the Company by execution of documents, instruments, agreements, contracts or otherwise to any obligation not inconsistent with the provisions of this Agreement.

(b) Expenditures by Company. The Company shall, upon the direction of the Member, pay compensation for accounting, administrative, legal, technical and management services rendered to the Company. The Member shall be entitled to reimbursement by the Company for any expenditure necessarily and reasonably incurred by it on behalf of the Company, which shall be made out of the funds of the Company.

(c) Officers. The Member may from time to time elect officers of the Company, each of which shall have the authority and responsibility and serve for the term designated by the Member by resolution. None of the officers shall be deemed managers as that term is used in the Act, but each officer shall be deemed an agent of the Company.

(d) No Fiduciary Duties. Not by means of limitation of anything contained in this Agreement or the Act, the Member has no fiduciary duties to the Company whatever.

(e) Rights and Obligations of the Member. The Member shall not be personally liable for any of the debts of the Company or any of the losses thereof, whether arising in tort, contract, or otherwise, beyond the amounts contributed by it to the capital of the Company.

(f) Liability of the Member. The Member shall not be liable, responsible or accountable in damages or otherwise to the Company for any good faith act or omission on behalf of the Company within the scope of the authority conferred on the Member by this Agreement or by law unless such action or omission was performed or omitted in bad faith or constituted gross negligence or willful misconduct.

11. ADMISSION OF NEW MEMBERS. New members may not be admitted to the Company without the prior written consent of and upon terms approved by the Member. An assignee of the entire interest of a sole member of the Company shall become the sole member of the Company and shall be entitled to participate in the management of the Company and to exercise all rights and powers of a member of the Company upon the effectiveness of such assignment by its terms. In any other case, prior to admission, the new member(s) and the Member shall amend and restate this Agreement in its entirety.

12. DISSOLUTION OF THE COMPANY.

(a) Events Resulting in Dissolution. The Company shall be dissolved only upon the first to occur off the following:

(i) The written determination of the Member; or

(ii) The entry of a decree of judicial dissolution under the Act.

(b) Dissolution Procedures. In the event of the dissolution of the Company for any reason, the Member shall commence to wind up the affairs of the Company. Upon completion of the payment of all debts and liabilities, payment of all expenses of dissolution and the distribution of any remaining assets to the Member, the Company shall terminate and a Certificate of Cancellation shall be filed with the Secretary of State of Delaware and in any other jurisdiction where such filing is required.

13. AMENDMENTS TO AGREEMENT. This Agreement may be altered, amended or repealed by the Member in writing at any time and from time to time.

14. INDEMNIFICATION. The Company shall indemnify, defend and hold harmless any person who was or is a member, manager, employee, or agent of the Company, or who is or was serving at the request of the Company as a member, director, manager, employee, or agent of another limited liability company, corporation, partnership, joint venture, trust or other enterprise (an "Indemnitee") from and against any loss, liability, damage, cost or expense (including reasonable attorneys' fees and litigation costs) sustained or incurred by each Indemnitee as a result of any act, decision or omission concerning the business or activities of, or that otherwise is related to, the Company. The Company may purchase and maintain insurance for those persons as, and to the extent not prohibited by, the Act.

15. MISCELLANEOUS.

(a) Notices. All notices, offers or other communications required or permitted to be given pursuant to this Agreement shall be in writing and shall be considered as properly given or made, if mailed, five business days after mailing from within the United States by first class United States mail, postage prepaid, return receipt requested, or by personal delivery to the address of the principal place of business set forth in Section 3 if to the Company or to the address as the same appears on the records of the Company if to the Member. The Member may change its address by giving notice to the Company. Commencing on the tenth day after the giving of such notice, such newly

designated address shall be such Member's address for purposes of all notices or other communications required or permitted to be given pursuant to this Agreement.

(b) Company Property. All property, whether real, personal or mixed, tangible or intangible, and wherever located, contributed by the Member to the Company or acquired by the Company shall be the property of the Company. All files, documents, and records shall be the property of the Company and shall remain in the possession of the Company.

(c) Successors. This Agreement and all the terms and provisions hereof shall be binding upon and shall inure to the benefit of the Member and its respective legal representatives, heirs, successors and assigns, except as expressly herein otherwise provided.

(d) Governing Law. This Agreement shall be governed, construed and enforced in conformity with the laws of the State of Delaware.

* * *

IN WITNESS WHEREOF, the Member has adopted this Agreement as of the day and year first above written.

WESCAM INCORPORATED

By: /s/ Bruce Latimer

Its: Bruce Latimer

Officer and Director

SCHEDULE A

CAPITAL CONTRIBUTIONS

MEMBER	CAPITAL CONTRIBUTION	NUMBER OF UNITS
Wescam Incorporated	$100	100

Exhibit 3.101

ARTICLES OF INCORPORATION
OF
WESCAM-USA, INC.

I, the undersigned, hereby make, subscribe, acknowledge and file these Articles of Incorporation for the purpose of becoming a corporation under the laws of the State of Florida.

ARTICLE I

IDENTIFICATION

The name of this corporation is WESCAM-USA, INC., having a principal place of business at 270 East Drive, Suite A, Melbourne, Florida 32904.

ARTICLE II

DURATION

This corporation shall have perpetual existence which shall commence at the date of the filing of these Articles with the Secretary of State.

ARTICLE III

AUTHORIZED SHARES

The aggregate number of shares that the corporation is authorized to issue is 1,348,000 shares, divided into two classes. The designation of each class, the number of shares of each class, and the par value of the shares of each class, are as follows:

Class	No. of Shares	Par Value/Share
Common	1,000,000	$0.001
Preferred	348,000	$0.001

The Common stock shall have unlimited voting rights. The Preferred stock shall be non-voting and non-cumulative, and shall be redeemable at the option of the corporation or the stockholder at the rate of One Dollar ($1.00) per share. All or part of said stock to be issued from time to time shall be determined by the Board of Directors. On dissolution or liquidation of

the corporation, holders of the Common stock shall be entitled to distribution ratably as their holdings may appear upon the stock record of the corporation.

ARTICLE IV

REGISTERED AGENT AND OFFICE

The initial registered agent of this corporation and his address is as follows: David A. Schwartz, Esquire, 8181 West Broward Boulevard, Suite 204, Plantation, Florida 33324.

ARTICLE V

INCORPORATOR

The name and address of the Incorporator of these Articles of Incorporation is as follows: David A. Schwartz, Esquire, 8181 West Broward Boulevard, Suite 204, Plantation, Florida 33324.

ARTICLE VI

ADDITIONAL PROVISIONS

The following additional provisions for the regulation of the business and for the conduct of the affairs of the corporation, and creating, dividing, limiting, and regulating the powers of the corporation, its stockholders, and Directors are hereby adopted as a part of these Articles of Incorporation:

1. The Board of Directors from time to time shall determine whether and to what extent, and at what times and places, and under what conditions and regulations, the accounts and books of the corporation, or any of them, shall be opened to the inspection of the stockholders, and no stockholder shall have the right to inspect any account or document of the corporation except as conferred by a statute or authorized by the Board of Directors or by resolution of the stockholders.

2. No person shall be required to own, hold, or control stock in corporation as a condition precedent to holding an office in this corporation.

3. Except as otherwise provided by law, the Directors may prescribe a method or methods for replacement of lost certificates, and may prescribe reasonable conditions by way of security upon the issuance of new certificates therefor.

4. This corporation shall indemnify any officer or Director, and any former officer or Director, to the full extent provided by law. This corporation may provide such indemnification, or a portion thereof, through the purchase of insurance.

5. The power to adopt, alter, and repeal By-laws shall be in the Board of Directors of the corporation or in the stockholders; By-laws adopted by the Board of Directors may be altered or repealed by the stockholder and vice versa, except that the stockholders may prescribe in any By-law made by them that such By-law shall not be altered, amended, or repealed by the Board of Directors.

6. Every stockholder upon the issuance of any new stock of the corporation of the same kind shall have the right to purchase his pro rata thereof, at the price at which it is offered to others.

IN WITNESS WHEREOF, the undersigned, has made and subscribed these Articles of Incorporation at the City of Plantation, Broward County, Florida, for the uses and purposes aforesaid this 17th day of March, 1995.

/s/ David A. Schwartz

DAVID A. SCHWARTZ
INCORPORATOR

STATE OF FLORIDA)
: SS.
COUNTY OF BROWARD)

BEFORE ME, the undersigned authority, personally appeared David A. Schwartz, who is to me well known to be the person described in and who subscribed the above and foregoing Articles of Incorporation; and he has freely and voluntarily acknowledged before me according to law that he made and subscribed the same for the uses and purposes therein mentioned and set forth.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal, at Plantation, Broward County, Florida, this 17th day of March, 1995.

/s/ Signature of Notary Public

(Signature of Notary Public - State of Florida)

My commission Expires:

Personally Known [ ] OR Produced Identification [ ]
--
Type of Identification Produced: _____
DID Take Oath [ ] OR DID NOT Take Oath [ ]
--

CERTIFICATE DESIGNATING PLACE OF BUSINESS OR DOMICILE
FOR THE SERVICE OF PROCESS WITHIN THIS STATE, NAMING
AGENT UPON WHOM PROCESS MAY BE SERVED

In pursuance of Chapter 607, Florida Statutes, the following is submitted in compliance with said Act:

WESCAM-USA, INC., desiring to organize under the laws of the State of Florida with its principal office as indicated in the Articles of Incorporation at City of Melbourne, County of Brevard, State of Florida, has named David A. Schwartz, as its agent to accept service of process within this state.

ACKNOWLEDGEMENT:

Having been named to accept service of process for the above stated corporation, at place designated in this certificate, I hereby accept to act in this capacity and I agree to comply with the provision of said Act relative to keeping open said office and I accept the obligations of Section 607.0505 of the Florida Statutes.

By /s/ David A. Schwartz

DAVID A. SCHWARTZ
Registered Agent

ARTICLES OF AMENDMENT
TO
ARTICLES OF INCORPORATION
OF

WESCAM-USA, INC.

(present name)

Pursuant to the provisions of section 607.1006, Florida Statutes, this Florida profit corporation adopts the following articles of amendment to its articles of incorporation:

FIRST: Amendment(s) adopted: (indicate article number(s) being amended, added or deleted)

That ARTICLE 1, IDENTIFICATION, of the Articles of Incorporation of Wescam-USA, Inc., be amended in its entirety to read as follows:

"The name of this corporation is Wescam Incorporated, having a principal place of business at 4356 Fortune Place, Suite C, Melbourne, Florida 32904."

SECOND: If an amendment provides for an exchange, reclassification or cancellation of issued shares, provisions for implementing the amendment if not contained in the amendment itself, are as follows: N/A

THIRD: The date of each amendment's adoption: April 30, 1998

FOURTH: Adoption of Amendment(s) (CHECK ONE)

[] The amendment(s) was/were approved by the shareholders. The number of votes cast for the amendment(s) was/were sufficient for approval.

[] The amendment(s) was/were approved by the shareholders through voting groups. The following statement must be separately provided for each voting group entitled to vote separately on the amendment(s):

"The number of votes cast for the amendment(s) was/were sufficient for approval by
---."
voting group

[] The amendment(s) was/were adopted by the board of directors without shareholder action and shareholder action was not required.

[] The amendment(s) was/were adopted by the incorporators without shareholder action and shareholder action was not required.

Signed on this 26th day of May , 1998 .

Signature /s/ Bruce Latimer

(By the Chairman or Vice Chairman of the Board of Directors, President or other officer if adopted by the shareholders)

OR

(By a director if adopted by the directors)

OR

(By an incorporator if adopted by the incorporators)

Bruce Latimer

Typed or printed name

Vice President

Title

Exhibit 3.102

BY-LAWS
OF
WESCAM-USA, INC.

ARTICLE I
OFFICES

The principal office shall be at 270 East Drive, Suite A, Melbourne, Florida 32904. The Corporation may also have offices at such other places both within and without the State of Florida as the Board of Directors may from time to time determine or the business of the Corporation may require.

ARTICLE II
MEETINGS OF SHAREHOLDERS

Section 1. Annual Meeting. The annual meeting of the shareholders of this Corporation shall be held on the 1st day of April of each year or at such other time and place designated by the Board of Directors of the Corporation. Business transacted at the annual meeting shall include the election of Directors of the Corporation and all other matters properly before the Board. If the designated day shall fall on a Sunday or legal holiday, then the meeting shall be held on the first business day thereafter.

Section 2. Special Meetings. Special meetings of the shareholders shall be held when directed by the President or the Board of Directors, or when requested in writing by the holders of not less than ten percent (10%) of all the shares entitled to vote at the meeting. A meeting requested by shareholders shall be called for a date not less than ten (10) nor more than sixty (60) days after the request is made, unless the shareholders requesting the meeting designate a later date. The call for the meeting shall be issued by the Secretary, unless the President, Board of Directors, or shareholders requesting the meeting shall designate another person to do so. Such request shall state the purpose or purposes of the proposed meeting. Business transacted at any special meeting of shareholders shall be limited to the purposes stated in the notice thereof.

Section 3. Place. Meetings of shareholders shall be held at the principal place of business of the Corporation or at such other place as may be designated by the Board of Directors.

Section 4. Notice. Written notice stating the place, day and hour of the meeting and, in the case of a special meeting, the purpose or purposes for which the meeting is called, shall be delivered not less than ten (10) nor more than sixty (60) days before the meeting, either personally or by first class mail, by or at the direction of the President, the Secretary or the officer or persons calling the meeting, to each shareholder of record entitled to vote at such meeting. If mailed, such notice shall be deemed to be delivered when deposited in the United States mail addressed to the shareholder at his address as it appears on the stock transfer books of the Corporation, with postage thereon prepaid. Any shareholder may waive notice of any meeting either before, during or after the meeting.

Section 5. Notice of Adjourned Meeting. When a meeting is adjourned to another time or place, it shall not be necessary to give any notice of the adjourned meeting if the time and place to which the meeting is adjourned are announced at the meeting at which the adjournment is taken, and at the adjourned meeting any business may be transacted that might have been transacted on the original date of the meeting. If, however, after the adjournment the Board of Directors fixes a new record date for the adjourned meeting, a notice of the adjourned meeting shall be given as provided in this Article to each shareholder of record on the new record date entitled to vote at such meeting.

Section 6. Shareholder Quorum and Voting. The majority of the shares entitled to vote, represented in person or by proxy, shall constitute a quorum at a meeting of shareholders, but in no event shall a quorum consist of less than one-third (1/3) of the shares entitled to vote at the meeting.

If a quorum is present, the affirmative vote of fifty-one percent (51%) of the shares represented at the meeting and entitled to vote on the subject matter shall be the act of the shareholders unless otherwise provided by law.

Section 7. Voting of Shares. Each outstanding share shall be entitled to one vote on each matter submitted to a vote at a meeting of shareholders.

Section 8. Proxies. A shareholder may vote either in person or by proxy executed in writing by the shareholder or his duly authorized attorney-in-fact. No proxy shall be valid after the duration of eleven (11) months from the date thereof unless otherwise provided in the proxy.

Section 9. Action by Shareholders Without a Meeting. Any action required by law, these By-laws, or the Articles of Incorporation of this Corporation to be taken at any annual or special meeting of shareholders, or any action which may be taken at any annual or special meeting of shareholders, may be taken without a meeting, without prior notice and without a vote, if a consent in writing, setting forth the action so taken, shall be signed by the holders of outstanding stock having not less than the minimum number of votes that would be necessary to authorize or take such action at a meeting at which all shares entitled to vote thereon were present and voted, as is provided by law.

ARTICLE III
DIRECTORS

Section 1. Function. All corporate powers shall be exercised by or under the authority of, and the business and affairs of the Corporation shall be managed under the direction of, the Board of Directors.

Section 2. Qualification. Directors need not be residents of this state nor shareholders of this Corporation.

Section 3. Compensation. No compensation shall be paid to Directors, as such, for their services, but by resolution of the Board, a fixed sum and expenses for actual attendance, at each regular or special meeting of the Board may be authorized. Nothing herein shall be

construed to preclude any Director from serving the Corporation in any other capacity and receiving compensation therefor.

Section 4. Presumption of Assent. A Director of the Corporation who is present at a meeting of the Board of Directors at which action on any corporate matter is taken shall be presumed to have assented to the action taken unless he votes against such action or abstains from voting in respect thereto because of an asserted conflict of interest.

Section 5. Number. This Corporation shall have at least (1) but no more than seven (7) Directors. The number of Directors may be altered from time to time, by the shareholders at any annual or special meeting; provided that the number of Directors shall not be less than nor more than the number fixed by the Articles of Incorporation.

Section 6. Election and Term. Each person named in the Articles of Incorporation as a member of the initial Board of Directors shall hold office until the first annual meeting of shareholders, and until his successor shall have been elected and qualified or until his earlier resignation, removal from office or death.

At the first annual meeting of shareholders and at each annual meeting thereafter the shareholders shall elect Directors to hold office until the next succeeding annual meeting. Each Director shall hold office for a term for which he is elected and until his successor shall have been elected and qualified or until his earlier resignation, removal from office or death.

Section 7. Vacancies. Any vacancy occurring in the Board of Directors, including any vacancy created by reason of an increase in the number of Directors, may be filled by the affirmative vote of a majority of the remaining Directors though less than a quorum of the Board of Directors. A Director elected to fill a vacancy shall hold office only until the next election of Directors by the shareholders.

Section 8. Removal of Directors. At a meeting of shareholders called expressly for that purpose, any Director or the entire Board of Directors may be removed, with or without cause, by a vote of a majority of the shareholders then entitled to vote at an election of Directors.

Section 9. Quorum and Voting. A majority of the number of Directors fixed by these By-laws shall constitute a quorum for the transaction of business. The act of a majority of the Directors present at a meeting at which a quorum is present shall be the act of the Board of Directors.

Section 10. Executive and Other Committees. The Board of Directors, by resolution adopted by a majority of the full Board of Directors, may designate from among its members an executive committee and one or more other committees each of which, to the extent provided in such resolution shall have and may exercise all the authority of the Board of Directors, except as is provided by law.

Section 11. Place of Meeting. Regular and special meetings of the Board of Directors shall be held either within or without the State of Florida.

Section 12. Time, Notice and Call of Meetings. Regular meetings of the Board of Directors shall be held without notice at such time and at such place as shall be determined by the Board of Directors. Special meetings of the Board shall be held upon notice to the Directors and may be called by the President upon three days notice to each Director either personally or by mail or by wire; special meetings shall be called by the President or by the Secretary in a like manner on written request of two Directors.

Notice of a meeting of the Board of Directors need not be given to any Director who signs a waiver of notice either before or after the meeting. Attendance of a Director at a meeting shall constitute a waiver of notice of such meeting and waiver of any and all objections to the place of the meeting, the time of the meeting, or the manner in which it has been called or convened, except when a Director states, at the beginning of the meeting, any objection to the transaction of business because the meeting is not lawfully called or convened.

Neither the business to be transacted at, nor the purpose of, any regular or special meeting of the Board of Directors need be specified in the notice or waiver of notice of such meeting.

A majority of the Directors present, whether or not a quorum exists, may adjourn any meeting of the Board of Directors to another time and place. Notice of any such adjourned meeting shall be given to the Directors who were not present at the time of the adjournment and, unless the time and place of the adjourned meeting are announced at the time of the adjournment, to the other Directors.

Meetings of the Board of Directors may be called by the President of the Corporation or by any two Directors.

Members of the Board of Directors may participate in a meeting of such Board by means of a conference telephone or similar communications equipment by means of which all persons participating in the meeting can hear each other at the same time. Participation by such means shall constitute presence in person at a meeting.

Section 13. Action Without a Meeting. Any action required to be taken at a meeting of the Board of Directors, or any action which may be taken at a meeting of the Board of Directors or a committee thereof, may be taken without a meeting if a consent in writing, setting forth the action so to be taken, signed by all the Directors, or all the members of the committee, as the case may be, is filed in the minutes of the proceedings of the Board or of the committee. Such consent shall have the same effect as a unanimous vote.

ARTICLE IV
OFFICERS

Section 1. Officers. The officers of this Corporation shall consist of a President, one or more Vice-Presidents, a Secretary and a Treasurer, each of whom shall be elected by the Board of Directors. Such other officers and assistant officers and agents as may be deemed necessary may be elected or appointed by the Board of Directors from time to time. Any two or more offices may be held by the same person.

All officers shall be elected or appointed to hold office until the meeting of the Board following the next annual meeting of the shareholders and until their successors have been elected or appointed and qualified.

Section 2. Duties. The officers of this Corporation shall have the following duties:

The President shall, subject to the direction of the Board of Directors, be the Chief Executive Officer and shall have general and active management of the business and affairs of the Corporation.

The Vice-Presidents of the Corporation shall have general and active management of the business and affairs of the Corporation subject to the superior authority of the President of the Corporation and subject to the directions of the Board of Directors and such other duties as the Board of Directors may from time to time designate.

The Secretary shall have custody of, and maintain, all of the corporate records except the financial records; shall record the minutes of all meetings of the shareholders and Board of Directors, send all notices of all meetings and perform such other duties as may be prescribed by the Board of Directors or the President.

The Treasurer shall have custody of all corporate funds and financial records, shall keep full and accurate accounts of receipts and disbursements and render accounts thereof at the annual meetings of shareholders and whenever else required by the Board of Directors or the President and shall perform such other duties as may be prescribed by the Board of Directors or the President.

The Assistant Treasurer and Assistant Secretary shall have the same responsibilities and duties as the Treasurer and Secretary respectively and shall perform such other duties as the Board of Directors may from time to time prescribe.

Section 3. Removal of Officers. An officer or agent elected or appointed by the Board of Directors may be removed by the Board whenever in its judgment the best interests of the Corporation will be served thereby.

Any vacancy in any office may be filed by the Board of Directors.

Section 4. Salaries. The salaries of the officers shall be fixed from time to time by the Board of Directors and no officer shall be prevented from receiving such salary by reason of the fact that he is also a Director of the Corporation.

ARTICLE V
STOCK CERTIFICATES

Section 1. Issuance. Every holder of shares in this Corporation shall be entitled to have a certificate representing all shares to which he is entitled. No certificate shall be issued for any share until such share is fully paid.

Section 2. Form. Certificates representing shares in this Corporation shall be signed by the President or Vice President and the Secretary or an Assistant Secretary and may be sealed with the seal of this Corporation or a facsimile thereof.

Section 3. Transfer of Stock. The Corporation shall register a stock certificate presented to it for transfer if the certificate is properly endorsed by the holder of record or by his duly authorized attorney.

Section 4. Lost, Stolen, or Destroyed Certificates. If the shareholder shall claim to have lost or destroyed a certificate of shares issued by the Corporation, a new certificate shall be issued upon the making of an affidavit of that fact by the person claiming the certificate of stock to be lost, stolen or destroyed, and, at the discretion of the Board of Directors, upon the deposit of a bond or other indemnity in such amount and with such sureties, if any, as the Board may reasonably require.

ARTICLE VI
BOOKS AND RECORDS

Section 1. Books and Records. This Corporation shall keep correct and complete books and records of account and shall keep minutes of the proceedings of its shareholders, Board of Directors and committees of Directors.

This Corporation shall keep at its registered office or principal place of business a record of its shareholders, giving the names and addresses of all shareholders and the number of the shares held by each.

Any books, records and minutes may be in written form or in any other form capable of being converted into written form within a reasonable time.

Section 2. Shareholders' Inspection Rights. Any person who shall have been a holder of record of shares or of voting trust certificates therefor at least six months immediately preceding his demand or shall be the holder of record of, or the holder of record of voting trust certificates for, at least five percent of the outstanding shares of the Corporation, upon written demand stating the purpose thereof, shall have the right to examine, in person or by agent or attorney, at any reasonable time, for any proper purpose, its relevant books and records of accounts, minutes and records of shareholders and to make extracts therefrom.

Section 3. Financial Information. Not later than four (4) months after the close of each fiscal year, this Corporation shall prepare a balance sheet showing in reasonable detail the financial condition of the Corporation as of the close of its fiscal year, and a profit and loss statement showing the results of the operations of the Corporation during its fiscal year.

Upon the written request of any shareholder or holder of voting trust certificates for shares of the Corporation, the Corporation shall mail to each shareholder or holder of voting trust certificates a copy of the most recent such balance sheet and profit and loss statement.

The balance sheets and profit and loss statements shall be filed in the registered office of the Corporation in this state, shall be kept for at least five (5) years, and shall be subject

to inspection during business hours by any shareholder or holder of voting trust certificates, in person or by agent.

ARTICLE VII
DIVIDENDS

The Board of Directors of this Corporation may, from time to time, declare and the Corporation may pay dividends on its shares in cash, property or its own shares, except when the Corporation is insolvent or when the payment thereof would render the Corporation insolvent, subject to the provisions of the Florida Statutes.

ARTICLE VIII
FISCAL YEAR

The fiscal year of the Corporation shall be the 12-month period selected by the Board of Directors as the taxable year of the Corporation for federal income tax purposes.

ARTICLE IX
CORPORATE SEAL

The Board of Directors shall provide a corporate seal which shall be in circular form.

ARTICLE X
AMENDMENTS

These By-Laws may be altered, amended or repealed and new By-Laws may be adopted by the Board of Directors, provided that any By-Law or amendment thereto as adopted by the Board of Directors may be altered, amended or repealed by vote of the shareholders entitled to vote thereon, or a new By-Law in lieu thereof may be adopted by the shareholders.

Secretary

Exhibit 3.103

CERTIFICATE OF FORMATION

OF

WESCAM LLC

This Certificate of Formation of Wescam LLC (the "Company"), dated October 26, 1999, is being duly executed and filed by Thomas P. Ward, as an authorized person to form a limited liability company under the Delaware Limited Liability Company Act.

FIRST. The name of the limited liability company formed hereby is Wescam LLC.

SECOND. The address of the registered office of the Company in the State of Delaware is 103 Springer Building, 3411 Silverside Road, Wilmington, Delaware 19810, New Castle County.

THIRD. The name and address of the registered agent for service of process on the Company in the State of Delaware is Organization Services, Inc. located at 103 Springer Building, 3411 Silverside Road, Wilmington, Delaware 19810, New Castle County.

IN WITNESS WHEREOF, the undersigned has executed this Certificate of Formation as of the date first above written.

/s/ Thomas P. Ward

Thomas P. Ward, Authorized Person
on behalf of Wescam LLC

Exhibit 3.104

WESCAM LLC

LIMITED LIABILITY COMPANY AGREEMENT

This Limited Liability Company Agreement (this "Agreement") for Wescam LLC, a Delaware limited liability company (the "Company"), is adopted this 26th day of October, 1999 by 3033544 Nova Scotia Company ("NSC"), a company organized under the laws of Nova Scotia (the "Member").

1. CERTAIN DEFINITIONS. Certain terms used in this Agreement shall have the following definitions:

COMMON UNITS shall mean Units designated as such and having such rights as set forth in this Agreement.

PREFERRED CAPITAL shall mean the capital contribution of the Member made in exchange for Preferred Units, as set forth on Exhibit A hereto, less any reductions attributable to a redemption or retraction of all or a part of such Member's Preferred Units under this Agreement. The initial Preferred Capital shall be US $10,127.654 per Preferred Unit.

PREFERRED UNITS shall mean Units designated as such and having such rights as set forth in this Agreement.

UNITS means the Preferred Units and Common Units, which shall have identical rights except as specifically provided in this Agreement. Units may divided into fractional amounts if necessary, and may, but need not, be evidenced by certificates.

2. FORMATION. The Company has been formed as a Delaware limited liability company pursuant to the Delaware Limited Liability Company Act (the "Act") by filing a Certificate of Formation with the Delaware Secretary of State in accordance with the Act, and the rights and liabilities of the Member shall be as provided in the Act, except as herein otherwise provided.

3. NAME. The Company shall be conducted under the name of Wescam LLC or such other name as from time to time may be determined by the Member.

4. PRINCIPAL PLACE OF BUSINESS. The principal place of business of the Company shall at such place or places as from time to time may be determined by the Member.

5. PURPOSE. The purpose of the Company shall be the transaction of any or all lawful business for which limited liability companies may be organized under the Act. The Company shall have all powers necessary or desirable to accomplish the aforesaid purposes.

6. QUALIFICATION AND REGISTRATION. The Company and its Member shall, as soon as practicable and to the extent necessary, take all action necessary to qualify the Company to do business and to execute all certificates or other documents, and perform all filings and recordings, as are required by the laws of the State of Delaware and the other jurisdictions in which the Company does business.

7. CAPITAL CONTRIBUTIONS AND UNIT OWNERSHIP.

(a) Initial Contribution. The initial capital contribution of the Member shall be as set forth on Exhibit A attached hereto and made a part hereof.

(b) Unit Grants. The Member shall be granted the number and classes of Units as is set forth on Exhibit A hereto.

(c) Additional Capital Contributions. No Member is obligated to make additional capital contributions to the Company beyond the contributions agreed to in clause (a) of this Section 7. Any additional capital contributions shall be made by the Member(s) solely in their discretion and in the amounts so determined.

(d) Capital Account. The Company shall maintain a capital account for the Member. The Member's capital account shall consist of the Member's initial capital contributions, increased by additional capital contributions and by the Member's share of Company profits and decreased by distributions to the Member and by the Member's share of Company losses. No advance of money to the Company by any Member shall be credited to the capital account of such Member.

(e) Contributions Not to be Returned at Any Specified Time. No time is agreed upon as to when the capital contribution of a Member is to be returned. Except as otherwise provided in this Agreement, no Member shall have the right to demand the return of its capital contribution, nor shall any Member have the right to demand and receive property other than cash in return for its capital contribution.

(f) Restrictions Relating to Capital. No Member shall (i) be entitled to receive interest on its capital contribution, (ii) have the right to partition of the Company's properties, (iii) be liable to the Company or to any other Member to restore any deficit balance in his capital account (except as may be required by the Act) or to reimburse any other Member for any portion of such other Member's investment in the Company, (iv) have priority over any other Member either as to the return of its capital contribution or as to income, losses, interest, returns, or distributions.

8. ALLOCATIONS AND DISTRIBUTIONS.

(a) Allocations. Except as otherwise required by applicable provisions of tax law, Company income and loss shall be allocated for each fiscal year or other relevant period to the Member(s) as follows:

(i) Company income shall be allocated first to the Member(s) holding Preferred Units in proportion to such Units, until the cumulative Company income allocated under this Section 8(a)(i) for the current and all prior period equals: (a) the cumulative distributions made under 8(b) to the Member(s) holding Preferred Units, plus (b) the cumulative loss, if any, allocated to the Member(s) holding Preferred Units with

respect to such Units. Remaining Company income shall be allocated to the Member(s) holding Common Units in proportion to such Units.

(ii) Company loss shall be allocated first to the Member(s) holding Common Units in proportion to such Units, until the cumulative Company loss allocated under this Section 8(a)(ii) equals the cumulative Company income allocated to the Member(s) holding Common Units with respect to such Units for all periods. Remaining Company loss shall be allocated to the Member(s) holding Preferred Units in proportion to such Units.

(b) Distributions on Preferred Units. The Company may, in its sole discretion, make distributions to the Member(s) holding Preferred Units with respect to such Units from time to time. Such distribution shall be in the amounts as the Company may in its discretion determine, but in no event shall distributions to a Member holding Preferred Units exceed eight percent (8%) of the Preferred Capital each year. For the foregoing purpose, if there has been a redemption or retraction of Preferred Units during the year under this Agreement, the amount of outstanding Preferred Capital shall be determined on a weighted average basis. Distributions to the Preferred Member shall not be made or calculated on a cumulative basis.

(c) Distributions on Common Units. The Company may, in its sole discretion, make distributions to the Member(s) holding Common Units with respect to such Units from time to time. Distributions to the Member(s) holding Common Units shall be made in the amounts and at the times determined by the Company, irrespective of whether the Company has made distributions to the Member(s) holding Preferred Units for the relevant period.

9. ADDITIONAL PROVISIONS GOVERNING PREFERRED UNITS.

(a) Company Redemption Rights. The Company shall have the right to redeem all or any portion of the Preferred Units outstanding, including fractional interests therein, from time to time in its sole discretion. If the Company elects to redeem all or a portion of the Preferred Units, the Company shall pay the Member holding such Units a price equal to the Preferred Capital attributable to the redeemed Units. The closing of a redemption pursuant to this Section 9(a) shall occur as soon as is practicable after the Company gives notice of its intent to redeem.

(b) Preferred Member Retraction Rights. A Member holding Preferred Units shall have the right to cause the Company to purchase all or any portion of the Preferred Units held by such Member, including fractional interests therein, from time to time in such Member's sole discretion. If a Member elects to cause the Company to purchase all or a portion of such Member's Preferred Units, the Company shall pay the Member holding such Units a price equal to the Preferred Capital attributable to the retracted Units. The closing of a retraction pursuant to this Section 9(b) shall occur as soon as practicable after the Member gives notice of its intent to cause the Company to purchase Preferred Units.

10. ACCOUNTING AND REPORTS.

(a) Books of Account. The Company shall maintain or cause to be maintained at all times true and proper books, records, reports and accounts in accordance with generally accepted accounting principles consistently applied, in which shall be entered fully and accurately all transactions of the Company and each Member shall have access thereto at all reasonable times. The Company shall keep vouchers, statements, receipted bills and invoices and all other records in connection with the Company's business.

(b) Accounting and Reports. The books of account shall be closed promptly after the end of each fiscal year. Promptly thereafter, the Company shall make such written reports to the Member(s) as they determine, which may include a balance sheet of the Company as of the end of such year, a statement of income and expenses for such year, a statement of each Member's capital account as of the end of such year, and such other statements with respect to the status of the Company and distribution of the profits and losses therefrom as are considered necessary by the Member(s) to advise the Member(s) properly about their investment in the Company for income tax reporting purposes.

(c) Fiscal Year. The Member shall determine the fiscal year of the Company.

(d) Banking. An account or accounts in the name of the Company shall be maintained in such bank or banks as the Member(s) may from time to time select. All monies and funds of the Company, and all instruments for the payment of money to the Company, shall, when received, be deposited in said bank account or accounts, or prudently invested in marketable securities or other negotiable instruments. All checks, drafts and orders upon said account or accounts shall be signed in the Company name by such persons in such manner as the Member(s) may from time to time determine.

11. MANAGEMENT AND DUTIES.

(a) Responsibility of Member(s). The Member(s) shall have full, exclusive and complete discretion in the management and control of the business and affairs of the Company for the purpose herein stated, and shall make all decisions affecting the Company's business and affairs, except as otherwise expressly limited herein. The Member(s) shall have full authority to bind the Company by execution of documents, instruments, agreements, contracts or otherwise to any obligation not inconsistent with the provisions of this Agreement.

(b) Vote of Member(s). Except as otherwise expressly provided herein and to the extent there is more than one Member, all matters relating or pertaining to the Company, its operation or its business shall be determined by a vote or written consent of the Member(s) whose aggregate Unit Ownership exceed 50%. To the extent there is more than one Member, meetings of the Members may be called upon five days written notice by the Member(s) whose aggregate Unit Ownership exceed 50%. All meetings of the Members shall be held at the offices of the Company or elsewhere as the Members

may designate. Members whose aggregate Unit Ownership exceed fifty percent (50%) shall constitute a quorum for the transaction of business at any meeting.

(c) Expenditures by Company. The Company shall, upon the direction of the Member(s), pay compensation for accounting, administrative, legal, technical and management services rendered to the Company. The Member(s) shall be entitled to reimbursement by the Company for any expenditures necessarily and reasonably incurred by them on behalf of the Company, which shall be made out of the funds of the Company.

(d) Advances and Loans by Member(s). A Member may lend money to and transact other business with the Company and such Member shall have the same rights and obligations with respect thereto as a person who is not a Member. Loans by any Member to the Company, or guarantees by any Member of Company indebtedness shall not be considered capital contributions to the Company. Any such advance shall be treated as a debt owing from the Company, payable at such times and with such rate of interest as shall be agreed upon by the Company and the Member making such advance or loan. Undistributed earnings and profits of the Company shall not be considered an advance of money to the Company.

(e) Potential Conflicts.

(i) The Member(s) may engage in business ventures of any nature and description independently or with others and neither the Company nor any other Member shall have any rights in and to such independent ventures or the income or profits derived therefrom.

(ii) No contract or transaction between the Company and its Member(s) or officers, if any or between the Company and any other limited liability company, corporation, partnership, association, or other organization in which its Member(s) or officers, if any are members, managers, directors or officers or have a financial interest, shall be void or voidable solely: (A) for this reason, (B) because the Member or officer is present at or participates in the meeting which authorizes the contract or transaction, or (C) because such Member votes for such purpose, if: (I) the material facts as to the relationship or interest and as to the contract or transaction are disclosed or are known to the Member(s), and the Member(s) in good faith authorize the contract or transaction by the affirmative vote of a majority of the disinterested Members, even though the disinterested Members be less than a quorum; (II) the material facts as to the relationship or interest and to the contract or transaction are disclosed or are known to the Member(s) entitled to vote thereon, and the contract or transaction is specifically approved in good faith by vote of the Member(s); or (III) the contract or transaction is fair as to the Company as of the time it is authorized, approved, or ratified by the Member(s).

(f) Rights and Obligations of the Member(s). The Member(s) shall not be personally liable for any of the debts of the Company or any of the losses thereof beyond the amounts contributed by them to the capital of the Company. The Member(s) shall not be entitled to the return of their capital contribution except to the extent provided for in this Agreement.

12. CHANGES IN MEMBERSHIP OR INTERESTS.

(a) Transfer of Interests. Except as otherwise expressly provided in this Agreement, no Member shall sell, transfer, assign, give, pledge, or otherwise dispose of or encumber any part or all of his interest in the Company now owned or hereafter acquired, whether voluntarily, by operation of law, or otherwise, without the prior written consent of all of the other Members, if any. Any attempted transfer in violation of this Agreement shall be considered null and void and the Member attempting to transfer such interest shall continue to be treated as a Member for purposes of this Agreement and shall continue to be bound by all of the provisions hereof.

(b) Admission of New Members. New members may not be admitted to the Company without the prior written consent of and upon terms approved by the all of the Members. Upon admission, new members shall sign a counterpart of this Agreement.

(c) Resignation of Member. A Member may resign from the Company at any time by giving written notice of such resignation to the other Members, if any. A withdrawing Member is entitled to receive within a reasonable time after withdrawal the fair value of its interest in the Company as of the date of withdrawal.

13. DISSOLUTION OF THE COMPANY.

(a) Events Resulting in Dissolution. The Company shall be dissolved only upon the first to occur of the following:

(i) The written agreement of the Member(s) whose aggregate Unit Ownership exceeds 80%; or

(ii) The entry of a decree of judicial dissolution under the Act.

(b) Liquidation and Distribution of Liquidation Proceeds. In the event of the dissolution of the Company for any reason, the Member(s) shall commence to wind up the affairs of the Company and to liquidate its assets. The Member(s) shall select a liquidating trustee who shall have full power to sell, assign and encumber Company assets. The Member(s) shall continue to share profits and losses during the period of liquidation in the same proportion as before the dissolution. Any property distributed in kind in liquidation shall be valued and treated as though the property were sold and the cash proceeds were distributed. Upon liquidation, the assets of the Company shall be used and distributed in the following order: (a) to pay or provide for the payment of all debts and liabilities of the Company to creditors, including any Member(s) who are creditors, to the extent permitted by law, in satisfaction of liabilities of the Company other than liabilities for distributions to the Member(s); (b) to the Member(s) and former members of the Company in satisfaction of the Company's obligations for distributions; (c) to the Member(s) holding Preferred Units in the amount of their Preferred Capital; and (d) to the Member(s) holding Common Units in proportion to their Unit Ownership.

(c) Accounting. Within a reasonable time after the date the assets have been distributed in liquidation, the Member(s) shall cause to be prepared and provided to each

Member a statement which shall set forth the assets and the liabilities of the Company as of the date of complete liquidation and each Member's pro rata portion of distributions made pursuant to Section 13(b) hereof.

(d) Termination. Upon the completion of liquidation of the Company and the distribution of all Company assets, the Company shall terminate.

14. OFFICERS. The Member(s) may from time to time elect officers of the Company, each of which shall have the authority and responsibility and serve for the term designated by the Member(s) by resolution. None of the officers shall be deemed managers as that term is used in the Act, but each officer shall be deemed an agent of the Company.

15. AMENDMENTS TO AGREEMENT. This Agreement may be altered, amended or repealed at any time and from time to time only in writing and with the approval of the Member(s) whose aggregate Unit Ownership exceeds 50%.

16. INDEMNIFICATION. The Company shall indemnify, defend and hold harmless any person who was or is a member, manager, employee, or agent of the Company, or who is or was serving at the request of the Company as a member, director, manager, employee, or agent of another limited liability company, corporation, partnership, joint venture, trust or other enterprise (an "Indemnitee") from and against any loss, liability, damage, cost or expense (including reasonable attorneys' fees and litigation costs) sustained or incurred by each Indemnitee as a result of any act, decision or omission concerning the business or activities of the Company. The Company may purchase and maintain insurance for those persons as, and to the extent permitted by the Act.

17. MISCELLANEOUS.

(a) Notices. All notices, offers or other communications required or permitted to be given pursuant to this Agreement shall be in writing and shall be considered as properly given or made, if mailed, five business days after mailing from within the United States by first class United States mail, postage prepaid, return receipt requested, or by personal delivery to the address of the principal place of business. The Member(s) may change their addresses by giving notice to the other Members. Commencing on the tenth day after the giving of such notice, such newly designated address shall be such Member's address for purposes of all notices or other communications required or permitted to be given pursuant to this Agreement.

(b) Company Property. All property, whether real, personal or mixed, tangible or intangible, and wherever located, contributed by the Member(s) to the Company or acquired by the Company shall be the property of the Company. All files, documents, and records shall be the property of the Company and shall remain in the possession of the Company.

(c) Successors. This Agreement and all the terms and provisions hereof shall be binding upon and shall inure to the benefit of the Member(s) and their respective legal representatives, heirs, successors and assigns, except as expressly herein otherwise provided.

(d) Governing Law. This Agreement shall be governed, construed and enforced in conformity with the laws of the State of Delaware.

(e) Counterparts. This Agreement may be executed in counterparts, each of which shall be an original, but all of which shall constitute one and the same instrument.

(f) Entire Agreement. This Agreement contains the entire understanding of the Member(s) and supersedes any prior understandings and/or written or oral agreements among them respecting the within subject matter. There are no representations, agreements, arrangements or understandings, oral or written, between and among the parties hereto relating to the subject matter of this Agreement which are not fully expressed herein.

* * *

(Signatures of next page)

IN WITNESS WHEREOF, the Member has adopted this Agreement as of the day and year first above written.

3033544 NOVA SCOTIA COMPANY, a company organized under the laws of Nova Scotia

By: /s/ Bruce Latimer

Name: Bruce Latimer

Title: Secretary

EXHIBIT "A"

CAPITAL
CONTRIBUTIONS AND
UNIT GRANTS

MEMBER	CASH	NOTE	PREFERRED UNITS	COMMON UNITS
NSC	US$9,800	Rights under the Amended and Restated Loan Agreement dated October 26, 1999 between Wescam Inc. and Wescam Holdings (US) Inc. in the principal amount of US$ 10,127,654	1,000	
NSC	US$100			100

Exhibit 3.105

CERTIFICATE OF AMENDMENT
OF
ARTICLES OF INCORPORATION
OF
VERSATRON CORPORATION

The undersigned certify that:

1. They are the president and the secretary, respectively, of Versatron Corporation, a California corporation (the "Corporation").

2. Article I of the Articles of Incorporation of the Corporation shall be amended to read as follows:

Article I

The name of this corporation is: Wescam Sonoma Inc.

3. The foregoing amendment of the Articles of Incorporation of the Corporation has been duly approved by the Board of Directors of the Corporation.

4. The foregoing amendment of the Articles of Incorporation of the Corporation has been duly approved by written consent of the sole shareholder of this corporation.

5. The foregoing amendment was approved by all of the outstanding shares required to vote in accordance with Section 902 of the California General Corporation Law.

We further declare under penalty of perjury under the laws of the State of California that the matters set forth in this certificate are true and correct of our own knowledge.

Dated: 22 September, 1999

/s/ Dan Heibel
Dan Heibel, President

/s/ Jon Dennison
Jon Dennison, Secretary

CONSENT TO USE OF NAME

To the California Secretary of State Dated: Sept 22,1999

Dear Sir/Madam:

Wescam Incorporated, a Florida corporation qualified to do business in the state of California, hereby consents to and approves of the use of the name "Wescam Sonoma Inc."

WESCAM INCORPORATED

By:

Its: Director

ARTICLES OF INCORPORATION

OF

JEFFERSON ACQUISITION CORPORATION

ARTICLE I

The name of this corporation is: JEFFERSON ACQUISITION CORPORATION

ARTICLE II

The purpose of this corporation is to engage in any lawful act or activity for which a corporation may be organized under the General Corporation Law of California other than the banking business, the trust company business or the practice of a profession permitted to be incorporated by the California Corporations Code.

ARTICLE III

The name and complete business address in the State of California of this corporation's initial agent for service of process is:

CT Corporation System

ARTICLE IV

This corporation is authorized to issue only one class of shares of stock which shall be designated common stock; and the total number of shares which this corporation is authorized to issue is 1000 Shares.

ARTICLE V

(a) The liability of directors of this corporation for monetary damages shall be eliminated to the fullest extent permissible under California law.

(b) This corporation is authorized to provide indemnification of agents (as defined in Section 317 of the California Corporations Code) through bylaw provisions, agreements with agents, vote of shareholders or disinterested directors, or otherwise, to the fullest extent permissible under California law.

(c) Any amendment, repeal or modification of any provision of this Article V shall not adversely affect any right or protection of an agent of this corporation existing at the time of such amendment, repeal or modification.

Dated: August 10, 1995

/s/ Deborah Abernathy Moore

Deborah Abernathy Moore, Incorporator

AGREEMENT OF MERGER

This Agreement of Merger is made and entered into as of December 12, 1995 ("Merger Agreement"), between Versatron Corporation, a California corporation ("Company"), and Jefferson Acquisition Corporation, a California corporation ("Newco" or the "Surviving Corporation") Company and Newco being hereinafter collectively referred to as the "Constituent Corporations").

INTENDING TO BE LEGALLY BOUND, and in consideration of the premises and mutual covenants and agreements contained herein, the Constituent Corporations hereby agree as follows:

ARTICLE I

THE MERGER

1.1 Merger of Company With and Into Newco.

(a) Agreement to Acquire Company. Upon the terms and subject to the conditions of this Merger Agreement and an Agreement and Plan of Reorganization, dated as of August 18, 1995 (the "Agreement"), among Wescam Inc., an Ontario corporation (as successor to Jefferson Partners Capital Corporation) and the owner of all the outstanding shares of common stock of Newco ("Wescam"), Company, certain shareholders of Company and Newco, Company shall be acquired by Wescam through a merger (the "Merger") of Company with and into Newco.

(b) Effective Date. The Merger shall become effective upon the filing of this Merger Agreement and officers' certificates of each Constituent Corporation with the Secretary of State of the State of California pursuant to Section 1103 of the California General Corporation Law (the "GCL"). The date and time of such filing is hereinafter referred to as the "Effective Date."

(c) Surviving Corporation. At the Effective Date Company shall be merged with and into Newco and the separate corporate existence of Company shall thereupon cease. Newco shall be the surviving corporation of the Merger.

1.2 Effect of the Merger; Additional Actions.

(a) Effects. The Merger shall have the effects set forth in Section 1107 of the GCL. Without limiting such effects, the Surviving Corporation shall have the name "Versatron Corporation" and shall have all the rights, privileges, immunities and franchises, of a public as well as of a private nature, of each of the Constituent Corporations; and all property, real, personal and mixed, tangible and intangible, and all debts due on whatever accounts, and all other choses in action, and all and every other interest, of or belonging to or due to each of the Constituent Corporations, shall be taken and deemed to be vested in the Surviving Corporation without further act or deed. Subject to the provisions of the Agreement, the Surviving Corporation shall thereafter be responsible and liable for all liabilities and obligations of each of the Constituent Corporations; and any claim existing or action or proceeding pending by or

against either of the Constituent Corporations may be prosecuted as if such Merger had not taken place or the Surviving Corporation may be substituted in its place. Neither the rights or creditors nor any liens upon the assets and properties of either of the Constituent Corporations shall be impaired by the Merger.

(b) Additional Actions. If, at any time after the Effective Date, the Surviving Corporation shall consider or be advised that any deeds, bills of sale, assignments, assurances or any other actions or things are necessary or desirable (i) to vest, perfect or confirm of record or otherwise in the Surviving Corporation its right, title or interest in, to or under any of the rights, properties or assets of either Constituent Corporation acquired or to be acquired by the Surviving Corporation as a result of, or in connection with the Merger or (ii) to otherwise carry out the purposes of this Merger Agreement, each Constituent Corporation and its officers and directors shall be deemed to have granted to the Surviving Corporation an irrevocable power of attorney to execute and deliver all such deeds, bills of sale, assignments and assurances and to take and do all such other actions and things as may be necessary or desirable to vest, perfect or confirm any and all right, title and interest in, to and under such rights, properties or assets in the Surviving Corporation and otherwise to carry out the purposes of this Merger Agreement; and the officers and directors of the Surviving Corporation are fully authorized in the name of each Constituent Corporation or otherwise to take any and all such actions.

ARTICLE II

ARTICLES OF INCORPORATION, BYLAWS AND DIRECTORS AND OFFICERS OF THE SURVIVING CORPORATION

2.1 Amendment of Company's Articles of Incorporation

(a) Authorized Stock at Merger. At the Effective Date, Article I of the Articles of Incorporation of Newco shall be amended in its entirety to read as follows:

"THE NAME OF THIS CORPORATION IS VERSATRON CORPORATION"

(b) Articles of Incorporation of Surviving Corporation. The Articles of Incorporation of Newco in effect immediately prior to the Effective Date, as amended as provided in Section 2.1(a), shall be the Articles of Incorporation of the Surviving Corporation unless and until amended or repealed as provided by applicable law and such Articles of Incorporation.

2.2 Bylaws of the Surviving Corporation. The Bylaws of Newco in effect immediately prior to the Effective Date shall be the Bylaws of the Surviving Corporation unless and until repealed as provided by applicable law, the Articles of Incorporation of the Surviving Corporation and such Bylaws.

2.3 Officers and Directors of Surviving Corporations. The officers and directors of Newco immediately prior to the Effective Date shall be the officers and directors of the Surviving Corporation, in each case until their successors shall have been elected, qualified or until otherwise provided by law.

ARTICLE III

EFFECT OF THE MERGER ON THE CAPITAL STOCK OF THE CONSTITUENT CORPORATIONS; EXCHANGE OF CERTIFICATES

(a) Effect on Capital Stock. As of the Effective Date, by virtue of the Merger and without any action on the part of the holder of any shares of capital stock of Newco or Company;

(b) Cancellation of Company Stock. All shares of common stock, without par value, of Company ("Company Common Stock") that are owned directly or indirectly by Company or by any Subsidiary of Company and any shares of Company Common Stock that are owned by Wescam, Newco or any other Subsidiary of Wescam shall be cancelled and retired, and no stock of Wescam or other consideration shall be delivered in exchange therefore and all rights in respect thereof shall cease to exist without any conversion thereof or payment therefore. In this Merger Agreement, a "Subsidiary" of a Person means, at any time, any corporation or other Person, if at such time the first mentioned Person owns, directly or indirectly, securities or other ownership interests in such corporation or other Person, having ordinary voting power to elect a majority of the board of directors or persons performing similar functions for such corporation or other Person. In this Merger Agreement, a "Person" means an individual, partnership, corporation, trust, unincorporated association, limited liability company, joint venture or other entity or governmental body, authority, agency or entity.

(c) Conversion of Company Common Stock. At the Effective Date, each of the issued and outstanding shares of Company Common Stock (other than shares to be cancelled pursuant to Section 3.1(b) and shares, if any, held by persons exercising dissenters' rights in accordance with Chapter 13 of the GCL ("Dissenting Shares")), automatically and without any action on the part of the holders thereof, shall cease to be outstanding and shall be converted into the right to receive after the Effective Date such share's ratable portion of (i) 555,555 common shares of Wescam ("Wescam Common Shares") (approximately 0.028 Wescam Common Shares per share of Company Common Stock), (ii) 1,388,888 common shares of Jefferson Partners Capital Incorporated, an Ontario corporation ("Jefferson Common Shares" and together with the Wescam Common Shares, the "Common Shares") (approximately 0.071 Jefferson Common Shares per share of Company Common Stock), and (iii) at such time as such proceeds are actually received by Company, an amount equal to 50% of the Net Proceeds of Sale, calculated as follows:

The amount received or deemed (as described below) to be received on the sale of the Actuator Business (which is defined as the business presently carried on by Company consisting of the design services, prototype development and production of actuators and related mechanical devices used in missiles and other projectiles in the defense industry but not including the electro-optics products or services of Company) less:

(1) the face amount of the Actuator Liabilities (which are defined as all liabilities of or pertaining to the Actuator Business accruing from time to time on or after August 18, 1995) as at the date of sale except liabilities not otherwise assumed by the purchaser of the Actuator Business;

(2) all federal, state and local taxes paid or payable whether on account of income or sales taxes paid or payable on the sale of die Actuator Business by Company;

(3) any and all third party coats reasonably incurred by Company in connection with the sale of the Company business including commissions and legal fees; and

(4) the amount of a reasonable reserve on account of any liabilities, claims or losses arising by reason of a breach of any representation or warranty granted by Company in connection with the sale of the Actuator Business.

An amount shall be deemed received for purposes of the definition of Net Proceeds of Sale under the following circus:

If the Actuator Business has not been sold by Company on or before April 30, 2000, Company shall have the right at any time thereafter to offer to sell the Actuator Business to Al Voigt, Judy Voigt, John Speicher, Gene Langworthy and Ed Levine (the "Shareholders") at a price (which shall be payable in cash at the closing) and on other tams as Company may specify. Such offer shall be open for acceptance for a period of 60 days. If one or more of the Shareholders elects to purchase his or its pro rata proportion of the Actuator Business and one or more of the Shareholders declines to elect to so purchase, the Shareholders electing to so purchase shall have a further right and option, exercisable by notice in writing within 30 days of being notified by Company that one or more of the Shareholders has declined to so purchase, to purchase the pro rata proportion of the Actuator Business which no Shareholder has elected to purchase. Notwithstanding that one or more Shareholders has elected to purchase from Company a pro rata proportion of the Actuator Business, the right of any of the Shareholders to acquire the Actuator Business shall be null and void and, for purposes of entitlement to Net Proceeds of Sale, the Actuator Business shall be deemed to have been sold in cash at the price specified in the offer of Company.

If the Actuator Business has not been sold by Company on or before April 30, 2000, the Shareholders pro rata or such fewer number of Shareholders who have the unanimous consent of all of the Shareholders to make the offer contemplated in this paragraph (such Shareholders making the offer being herein referee to as the "Offering Shareholders") shall have the right at any time thereafter to offer to purchase the Actuator Business from Company on terms and conditions set forth immediately below. Such offer shall be open for acceptance for 60 days. If Company accepts the offer within such 60 day period, the offer of the Offering Shareholders shall be completed by Company and the Shareholders in accordance with its terms. If the offer of the Offering Shareholders is not accepted, for purposes of entitlement to Net Proceeds of Sale, the Actuator Business shall be deemed to have been sold at the price specified in the offer of the Offering Shareholders.

Terms:

a. the purchase price shall be paid in cash or by bank draft on closing;

b. the closing shall occur not more than 90 days following the acceptance of the offer;

c. the offer shall provide for the assumption by the Shareholders of the Actuator Liabilities and the Shareholders shall jointly and severally indemnify Company from any claims in respect thereof or provide security therefor acceptable to Company acting reasonably;

d. Company shall be released from any guarantees which it has with respect to indebtedness which comprises a portion of the Actuator Liabilities;

e. Company shall only represent and warrant the nature and extent of and title to the assets of the Actuator Business, its power and authority to convey the Actuator Business, that the financial statements most recently prepared present fairly the assets and liabilities of the Actuator Business and the results of its operations, that since the date of the last financial statement, and the business has been carried on in the ordinary course of business; and

f. Company shall undertake not to compete with the Actuator Business pursuant to an agreement substantially similar to the non-competition agreements entered into by Voigt and Speicher.

For purposes of determining the time of receipt of Net Proceeds of Sale, in the case of consideration paid for the Actuator Business otherwise than in cash, Net Proceeds of Sale shall only be deemed to be received once the non-cash consideration is converted into cash, which, in the event the non-cash consideration is not divisible, shall occur as soon as Company has converted it into cash or, if such is not possible within 30 days after receipt thereof Company shall have such non-cash consideration valued by a third-party appraiser and the amount of the appraisal shall be considered to be cash for purposes of determining the amount to be received by the shareholders. In the event that the non-cash consideration is divisible in half such that 50% of the non-cash consideration could be dealt with separately, Company shareholders holding more than 50% of the Company Common Stock immediately prior to the Merger (the "Company Shareholders") shall be entitled to direct how the divisible 50% of the non-cash consideration is to be converted to cash.

If there is a dispute or advice is required as to the calculation or allocation of Net Proceeds of Sale or as to the timing of the receipt thereof, the dispute shall be revolved by a firm of chartered accountants (who may be Wescam's auditors) appointed by Wescam and acceptable to the Company Shareholders. Such chartered accountants shall have for such purposes access to all necessary records of Company and such resolution shall be binding upon Wescam, and the Company Shareholders.

In the event a reserve is taken in the calculation of Net Proceeds of Sale as contemplated by the definition thereof, 50% of the remaining amount of such reserve, if any, shall be distributed to the Company Shareholders pro rata or in such other proportions as they may unanimously direct in writing, following the termination of survival of such representations and warranties in respect of which the reserve has been taken.

The foregoing subsections (i), (ii) and (iii) collectively, are referred to herein as the "Merger Consideration". All such shares of any Company Common Stock, when so converted, shall no longer be outstanding and shall automatically be cancelled and retired and shall cease to exist, and each holder of a certificate representing any such shares shall cease to have any rights with respect thereto, except the right to receive the consideration provided in this Section 3.1(c) to be issued or paid in consideration therefor upon the surrender of such certificate in accordance with the Agreement, without interest.

(d) Dissenters' Rights. If holders of Company Common Stock are entitled to dissenters' rights in connection with due Merger under Chapter 13 of the GCL, any Dissenting Shares shall not be converted into the Manger Consideration, but shall be converted into the right to receive such consideration as may be determined to be due with respect to such Dissenting Shares pursuant to the laws of the State of California.

(e) Fractional Shares. No certificate or scrip representing fractional Common Shares shall be issued upon the surrender for exchange of certificates representing Company Common Stock, and such fractional share interests will not entitle the owner thereof to vote or to enjoy any other rights of a shareholder of Wescam or Jefferson.

3.2 No Further Ownership Rights In Company Common Stock. All Common Shares issued upon the surrender for exchange of shares of Company Common Stock in accordance with the terms hereof shall be deemed to have been issued in full satisfaction of all rights pertaining to such shares of Company Common Stock, subject, however, to due Surviving Corporation's obligation to pay any dividends or make any other distributions with a record date prior to the Effective Date which may have been declared or made by Company on such shares of Company Common Stock in accordance with the terms of this Merger Agreement and the Agreement or prior to the date hereof and which remain unpaid at the Effective Date, and there shall be no further registration of transfers on the stock transfer books of the Surviving Corporation or its transfer agent of the shares of Company Compare Stock which were outstanding immediately prior to the Effective Date. If, after the Effective Date, certificates representing Company Common Stock are presented to the Surviving Corporation for any reason, they shall be cancelled and exchanged as provided in this Article III.

ARTICLE IV

TERMINATION

4.1 Termination by Manual Agreement. Notwithstanding the approval of this Merger Agreement by the shareholders of Company and Newco, this Merger Agreement may be

terminated at any time prior to the Effective Date by mutual agreement of the Boards of Directors of Company and Newco.

4.2 Termination of Agreement ad Plan of Merger. Notwithstanding the approval of this Merger Agreement by the shareholders of Company and Newco, this Merger Agreement shall terminate forthwith in the event that the Agreement shall be terminated as therein provided.

4.3 Effects of Termination. In the event of the termination of this Merger Agreement, this Merger Agreement shall forthwith become void and there shall be no liability on the part of either Company or Newco or their respective officers or directors, except as otherwise provided in the Agreement.

ARTICLE V

GENERAL PROVISIONS

5.1 Amendment. This Merger Agreement may be amended by the parties hereto any time before or after approval hereof by the shareholders of Company and Newco, but, after such approval, no amendment shall be made which by law requires the further approval of such shareholders without obtaining such approval. This Merger Agreement may not be amended except by an instrument in writing signed on behalf of each of the parties hereto.

5.2 Counterparts. This Merger Agreement may be executed in one or mare counterparts, each of which shall be deemed to be an original, but all of which together shall constitute one agreement.

5.3 Interpretation. The headings contained in this Merger Agreement are for reference purposes only and shall not affect in any way the meaning or interpretation of this Merger Agreement.

5.4 Miscellaneous. This Merger Agreement, (a) together with the Agreement, constitutes the entire agreement of the parties and supersedes all other prior agreements and understandings, both written and oral, among the parties, or any of then, with respect to the subject matter hereof; (b) is not intended to confer upon any other person any rights or remedies hereunder; and (c) shall be governed in all respects, including as to validity, interpretation and effect, by the laws of the State of California (without giving effect to the provisions thereof relating to conflicts of law).

5.5 Parties in Interest. This Merger Agreement shall be binding upon and inure solely to the benefit of each party hereto, and nothing in this Merger Agreement, expressed or implied, is intended to confer upon any other person any rights or remedies of any nature whatsoever under or by reason of this Merger Agreement.

IN WITNESS WHEREOF, the parties have each caused this Merger Agreement to be signed by their respective officers thereunto duly authorized as of the date first written above.

JEFFERSON ACQUISITION CORPORATION

BY: /s/ Mark Chamberlain

MARK CHAMBERLAIN
CHAIRMAN OF THE BOARD

JEFFERSON ACQUISITION CORPORATION

By: /s/ J. Douglas Smith

J. Douglas Smith, President
and Secretary

VERSATRON CORPORATION

BY: /s/ Eugene Langworthy

EUGENE LANGWORTHY
PRESIDENT

VERSATRON CORPORATION

By: /s/ Judy Voigt

Judy Voigt, Secretary

By: /s/ Stan Mead

Stan Mead, Chief Financial Officer
and Assistant Secretary

CERTIFICATE OF APPROVAL
OF
AGREEMENT OF MERGER

The undersigned hereby certify as follows:

1. They are the President, the Secretary and the Chief Financial Officer and Assistant Secretary, respectively, of Versatron Corporation, a California corporation ("Corporation").

2. The Agreement of Merger in the form attached was duly approved by the board of directors and shareholders of Corporation.

3. The shareholder approval was obtained at a meeting of shareholders held at 10:00a.m. on December 11, 1995 at Corporation's corporate headquarters in Healdsburg, California at which time the Agreement of Merger was approved by the holders of outstanding shares of Corporation having an aggregate number of votes which equaled or exceeded the number of votes required for approval of the Agreement of Merger.

4. Corporation has only me class of shares outstanding and entitled to vote, and the number of shares outstanding is 19,694,632. The percentage vote of such class required to approve such Agreement of Merger is 50 plus one vote.

/s/ Eugene Langworthy
- ----------
Eugene Langworthy, President

/s/ Judy Voigt

Judy Voigt, Secretary

/s/ Stan Mead

Stan Mead, Chief Financial Officer
and Assistant Secretary

The undersigned declare under penalty of perjury under the laws of the State of California that the matters set forth in this certificate are true and correct of our own knowledge.

Executed at Healdsburg, California, on December 21, 1995.

/s/ Eugene Langworthy
- ----------
Eugene Langworthy, President

/s/ Judy Voigt

Judy Voigt, Secretary

/s/ Stan Mead

Stan Mead, Chief Financial Officer
and Assistant Secretary

CERTIFICATE OF APPROVAL
OF
AGREEMENT OF MERGER

The undersigned hereby certify as follows:

1. They are the Chairman of the Hoard and the President and Secretary, respectively, of Jefferson Acquisition Corporation, a California corporation (the "Corporation").

2. The Agreement of Merger in the form attached was duly approved by the board of directors and shareholders of the Corporation.

3. The shareholder approval was by the holder of one hundred percent (100%) of the outstanding shares of the Corporation.

4. The Corporation has only one class of shares and the number of shares outstanding is 1000.

5. No vote of the shareholders of Wescam Inc., the parent corporation of the Corporation, was required to approve the Agreement of Merger.

/s/ Mark Chamberlain

Mark Chamberlain, Chairman of the Board

/s/ J. Douglas Smith

J. Douglas Smith, President and Secretary

The undersigned declare under penalty of perjury under the laws of the State of California that the matters set forth in this certificate are true and correct of our own knowledge.

Executed at Flamborough, Ontario, on December 21, 1995.
--

/s/ Mark Chamberlain

Mark Chamberlain, Chairman of the Board

Executed at Healdsburg, California, on December 21, 1995.
--

/s/ J. Douglas Smith

J. Douglas Smith, President and Secretary

Exhibit 3.106

BYLAWS

OF

JEFFERSON ACQUISITION CORPORATION

(A CALIFORNIA CORPORATION)

BYLAWS

OF

JEFFERSON. ACQUISITION CORPORATION

TABLE OF CONTENTS

BYLAWS

OF

JEFFERSON ACQUISITION CORPORATION

ARTICLE I.

CORPORATE OFFICES

1.1 PRINCIPAL OFFICE

The Board of Directors shall fix the location of the principal executive office of the corporation at any place within or outside the State of California. If the principal executive office is located outside California and the corporation has one or more business offices in California, then the Board of Directors shall fix and designate a principal business office in California.

1.2 OTHER OFFICES

The Board of Directors may at any time establish branch or subordinate offices at any place or places.

ARTICLE II.

MEETINGS OF SHAREHOLDERS

2.1 PLACE OF MEETINGS

Meetings of shareholders shall be held at any place within or outside the State of California designated by the Board of Directors. In the absence of any such designation, shareholders' meetings shall be held at the principal executive office of the corporation or at any place consented to in writing by all persons entitled to vote at such meeting, given before or after the meeting and filed with the Secretary of the corporation.

2.2 ANNUAL MEETING

An annual meeting of shareholders shall be held each year on a date and at a time designated by the Board of Directors. At that meeting, directors shall be elected. Any other proper business may be transacted at the annual meeting of shareholders.

2.3 SPECIAL MEETINGS

Special meetings of the shareholders may be called at any time, subject to the provisions of Sections 2.4 and 2.5 of these Bylaws, by the Board of Directors, the Chairman of the Board, the President or the holders of shares entitled to cast not less than ten percent (10%) of the votes at that meeting.

If a special meeting is called by anyone other than the Board of Directors or the President or the Chairman of the Board, then the request shall be in writing, specifying the time of such meeting and the general nature of the business proposed to be transacted, and shall be delivered personally or sent by registered mail or by other written communication to the Chairman of the Board, the President, any Vice President or the Secretary of the corporation. The officer receiving the request forthwith shall cause notice to be given to the shareholders entitled to vote, in accordance with the provisions of Sections 2.4 and 2.5 of these Bylaws, that a meeting will be held at the time requested by the person or persons calling the meeting, so long as that time is not less than thirty-five (35) nor more than sixty (60) days after the receipt of the request. If the notice is not given within twenty (20) days after receipt of the request, then the person or persons requesting the meeting may give the notice. Nothing contained in this paragraph of this Section 2.3 shall be construed as limiting, fixing or affecting the time when a meeting of shareholders called by action of the Board of Directors may be held.

2.4 NOTICE OF SHAREHOLDERS' MEETINGS

All notices of meetings of shareholders shall be sent or otherwise given in accordance with Section 2.5 of these Bylaws not less than ten (10) (or, if sent by third-class mail pursuant to Section 2.5 of these Bylaws, not less than thirty (30)) nor more than sixty (60) days before the date of the meeting to each shareholder entitled to vote thereat. Such notice shall state the place, date, and hour of the meeting and (i) in the case of a special meeting, the general nature of the business to be transacted, and no business other than that specified in the notice may be transacted, or (H) in the case of the annual meeting, those matters which the Board of Directors, at the time of the mailing of the notice, intends to present for action by the shareholders, but, subject to the provisions of the next paragraph of this Section 2.4, any proper matter may be presented at the meeting for such action. The notice of any meeting at which Directors are to be elected shall include the names of nominees intended at the time of the notice to be presented by the Board for election.

If action is proposed to be taken at any meeting for approval of (i) a contract or transaction in which a director has a direct or indirect financial interest, pursuant to Section 310 of the California Corporations Code (the "Code"), (ii) an amendment of the Articles of Incorporation, pursuant to Section 902 of the Code, (iii) a reorganization of the corporation, pursuant to Section 1201 of the Code, (iv) a voluntary dissolution of the corporation, pursuant to Section 1900 of the Code, or (v) a distribution in dissolution other than in accordance with the rights of any outstanding preferred shares, pursuant to Section 2007 of the Code, then the notice shall also state the general nature of that proposal.

2.5 MANNER OF GIVING NOTICE; AFFIDAVIT OF NOTICE

Notice of a shareholders' meeting shall be given either personally or by first-class mail, or, if the corporation has outstanding shares held of record by five hundred (500) or more persons (determined as provided in Section 605 of the Code) on the record date for the shareholders' meeting, notice may be sent by third-class mail, or other means of written communication, addressed to the shareholder at the address of the shareholder appearing on the books of the corporation or given by the shareholder to the corporation for the purpose of notice; or if no such address appears or is given, at the place where the principal executive office of the

corporation is located or by publication at least once in a newspaper of general circulation in the county in which the principal executive office is located. The notice shall be deemed to have been given at the time when delivered personally or deposited in the mail or sent by other means of written communication.

If any notice (or any report referenced in Article VII of these Bylaws) addressed to a shareholder at the address of such shareholder appearing on the books of the corporation is returned to the corporation by the United States Postal Service marked to indicate that the United States Postal Service is unable to deliver the notice to the shareholder at that address, all future notices or reports shall be deemed to have been duly given without further mailing if the same shall be available to the shareholder upon written demand of the shareholder at the principal executive office of the corporation for a period of one (1) year from the date of the giving of the notice.

An affidavit of mailing of any notice or report in accordance with the provisions of this Section 2.5, executed by the Secretary, Assistant Secretary or any transfer agent, shall be prima facie evidence of the giving of the notice or report.

2.6 QUORUM

Unless otherwise provided in the Articles of Incorporation of the corporation, a majority of the shares entitled to vote, represented in person or by proxy, shall constitute a quorum at a meeting of the shareholders. The shareholders present at a duly called or held meeting at which a quorum is present may continue to transact business until adjournment notwithstanding the withdrawal of enough shareholders to leave less than a quorum, if any action taken (other than adjournment) is approved by at least a majority of the shares required to constitute a quorum.

In the absence of a quorum, any meeting of shareholders may be adjourned from time to time by the vote of a majority of the shares represented either in person or by proxy, but no other business may be transacted, except as provided in the last sentence of the preceding paragraph.

2.7 ADJOURNED MEETING; NOTICE

Any shareholders' meeting, annual or special, whether or not a quorum is present, may be adjourned from time to time by the vote of the majority of the shares represented at that meeting, either in person or by proxy.

When any meeting of shareholders, either annual or special, is adjourned to another time or place, notice need not be given of the adjourned meeting if its time and place are announced at the meeting at which the adjournment is taken. However, if the adjournment is for more than forty-five (45) days from the date set for the original meeting or if a new record date for the adjourned meeting is fixed, a notice of the adjourned meeting shall be given to each shareholder of record entitled to vote at the adjourned meeting in accordance with the provisions of Sections 2.4 and 2.5 of these Bylaws. At any adjourned meeting the corporation may transact any business which might have been transacted at the original meeting.

2.8 VOTING

The shareholders entitled to vote at any meeting of shareholders shall be determined in accordance with the provisions of Section 2.11 of these Bylaws, subject to the provisions of Sections 702 through 704 of the Code (relating to voting shares held by a fiduciary, in the name of a corporation, or in joint ownership).

Elections for directors and voting on any other matter at a shareholders' meeting need not be by ballot unless a shareholder demands election by ballot at the meeting and before the voting begins.

Except as provided in the last paragraph of this Section 2.8, or as may be otherwise provided in the Articles of Incorporation, each outstanding share, regardless of class, shall be entitled to one vote on each matter submitted to a vote of the shareholders. Any holder of shares entitled to vote on any matter may vote part of the shares in favor of the proposal and refrain from voting the remaining shares or may vote them against the proposal other than elections to office, but, if the shareholder fails to specify the number of shares such shareholder is voting affirmatively, it will be conclusively presumed that the shareholder's approving vote is with respect to all shares which the shareholder is entitled to vote.

The affirmative vote of the majority of the shares represented and voting at a duly held meeting at which a quorum is present (which shares voting affirmatively also constitute at least a majority of the required quorum) shall be the act of the shareholders, unless the vote of a greater number or voting by classes is required by the Code or by the Articles of Incorporation.

At a shareholders' meeting at which directors are to be elected, a shareholder shall be entitled to cumulate votes either (i) by giving one candidate a number of votes equal to the number of directors to be elected multiplied by the number of votes to which that shareholder's shares are normally entitled or (ii) by distributing the shareholder's votes on the same principle among as many candidates as the shareholder thinks fit, if the candidate or candidates' names have been placed in nomination prior to the voting and the shareholder has given notice prior to the voting of the shareholder's intention to cumulate the shareholder's votes. If any one shareholder has given such a notice, then every shareholder entitled to vote may cumulate votes for candidates in nomination. The candidates receiving the highest number of affirmative votes, up to the number of directors to be elected, shall be elected; votes against any candidate and votes withheld shall have no legal effect.

2.9 VALIDATION OF MEETINGS; WAIVER OF NOTICE; CONSENT

The transactions of any meeting of shareholders, either annual or special, however called and noticed, and wherever held, are as valid as though they had been taken at a meeting duly held after regular call and notice, if a quorum be present either in person or by proxy, and if, either before or after the meeting, each of the persons entitled to vote, not present in person or by proxy, signs a written waiver of notice or a consent to the holding of the meeting or an approval of the minutes thereof. Neither the business to be transacted at nor the purpose of any annual or special meeting of shareholders need be specified in any written waiver of notice or consent to the holding of the meeting or approval of the minutes thereof, except that if action is taken or

proposed to be taken for approval of any of those matters specified in the second paragraph of Section 2.4 of these Bylaws, the waiver of notice or consent or approval shall state the general nature of the proposal. All such waivers, consents, and approvals shall be filed with the corporate records or made a part of the minutes of the meeting.

Attendance of a person at a meeting shall constitute a waiver of notice of and presence at that meeting, except when the person objects, at the beginning of the meeting, to the transaction of any business because the meeting is not lawfully called or convened and except that attendance at a meeting is not a waiver of any right to object to the consideration of matters required by the Code to be included in the notice of such meeting but not so included, if such objection is expressly made at the meeting.

2.10 SHAREHOLDER ACTION BY WRITTEN CONSENT WITHOUT A MEETING

Any action which may be taken at any annual or special meeting of shareholders may be taken without a meeting and without prior notice, if a consent in writing, setting forth the action so taken, shall be signed by the holders of outstanding shares having not less than the minimum number of votes that would be necessary to authorize or take such action at a meeting at which all shares entitled to vote thereon were present and voted.

Directors may not be elected by written consent except by unanimous written consent of all shares entitled to vote for the election of directors. However, a director may be elected at any time to fill any vacancy on the Board of Directors, provided that it was not created by removal of a director and that it has not been filled by the directors, by the written consent of the holders of a majority of the outstanding shares entitled to vote for the election of directors.

All such consents shall be maintained in the corporate records. Any shareholder giving a written consent, or the shareholder's proxy holders, or a transferee of the shares, or a personal representative of the shareholder, or their respective proxy holders, may revoke the consent by a writing received by the Secretary of the corporation before written consents of the number of shares required to authorize the proposed action have been filed with the Secretary.

If the consents of all shareholders entitled to vote have not been solicited in writing, the Secretary shall give prompt notice of any corporate action approved by the shareholders without a meeting by less than unanimous written consent to those shareholders entitled to vote who have not consented in writing. Such notice shall be given in the manner specified in Section 2.5 of these Bylaws. In the case of approval of (i) a contract or transaction in which a director has a direct or indirect financial interest, pursuant to Section 310 of the Code, (ii) indemnification of a corporate "agent," pursuant to Section 317 of the Code, (iii) a reorganization of the corporation, pursuant to Section 1201 of the Code, and (iv) a distribution in dissolution other than in accordance with the rights of outstanding preferred shares, pursuant to Section 2007 of the Code, the notice shall be given at least ten (10) days before the consummation of any action authorized by that approval, unless the consents of all shareholders entitled to vote have been solicited in writing.

2.11 RECORD DATE FOR SHAREHOLDER NOTICE; VOTING; GIVING CONSENTS

In order that the corporation may determine the shareholders entitled to notice of any meeting or to vote, the Board of Directors may fix, in advance, a record date, which shall not be more than sixty (60) days nor less than ten (10) days prior to the date of such meeting nor more than sixty (60) days before any other action. Shareholders at the close of business on the record date are entitled to notice and to vote, as the case may be, notwithstanding any transfer of any shares on the books of the corporation after the record date, except as otherwise provided in the Articles of Incorporation or the Code.

A determination of shareholders of record entitled to notice of or to vote at a meeting of shareholders shall apply to any adjournment of the meeting unless the Board of Directors fixes a new record date for the adjourned meeting, but the Board of Directors shall fix a new record date if the meeting is adjourned for more than forty-five (45) days from the date set for the original meeting.

If the Board of Directors does not so fix a record date:

1. The record date for determining shareholders entitled to notice of or to vote at a meeting of shareholders shall be at the close of business on the business day next preceding the day on which notice is given or, if notice is waived, at the close of business on the business day next preceding the day on which the meeting is held.

2. The record date for determining shareholders entitled to give consent to corporate action in writing without a meeting, (i) when no prior action by the Board has been taken, shall be the day on which the first written consent is given, or (ii) when prior action by the Board has been taken, shall be at the close of business on the day on which the Board adopts the resolution relating thereto, or the sixtieth (60th) day prior to the date of such other action, whichever is later.

The record date for any other purpose shall be as provided in Section 8.1 of these Bylaws.

2.12 PROXIES

Every person entitled to vote for directors, or on any other matter, shall have the right to do so either in person or by one or more agents authorized by a written proxy signed by the person and filed with the Secretary of the corporation. A proxy shall be deemed signed if the shareholder's name or other authorization is placed on the proxy (whether by manual signature, typewriting, telegraphic or electronic transmission or otherwise) by the shareholder or the shareholder's attorney-in-fact. A validly executed proxy which does not state that it is irrevocable shall continue in full force and effect unless (i) the person who executed the proxy revokes it prior to the time of voting by delivering a writing to the corporation stating that the proxy is revoked or by executing a subsequent proxy and presenting it to the meeting or by attendance at such meeting and voting in person, or (ii) written notice of the death or incapacity of the maker of that proxy is received by the corporation before the vote pursuant to that proxy is counted; provided, however, that no proxy shall be valid after the expiration of eleven (11) months from the date thereof, unless otherwise provided in the proxy. The dates contained on the

forms of proxy presumptively determine the order of execution, regardless of the postmark dates on the envelopes in which they are mailed. The revocability of a proxy that states on its face that it is irrevocable shall be governed by the provisions of Sections 705(e) and 705(f) of the Code.

2.13 INSPECTORS OF ELECTION

In advance of any meeting of shareholders, the Board of Directors may appoint inspectors of election to act at the meeting and any adjournment thereof. If inspectors of election are not so appointed or designated or if any persons so appointed fail to appear or refuse to act, then the Chairman of the meeting may, and on the request of any shareholder or a shareholder's proxy shall, appoint inspectors of election (or persons to replace those who so fail to appear) at the meeting. The number of inspectors shall be either one (1) or three (3). If appointed at a meeting on the request of one (1) or more shareholders or proxies, the majority of shares represented in person or by proxy shall determine whether one (1) or three (3) inspectors are to be appointed.

The inspectors of election shall determine the number of shares outstanding and the voting power of each, the shares represented at the meeting, the existence of a quorum, and the authenticity, validity, and effect of proxies, receive votes, ballots or consents, hear and determine all challenges and questions in any way arising in connection with the right to vote, count and tabulate all votes or consents, determine when the polls shall close, determine the result and do any other acts that may be proper to conduct the election or vote with fairness to all shareholders.

ARTICLE III.

DIRECTORS

3.1 POWERS

Subject to the provisions of the Code and any limitations in the Articles of Incorporation and these Bylaws relating to action required to be approved by the shareholders or by the outstanding shares, the business and affairs of the corporation shall be managed and all corporate powers shall be exercised by or under the direction of the Board of Directors. The Board may delegate the management of the day-to-day operation of the business of the corporation to a management company or other person provided that the business and affairs of the corporation shall be managed and all corporate powers shall be exercised under the ultimate direction of the Board.

3.2 NUMBER OF DIRECTORS

The authorized number of directors of the corporation shall be not less than one (1) and no more than three (3) until changed, by a resolution amending such number, duly adopted by the Board of Directors or by the shareholders; provided, however, that an amendment reducing the fixed number of directors cannot be adopted if the votes cast against its adoption at a meeting, or the shares not consenting in the case of an action by written consent, are equal to more than sixteen and two-thirds percent (16-2/3%) of the outstanding shares.

No reduction of the authorized number of directors shall have the effect of removing any director before that director's term of office expires.

3.3 ELECTION AND TERM OF OFFICE OF DIRECTORS

At each annual meeting of shareholders, directors shall be elected to hold office until the next annual meeting. Each director, including a director elected to fill a vacancy, shall hold office until the expiration of the term for which elected and until a successor has been elected and qualified, except in the case of the death, resignation, or removal of such a director.

3.4 REMOVAL

The entire Board of Directors or any individual director may be removed from office without cause by the affirmative vote of a majority of the outstanding shares entitled to vote on such removal; provided, however, that unless the entire Board is removed, no individual director may be removed when the votes cast against such director's removal, or not consenting in writing to such removal, would be sufficient to elect that director if voted cumulatively at an election at which the same total number of votes cast were cast (or, if such action is taken by written consent, all shares entitled to vote were voted) and the entire number of directors authorized at the time of such director's most recent election were then being elected.

3.5 RESIGNATION AND VACANCIES

Any director may resign effective upon giving oral or written notice to the Chairman of the Board, the President, the Secretary or the Board of Directors, unless the notice specifies a later time for the effectiveness of such resignation. If the resignation of a director is effective at a future time, the Board of Directors may elect a successor to take office when the resignation becomes effective.

Vacancies on the Board of Directors may be filled by a majority of the remaining directors, or if the number of directors then in office is less than a quorum by (i) unanimous written consent of the directors then in office, (ii) the affirmative vote of a majority of the directors then in office at a meeting held pursuant to notice or waivers of notice, or (iii) a sole remaining director; however, a vacancy created by the removal of a director by the vote or written consent of the shareholders or by court order may be filled only by the affirmative vote of a majority of the shares represented and voting at a duly held meeting at which a quorum is present (which shares voting affirmatively also constitute at least a majority of the required quorum), or by the unanimous written consent of all shares entitled to vote thereon. Each director so elected shall hold office until the next annual meeting of the shareholders and until a successor has been elected and qualified, or until his or her death, resignation or removal.

A vacancy or vacancies in the Board of Directors shall be deemed to exist (i) in the event of the death, resignation or removal of any director, (ii) if the Board of Directors by resolution declares vacant the office of a director who has been declared of unsound mind by an order of court or convicted of a felony, (iii) if the authorized number of directors is increased, or (iv) if the shareholders fail, at any meeting of shareholders at which any director or directors are elected, to elect the full authorized number of directors to be elected at that meeting.

The shareholders may elect a director or directors at any time to fill any vacancy or vacancies not filled by the directors, but any such election by written consent, other than to fill a vacancy created by removal, shall require the consent of the holders of a majority of the

outstanding shares entitled to vote thereon. A director may not be elected by written consent to fill a vacancy created by removal except by unanimous consent of all shares entitled to vote for the election of directors.

3.6 PLACE OF MEETINGS; MEETINGS BY TELEPHONE

Regular meetings of the Board of Directors may be held at any place within or outside the State of California that has been designated from time to time by resolution of the Board. In the absence of such a designation, regular meetings shall be held at the principal executive office of the corporation. Special meetings of the Board may be held at any place within or outside the State of California that has been designated in the notice of the meeting or, if not stated in the notice or if there is no notice, at the principal executive office of the corporation.

Members of the Board may participate in a meeting through the use of conference telephone or similar communications equipment, so long as all directors participating in such meeting can hear one another. Participation in a meeting pursuant to this paragraph constitutes presence in person at such meeting.

3.7 REGULAR MEETINGS

Regular meetings of the Board of Directors may be held without notice if the time and place of such meetings are fixed by the Board of Directors.

3.8 SPECIAL MEETINGS; NOTICE

Subject to the provisions of the following paragraph, special meetings of the Board of Directors for any purpose or purposes may be called at any time by the Chairman of the Board, the President, any Vice President, the Secretary or any two (2) directors.

Notice of the time and place of special meetings shall be delivered personally or by telephone to each director or sent by first-class mail, telegram, charges prepaid, or by telecopier, addressed to each director at that director's address as it is shown on the records of the corporation. If the notice is mailed, it shall be deposited in the United States mail at least four (4) days before the time of the holding of the meeting. If the notice is delivered personally or by telephone or by telecopier or telegram, it shall be delivered personally or by telephone or by telecopier or to the telegraph company at least forty-eight (48) hours before the time of the holding of the meeting. Any oral notice given personally or by telephone may be communicated either to the director or to a person at the office of the director who the person giving the notice has reason to believe will promptly communicate it to the director. The notice need not specify the purpose of the meeting.

3.9 QUORUM

A majority of the authorized number of directors shall constitute a quorum for the transaction of business, except to adjourn as provided in Section 3.11 of these Bylaws. Every act or decision done or made by a majority of the directors present at a meeting duly held at which a quorum is present is the act of the Board of Directors, subject to the provisions of Section 310 of the Code (as to approval of contracts or transactions in which a director has a direct or indirect

material financial interest), Section 311 of the Code (as to appointment of committees), Section 317(e) of the Code (as to indemnification of directors), the Articles of Incorporation, and other applicable law.

A meeting at which a quorum is initially present may continue to transact business notwithstanding the withdrawal of directors, if any action taken is approved by at least a majority of the required quorum for such meeting.

3.10 WAIVER OF NOTICE

Notice of a meeting need not be given to any director who signs a waiver of notice or a consent to holding the meeting or an approval of the minutes thereof, whether before or after the meeting, or who attends the meeting without protesting, prior thereto or at its commencement, the lack of notice to such director. All such waivers, consents, and approvals shall be filed with the corporate records or made a part of the minutes of the meeting. A waiver of notice need not specify the purpose of any regular or special meeting of the Board of Directors.

3.11 ADJOURNMENT

A majority of the directors present, whether or not a quorum is present, may adjourn any meeting to another time and place.

3.12 NOTICE OF ADJOURNMENT

If the meeting is adjourned for more than twenty-four (24) hours, notice of any adjournment to another time and place shall be given prior to the time of the adjourned meeting to the directors who were not present at the time of the adjournment.

3.13 BOARD ACTION BY WRITTEN CONSENT WITHOUT A MEETING

Any action required or permitted to be taken by the Board of Directors may be taken without a meeting, if all members of the Board individually or collectively consent in writing to such action. Such written consent or consents shall be filed with the minutes of the proceedings of the Board. Such action by written consent shall have the same force and effect as a unanimous vote of the Board of Directors.

3.14 FEES AND COMPENSATION OF DIRECTORS

Directors and members of committees may receive such compensation, if any, for their services and such reimbursement of expenses as may be fixed or determined by resolution of the Board of Directors. This Section 3.14 shall not be construed to preclude any director from serving the corporation in any other capacity as an officer, agent, employee or otherwise and receiving compensation for those services.

3.15 APPROVAL OF LOANS TO OFFICERS

If these Bylaws have been approved by the corporation's shareholders in accordance with the Code, the corporation may, upon the approval of the Board of Directors alone, make loans of

money or property to, or guarantee the obligations of, any officer of the corporation or of its parent, if any, whether or not a director, or adopt an employee benefit plan or plans authorizing such loans or guaranties provided that (i) the Board of Directors determines that such a loan or guaranty or plan may reasonably be expected to benefit the corporation, (ii) the corporation has outstanding shares held of record by 100 or more persons (determined as provided in Section 605 of the Code) on the date of approval by the Board of Directors, and (iii) the approval of the Board of Directors is by a vote sufficient without counting the vote of any interested director or directors. Notwithstanding the foregoing, the corporation shall have the power to make loans permitted by the Code.

ARTICLE IV.

COMMITTEES

4.1 COMMITTEES OF DIRECTORS

The Board of Directors may, by resolution adopted by a majority of the authorized number of directors, designate one or more committees, each consisting of two (2) or more directors, to serve at the pleasure of the Board. The Board may designate one or more directors as alternate members of any committee, who may replace any absent member at any meeting of the committee. The appointment of members or alternate members of a committee requires the vote of a majority of the authorized number of directors. Any such committee shall have authority to act in the manner and to the extent provided in the resolution of the Board and may have all the authority of the Board, except with respect to:

1. The approval of any action which, under the Code, also requires shareholders' approval or approval of the outstanding shares.

2. The filling of vacancies on the Board of Directors or in any committee.

3. The fixing of compensation of the directors for serving on the Board or on any committee.

4. The amendment or repeal of these Bylaws or the adoption of new Bylaws.

5. The amendment or repeal of any resolution of the Board of Directors which by its express terms is not so amendable or repealable.

6. A distribution to the shareholders of the corporation, except at a rate, in a periodic amount or within a price range set forth in the Articles of Incorporation or determined by the Board of Directors.

7. The appointment of any other committees of the Board of Directors or the members thereof.

4.2 MEETINGS AND ACTION OF COMMITTEES

Meetings and actions of committees shall be governed by, and held and taken in accordance with, the provisions of Article III of these Bylaws, Section 3.6 (place of meetings), Section 3.7 (regular meetings), Section 3.8 (special meetings and notice), Section 3.9 (quorum), Section 3.10 (waiver of notice), Section 3.11 (adjournment), Section 3.12 (notice of adjournment), and Section 3.13 (action without meeting), with such changes in the context of those Bylaws as are necessary to substitute the committee and its members for the Board of Directors and its members; provided, however, that the time of regular meetings of committees may be determined either by resolution of the Board of Directors or by resolution of the committee, that special meetings of committees may also be called by resolution of the Board of Directors, and that notice of special meetings of committees shall also be given t to all alternate members, who shall have the right to attend all meetings of the committee. The Board of Directors may adopt rules for the government of any committee not inconsistent with the provisions of these Bylaws.

ARTICLE V.

OFFICERS

5.1 OFFICERS

The officers of the corporation shall be a President, a Secretary, and a Treasurer. The corporation may also have, at the discretion of the Board of Directors, a Chairman of the Board, one or more Vice Presidents, one or more Assistant Secretaries, one or more Assistant Treasurers, and such other officers as may be appointed in accordance with the provisions of Section 5.3 of these Bylaws. Any number of offices may be held by the same person.

5.2 APPOINTMENT OF OFFICERS

The officers of the corporation, except such officers as may be appointed in accordance with the provisions of Section 5.3 or Section 5.5 of these Bylaws, shall be chosen by the Board and serve at the pleasure of the Board, subject to the rights, if any, of an officer under any contract of employment.

5.3 SUBORDINATE OFFICERS

The Board of Directors may appoint, or may empower the Chairman of the Board or the President to appoint, such other officers as the business of the corporation may require, each of whom shall hold office for such period, have such authority, and perform such duties as are provided in these Bylaws or as the Board of Directors may from time to time determine.

5.4 REMOVAL AND RESIGNATION OF OFFICERS

Subject to the rights, if any, of an officer under any contract of employment, all officers serve at the pleasure of the Board of Directors and any officer may be removed, either with or without cause, by the Board of Directors at any regular or special meeting of the Board or,

except in case of an officer chosen by the Board of Directors, by any officer upon whom such power of removal may be conferred by the Board of Directors.

Any officer may resign at any time by giving written notice to the corporation. Any resignation shall take effect at the date of the receipt of that notice or at any later time specified in that notice; and, unless otherwise specified in that notice, the acceptance of the resignation shall not be necessary to make it effective. Any resignation is without prejudice to the rights, if any, of the corporation under any contract to which the officer is a party.

5.5 VACANCIES IN OFFICES

A vacancy in any office because of death, resignation, removal, disqualification or any other cause shall be filled in the manner prescribed in these Bylaws for regular appointments to that office.

5.6 CHAIRMAN OF THE BOARD

The Chairman of the Board, if such an officer be elected, shall, if present, preside at meetings of the Board of Directors and exercise and perform such other powers and duties as may from time to time be assigned by the Board of Directors or as may be prescribed by these Bylaws. If there is no President, then the Chairman of the Board shall also be the chief executive officer of the corporation and shall have the powers and duties prescribed in Section 5.7 of these Bylaws.

5.7 PRESIDENT

Subject to such supervisory powers, if any, as may be given by the Board of Directors to the Chairman of the Board, if there be such an officer, the President shall be the chief executive officer of the corporation and shall, subject to the control of the Board of Directors, have general supervision, direction, and control of the business and the officers of the corporation. The President shall preside at all meetings of the shareholders and, in the absence or nonexistence of a Chairman of the Board, at all meetings of the Board of Directors. The President shall have the general powers and duties of management usually vested in the office of President of a corporation, and shall have such other powers and duties as may be prescribed by the Board of Directors or these Bylaws.

5.8 VICE PRESIDENTS

In the absence or disability of the President, the Vice Presidents, if any, in order of their rank as fixed by the Board of Directors or, if not ranked, a Vice President designated by the Board of Directors, shall perform all the duties of the President and when so acting shall have all the powers of, and be subject to all the restrictions upon, the President. The Vice Presidents shall have such other powers and perform such other duties as from time to time may be prescribed for them respectively by the Board of Directors, these Bylaws, the President or the Chairman of the Board.

5.9 SECRETARY

The Secretary shall keep or cause to be kept, at the principal executive office of the corporation or such other place as the Board of Directors may direct, a book of minutes of all meetings and actions of Directors, committees of directors and shareholders. The minutes shall show the time and place of each meeting, whether regular or special (and, if special, how authorized and the notice given), the names of those present at directors' meetings or committee meetings, the number of shares present or represented at shareholders' meetings, and the proceedings thereof.

The Secretary shall keep, or cause to be kept, at the principal executive office of the corporation or at the office of the corporation's transfer agent or registrar, as determined by resolution of the Board of Directors, a share register, or a duplicate share register, showing the names of all shareholders and their addresses, the number and classes of shares held by each, the number and date of certificates evidencing such shares, and the number and date of cancellation of every certificate surrendered for cancellation.

The Secretary shall give, or cause to be given, notice of all meetings of the shareholders and of the Board of Directors required to be given by law or by these Bylaws. The Secretary shall keep the seal of the corporation, if one be adopted, in safe custody and shall have such other powers and perform such other duties as may be prescribed by the Board of Directors or by these Bylaws.

5.10 TREASURER/CHIEF FINANCIAL OFFICER

The Treasurer/Chief Financial Officer shall keep and maintain, or cause to be kept and maintained, adequate and correct books and records of accounts of the properties and business transactions of the corporation, including accounts of its assets, liabilities, receipts, disbursements, gains, losses, capital, retained earnings, and shares. The books of account shall at all reasonable times be open to inspection by any director.

The Treasurer/Chief Financial Officer shall deposit all money and other valuables in the name and to the credit of the corporation with such depositaries as may be designated by the Board of Directors. The Treasurer/Chief Financial Officer shall disburse the funds of the corporation as may be ordered by the Board of Directors, shall render to the President and directors, whenever they request it, an account of all of his or her transactions as Treasurer/Chief Financial Officer and of the financial condition of the corporation, and shall have such other powers and perform such other duties as may be prescribed by the Board of Directors or these Bylaws.

ARTICLE VI.

INDEMNIFICATION OF DIRECTORS, OFFICERS, EMPLOYEES, AND OTHER AGENTS

6.1 INDEMNIFICATION OF DIRECTORS AND OFFICERS

The corporation shall, to the maximum extent and in the manner permitted by the Code, indemnify each of its directors and officers against expenses (as defined in Section 317(a) of the Code), judgments, fines, settlements, and other amounts actually and reasonably incurred in connection with any proceeding (as defined in Section 317(a) of the Code), arising by reason of the fact that such person is or was a director or officer of the corporation. For purposes of this Article VI, a "director" or "officer" of the corporation includes any person (i) who is or was a director or officer of the corporation, (ii) who is or was serving at the request of the corporation as a director or officer of another foreign or domestic corporation, partnership, joint venture, trust or other enterprise, or (iii) who was a director or officer of a corporation which was a predecessor corporation of the corporation or of another enterprise at the request of such predecessor corporation.

6.2 INDEMNIFICATION OF OTHERS

The corporation shall have the power, to the extent and in the manner permitted by the Code, to indemnify each of its employees and agents (other than directors) against expenses (as defined in Section 317(a) of the Code), judgments, fines, settlements, and other amounts actually and reasonably incurred in connection with any proceeding (as defined in Section 317(a) of the Code), arising by reason of the fact that such person is or was an employee or agent of the corporation. For purposes of this Article VI, an "employee" or "agent" of the corporation (other than a director or officer) includes any person (i) who is or was an employee or agent of the corporation, (ii) who is or was serving at the request of the corporation as an employee or agent of another foreign or domestic corporation, partnership, joint venture, trust or other enterprise, or (iii) who was an employee or agent of a corporation which was a predecessor corporation of the corporation or of another enterprise at the request of such predecessor corporation.

6.3 PAYMENT OF EXPENSES IN ADVANCE

Expenses and attorneys' fees incurred in defending any civil or criminal action or proceeding for which indemnification is required pursuant to Section 6.1, or if otherwise authorized by the Board of Directors, shall be paid by the corporation in advance of the final disposition of such action or proceeding upon receipt of an undertaking by or on behalf of the indemnified party to repay such amount if it shall ultimately be determined that the indemnified party is not entitled to be indemnified as authorized in this Article VI.

6.4 INDEMNITY NOT EXCLUSIVE

The indemnification provided by this Article VI shall not be deemed exclusive of any other rights to which those seeking indemnification may be entitled under any Bylaw, agreement, vote of shareholders or directors or otherwise, both as to action in an official capacity and as to action in another capacity while holding such office. The rights to indemnity hereunder shall

continue as to a person who has ceased to be a director, officer, employee, or agent and shall inure to the benefit of the heirs, executors, and administrators of the person.

6.5 INSURANCE INDEMNIFICATION

The corporation shall have the power to purchase and maintain insurance on behalf of any person who is or was a director, officer, employee or agent of the corporation against any liability asserted against or incurred by such person in such capacity or arising out of that person's status as such, whether or not the corporation would have the power to indemnify that person against such liability under the provisions of this Article VI.

6.6 CONFLICTS

No indemnification or advance shall be made under this Article VI, except where such indemnification or advance is mandated by law or the order, judgment or decree of any court of competent jurisdiction, in any circumstance where it appears:

(1) That it would be inconsistent with a provision of the Articles of Incorporation, these Bylaws, a resolution of the shareholders or an agreement in effect at the time of the accrual of the alleged cause of the action asserted in the proceeding in which the expenses were incurred or other amounts were paid, which prohibits or otherwise limits indemnification; or

(2) That it would be inconsistent with any condition expressly imposed by a court in approving a settlement.

6.7 RIGHT TO BRING SUIT

If a claim under this Article is not paid in full by the corporation within 90 days after a written claim has been received by the corporation (either because the claim is denied or because no determination is made), the claimant may at any time thereafter bring suit against the corporation to recover the unpaid amount of the claim and, if successful in whole or in part, the claimant shall also be entitled to be paid the expenses of prosecuting such claim. The corporation shall be entitled to raise as a defense to any such action that the claimant has not met the standards of conduct that make it permissible under the Code for the corporation to indemnify the claimant for the claim. Neither the failure of the corporation (including its Board of Directors, independent legal counsel, or its shareholders) to have made a determination prior to the commencement of such action that indemnification of the claimant is permissible in the circumstances because he or she has met the applicable standard of conduct, if any, nor an actual determination by the corporation (including its Board of Directors, independent legal counsel, or its shareholders) that the claimant has not met the applicable standard of conduct, shall be a defense to such action or create a presumption for the purposes of such action that the claimant has not met the applicable standard of conduct.

6.8 INDEMNITY AGREEMENTS

The Board of Directors is authorized to enter into a contract with any director, officer, employee or agent of the corporation, or any person who is or was serving at the request of the

corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, including employee benefit plans, or any person who was a director, officer, employee or agent of a corporation which was a predecessor corporation of the corporation or of another enterprise at the request of such predecessor corporation, providing for indemnification rights equivalent to or, if the Board of Directors so determines and to the extent permitted by applicable law, greater than, those provided for in this Article VI.

6.9 AMENDMENT, REPEAL OR MODIFICATION

Any amendment, repeal or modification of any provision of this Article VI shall not adversely affect any right or protection of a director or agent of the corporation existing at the time of such amendment, repeal or modification.

ARTICLE VII.

RECORDS AND REPORTS

7.1 MAINTENANCE AND INSPECTION OF SHARE REGISTER

The corporation shall keep either at its principal executive office or at the office of its transfer agent or registrar (if either be appointed), as determined by resolution of the Board of Directors, a record of its shareholders listing the names and addresses of all shareholders and the number and class of shares held by each shareholder.

A shareholder or shareholders of the corporation holding at least five percent (5%) in the aggregate of the outstanding voting shares of the corporation or who hold at least one percent (1%) of such voting shares and have filed a Schedule 14B with the United States Securities and Exchange Commission relating to the election of directors, shall have an absolute right to do either or both of the following (i) inspect and copy the record of shareholders' names, addresses, and shareholdings during usual business hours upon five (5) days' prior written demand upon the corporation, or (ii) obtain from the transfer agent for the corporation, upon written demand and upon the tender of such transfer agent's usual charges for such list (the amount of which charges shall be stated to the shareholder by the transfer agent upon request), a list of the shareholders' names and addresses who are entitled to vote for the election of directors, and their shareholdings, as of the most recent record date for which it has been compiled or as of a date specified by the shareholder subsequent to the date of demand. The list shall be made available on or before the later of five (5) business days after the demand is received or the date specified therein as the date as of which the list is to be compiled.

The record of shareholders shall also be open to inspection and copying by any shareholder or holder of a voting trust certificate at any time during usual business hours upon written demand on the corporation, for a purpose reasonably related to the holder's interests as a shareholder or holder of a voting trust certificate.

Any inspection and copying under this Section 7.1 may be made in person or by and agent or attorney of the shareholder or holder of a voting trust certificate making the demand.

7.2 MAINTENANCE AND INSPECTION OF BYLAWS

The corporation shall keep at its principal executive office or, if its principal executive office is not in the State of California, at its principal business office in California, the original or a copy of these Bylaws as amended to date, which shall be open to inspection by the shareholders at all reasonable times during office hours. If the principal executive office of the corporation is outside the State of California and the corporation has no principal business office in such state, then it shall, upon the written request of any shareholder, furnish to such shareholder a copy of these Bylaws as amended to date.

7.3 MAINTENANCE AND INSPECTION OF OTHER CORPORATE RECORDS

The accounting books and records and the minutes of proceedings of the shareholders and the Board of Directors, and committees of the Board of Directors shall be kept at such place or places as are designated by the Board of Directors or, in absence of such designation, at the principal executive office of the corporation. The minutes shall be kept in written form, and the accounting books and records shall be kept either in written form or in any other form capable of being converted into written form.

The minutes and accounting books and records shall be open to inspection upon the written demand on the corporation of any shareholder or holder of a voting trust certificate at any reasonable time during usual business hours, for a purpose reasonably related to such holder's interests as a shareholder or as the holder of a voting trust certificate. Such inspection by a shareholder or holder of a voting trust certificate may be made in person or by an agent or attorney and the right of inspection includes the right to copy and make extracts. Such rights of inspection shall extend to the records of each subsidiary corporation of the corporation.

7.4 INSPECTION BY DIRECTORS

Every director shall have the absolute right at any reasonable time to inspect and copy all books, records, and documents of every kind and to inspect the physical properties of the corporation and each of its subsidiary corporations, domestic or foreign. Such inspection by a director may be made in person or by an agent or attorney and the right of inspection includes the right to copy and make extracts.

7.5 ANNUAL REPORT TO SHAREHOLDERS; WAIVER

The Board of Directors shall cause an annual report to be sent to the shareholders not later than one hundred twenty (120) days after the close of the fiscal year adopted by the corporation. Such report shall be sent to the shareholders at least fifteen (15) days (or, if sent by third-class mail, thirty-five (35) days) prior to the annual meeting of shareholders to be held during the next fiscal year and in the manner specified in Section 2.5 of these Bylaws for giving notice to shareholders of the corporation.

The annual report shall contain a balance sheet as of the end of the fiscal year and an income statement and statement of changes in financial position for the fiscal year, accompanied by any report thereon of independent accountants or, if there is no such report, the certificate of

an authorized officer of the corporation that the statements were prepared without audit from the books and records of the corporation.

The foregoing requirement of an annual report shall be waived so long as the shares of the corporation are held by fewer than one hundred (100) holders of record.

7.6 FINANCIAL STATEMENTS

If no annual report for the fiscal year has been sent to shareholders, then the corporation shall, upon the written request of any shareholder made more than one hundred twenty (120) days after the close of such fiscal year, deliver or mail to the person making the request, within thirty (30) days thereafter, a copy of a balance sheet as of the end of such fiscal year and an income statement and statement of changes in financial position for such fiscal year.

A shareholder or shareholders holding at least five percent (5%) of the outstanding shares of any class of the corporation may make a written request to the corporation for an income statement of the corporation for the three-month, six-month or nine-month period of the current fiscal year ended more than thirty (30) days prior to the date of the request and a balance sheet of the corporation as of the end of that period. The statements shall be delivered or mailed to the person making the request within thirty (30) days thereafter. A copy of the statements shall be kept on file in the principal office of the corporation for twelve (12) months and it shall be exhibited at all reasonable times to any shareholder demanding an examination of the statements or a copy shall be mailed to the shareholder. If the corporation has not sent to the shareholders its annual report for the last fiscal year, the statements referred to in the first paragraph of this Section 7.6 shall likewise be delivered or mailed to the shareholder or shareholders within thirty (30) days after the request.

The quarterly income statements and balance sheets referred to in this section shall be accompanied by the report thereon, if any, of any independent accountants engaged by the corporation or the certificate of an authorized officer of the corporation that the financial statements were prepared without audit from the books and records of the corporation.

7.7 REPRESENTATION OF SHARES OF OTHER CORPORATIONS

The Chairman of the Board, the President, any Vice President, the Chief Financial Officer, the Secretary or Assistant Secretary of this corporation, or any other person authorized by the Board of Directors or the President or a Vice President, is authorized to vote, represent, and exercise on behalf of this corporation all rights incident to any and all shares of any other corporation or corporations standing in the name of this corporation. The authority herein granted may be exercised either by such person directly or by any other person authorized to do so by proxy or power of attorney duly executed by such person having the authority.

ARTICLE VIII.

GENERAL MATTERS

8.1 RECORD DATE FOR PURPOSES OTHER THAN NOTICE AND VOTING

For purposes of determining the shareholders entitled to receive payment of any dividend or other distribution or allotment of any rights or entitled to exercise any rights in respect of any other lawful action (other than with respect to notice or voting at a shareholders meeting or action by shareholders by written consent without a meeting), the Board of Directors may fix, in advance, a record date, which shall not be more than sixty (60) days prior to any such action. Only shareholders of record at the close of business on the record date are entitled to receive the dividend, distribution or allotment of rights, or to exercise the rights, as the case may be, notwithstanding any transfer of any shares on the books of the corporation after the record date, except as otherwise provided in the Articles of Incorporation or the Code.

If the Board of Directors does not so fix a record date, then the record date for determining shareholders for any such purpose shall be at the close of business on the day on which the Board adopts the resolution relating thereto or the sixtieth (60th) day prior to the date of that action, whichever is later.

8.2 CHECKS; DRAFTS; EVIDENCES OF INDEBTEDNESS

From time to time, the Board of Directors shall determine by resolution which person or persons may sign or endorse all checks, drafts, other orders for payment of money, notes or other evidences of indebtedness that are issued in the name of or payable to the corporation, and only the persons so authorized shall sign or endorse those instruments.

8.3 CORPORATE CONTRACTS AND INSTRUMENTS; HOW EXECUTED

The Board of Directors, except as otherwise provided in these Bylaws, may authorize any officer or officers, or agent or agents, to enter into any contract or execute any instrument in the name of and on behalf of the corporation; such authority may be general or confined to specific instances. Unless so authorized or ratified by the Board of Directors or within the agency power of an officer, no officer, agent or employee shall have any power or authority to bind the corporation by any contract or engagement or to pledge its credit or to render it liable for any purpose or for any amount.

8.4 CERTIFICATES FOR SHARES

A certificate or certificates for shares of the corporation shall be issued to each shareholder when any of such shares are fully paid. The Board of Directors may authorize the issuance of certificates for shares partly paid provided that these certificates shall state the total amount of the consideration to be paid for them and the amount actually paid. All certificates shall be signed in the name of the corporation by the Chairman of the Board or the Vice Chairman of the Board or the President or a Vice President and by the Treasurer/Chief Financial Officer or an Assistant Treasurer or the Secretary or an Assistant Secretary, certifying the

number of shares and the class or series of shares owned by the shareholder. Any or all of the signatures on the certificate may be by facsimile.

In case any officer, transfer agent or registrar who has signed or whose facsimile signature has been placed on a certificate has ceased to be such officer, transfer agent or registrar before such certificate is issued, it may be issued by the corporation with the same effect as if that person were an officer, transfer agent or registrar at the date of issue.

8.5 LOST CERTIFICATES

Except as provided in this Section 8.5, no new certificates for shares shall be issued to replace a previously issued certificate unless the latter is surrendered to the corporation or its transfer agent or registrar and cancelled at the same time. The Board of Directors may, in case any share certificate or certificate for any other security is lost, stolen or destroyed (as evidenced by a written affidavit or affirmation of such fact), authorize the issuance of replacement certificates on such terms and conditions as the Board may require; the Board may require indemnification of the corporation secured by a bond or other adequate security sufficient to protect the corporation against any claim that may be made against it, including any expense or liability, on account of the alleged loss, theft or destruction of the certificate or the issuance of the replacement certificate.

8.6 CONSTRUCTION; DEFINITIONS

Unless the context requires otherwise, the general provisions, rules of construction, and definitions in the Code shall govern the construction of these Bylaws. Without limiting the generality of this provision, the singular number includes the plural, the plural number includes the singular, and the term "person" includes both a corporation and a natural person.

ARTICLE IX.

AMENDMENTS

9.1 AMENDMENT BY SHAREHOLDERS

New Bylaws may be adopted or these Bylaws may be amended or repealed by the vote or written consent of holders of a majority of the outstanding shares entitled to vote; provided, however, that if the Articles of Incorporation of the corporation set forth the number of authorized Directors of the corporation, then the authorized number of Directors may be changed only by an amendment of the Articles of Incorporation.

9.2 AMENDMENT BY DIRECTORS

Subject to the rights of the shareholders as provided in Section 9.1 of these Bylaws, Bylaws, other than a Bylaw or an amendment of a Bylaw changing the authorized number of directors (except to fix the authorized number of directors pursuant to a Bylaw providing for a variable number of directors, if any), may be adopted, amended or repealed by the Board of Directors.

9.3 RECORD OF AMENDMENTS

Whenever an amendment or new Bylaw is adopted, it shall be copied in the book of minutes with the original Bylaws. If any Bylaw is repealed, the fact of repeal, with the date of the meeting at which the repeal was enacted or written consent was filed, shall be stated in said book.

ARTICLE X.

INTERPRETATION

Reference in these Bylaws to any provision of the California Corporations Code shall be deemed to include all amendments thereof.

SECRETARY'S CERTIFICATE OF ADOPTION OF BYLAWS
OF
JEFFERSON ACQUISITION CORPORATION

I, the undersigned, do hereby certify:

1. That I am the duly elected and acting Secretary of Jefferson Acquisition Corporation, a California corporation.

2. That the foregoing Bylaws constitute the Bylaws of said corporation as adopted by the Directors of said corporation by unanimous written consent on August 10, 1995.

IN WITNESS WHEREOF, I have hereunto subscribed my name this 10th day of August, 1995.

/s/ Mark Chamberlain

Mark Chamberlain
Secretary

Exhibit 3.107

CERTIFICATE OF AMENDMENT
OF
CERTIFICATE OF INCORPORATION
OF
WESCAM HOLDINGS (US) INC.

WESCAM HOLDINGS (US) INC., a corporation duly organized and existing under and by virtue of the General Corporation Law of the State of Delaware, DOES HEREBY CERTIFY THAT:

FIRST: That the sole member of the Board of Directors of the Corporation, by written consent of the sole member of the Board of Directors, as filed with the minutes of the Board, approved and adopted on May 21, 1998, the following resolution for amending its Certificate of Incorporation and submitted said amendment to the stockholders of the Corporation for their consideration and approval:

"RESOLVED, that the fourth article of the Certificate of Incorporation of the Corporation be amended in its entirety to read as follows:

"4. The total number of shares of stock which the Corporation shall have authority to issue is One Thousand (1,000) shares of Common Stock; each such share shall have One Dollar ($1.00) par value."

SECOND: That in lieu of a meeting and vote of stockholders, all the stockholders entitled to vote, have approved and adopted said amendment by unanimous written consent on May 21, 1998, in accordance with the provisions of Section 228 of the General Corporation Law of the State of Delaware.

THIRD: The amendment was duly adopted in accordance with the provisions of Sections 242 and 228 of the General Corporation Law of the State of Delaware.

IN WITNESS WHEREOF, Wescam Holdings (US) Inc. has caused this certificate to be executed by its Vice President this 21st day of May, 1998.

WESCAM HOLDINGS (US) INC.

By: /s/ Richard Ziemeski

Richard Ziemski, Vice President

CERTIFICATE OF INCORPORATION

OF

WESCAM HOLDINGS (US) INC.

1. The name of the Corporation is Wescam Holdings (US) Inc.

2. The address of its registered office is 103 Springer Building, 3411 Silverside Road, Wilmington, County of New Castle, Delaware 19810. The name of its registered agent at such address is Organization Services, Inc.

3. The nature of the business to be conducted or promoted is to engage in any lawful act or activity for which corporations may be organized under the General Corporation Law of Delaware.

4. The total number of shares of stock which the Corporation shall have authority to issue is One Hundred (100) shares of common stock; each such share shall have One Dollar ($1.00) par value.

5. The name and mailing address of each incorporator is as follows:

NAME	ADDRESS
Gilbert B. Warren	103 Springer Building 3411 Silverside Road Wilmington, DE 19810
Cynthia L. Conner	103 Springer Building 3411 Silverside Road Wilmington, DE 19810

6. The corporation is to have perpetual existence.

7. In furtherance and not in limitation of the powers conferred by statute, the Board of Directors is expressly authorized to make, alter or repeal the By-Laws of the Corporation.

8. Meetings of stockholders may be held within or without the State of Delaware as the By-Laws may provide. The books of the Corporation may be kept (subject to any provisions contained in the statutes) outside the State of Delaware at such place or places as may be designated from time to time by the Board of Directors or in the By-Laws of the Corporation. Elections of Directors need not be by written ballot unless the By-Laws of the Corporation shall so provide.

9. The Corporation reserves the right to amend, alter, change or repeal any provision contained in this Certificate of Incorporation, in the manner now or hereinafter prescribed by statute, and all rights conferred upon stockholders herein are granted subject to this reservation.

10. To the fullest extent permitted by the Delaware General Corporation Law as the same exists or may hereafter be amended, a director of this corporation shall not be liable to the corporation or its stockholders for monetary damages for breach of fiduciary duty as a director.

WE THE UNDERSIGNED, being each of the incorporators hereinbefore named, for the purpose of forming a corporation pursuant to the General Corporation Law of the State of Delaware, do make this certificate hereby declaring and certifying that this is our act and deed and the facts herein stated are true, accordingly have hereunto set our hands this 29th day of March, 1996.

/s/ Gilbert B. Warren

Gilbert B. Warren

/s/ Cynthia L. Conner

Cynthia L. Conner

Exhibit 3.108

WESCAM HOLDINGS (US) INC

(THE "CORPORATION")

BY-LAWS

ARTICLE I

OFFICES

Section 1. Registered Office. The registered office of the Corporation shall be in the City of Wilmington, County of New Castle, State of Delaware.

Section 2. Other Offices. The Corporation may also have offices at such other places both within and without the State of Delaware as the board of directors may from time to time determine or the business of the Corporation may require.

ARTICLE II

MEETINGS OF STOCKHOLDERS

Section 1. Time and Place of Meetings. All meetings of the stockholders for the election of directors or for any other purpose shall be held at such time and place, within or without the State of Delaware, as shall be stated in the notice of the meeting or in a duly executed waiver of notice thereof.

Section 2. Annual Meetings. Annual meetings of stockholders shall be held at such date and time as shall be designated from time to time by the board of directors and stated in the notice of the meeting, at which meeting, the stockholders shall elect by a plurality vote or by written ballot a board of directors and transact such other business as may be properly be brought before the meeting.

Section 3. Notice of Annual Meetings. Written notice of the annual meeting stating the place, date and hour of the meeting shall be given to each stockholder entitled to vote at such meeting not less than ten nor more than sixty days before the date of the meeting.

Section 4. Special Meetings. Special meetings of the stockholders, for any purpose or purposes, unless otherwise prescribed by statute or by the Certificate of Incorporation, may be called by the president and shall be called by the president or secretary at the request in writing of a majority of the board of directors, or at the request in writing of stockholders owning a majority in amount of the entire capital stock of the Corporation issued and outstanding and entitled to vote. Such a request shall state the purpose or purposes of the proposed meeting.

Section 5. Notice of Special Meetings. Written notice of a special meeting stating the place, date and hour of the meeting and the purpose or purposes for which the meeting is called, shall be given not less than ten nor more than sixty days before the date of the meeting, to each stockholder entitled to vote at such meeting.

Section 6. Quorum. The holders of a majority of the stock issued and outstanding and entitled to vote thereat, present in person or represented by proxy, shall constitute a quorum at all meetings of the stockholders for the transaction of business except as otherwise provided by statute or by the Certificate of Incorporation. If, however, such quorum shall not be present or represented at any meeting of the stockholders, the stockholders entitled to vote thereat, present in person or represented by proxy, shall have power to adjourn the meeting from time to time, without notice other than announcement at the meeting, until a quorum shall be present or represented.

Section 7. Action by Stockholders. When a quorum is present at any meeting, the vote of the holders of a majority of the stock having voting power present in person or represented by proxy shall decide any question brought before such meeting, unless the question is one upon which by express provision of the statutes or of the Certificates of Incorporation, a different vote is required in which case such express provision shall govern and control the decision of such question.

Section 8. Voting. Each stockholder shall at every meeting of the stockholders be entitled to one vote in person or by proxy or each share of the capital having voting power held by such stockholder.

Section 9. Written Action. Any action required to be taken at any annual or special meeting of stockholders of the Corporation, or any action which may be taken at any annual or special meeting of such stockholders, may be taken without a meeting, without prior notice and without a vote, if a consent in writing, setting forth the action so taken, shall be signed by the holders of outstanding stock having not less than the minimum number of votes that would be necessary to authorize or take such action at a meeting at which all shares entitled to vote thereon were present and voted.

ARTICLE III

DIRECTORS

Section 1. Number and Term. The board of directors shall consist of one or more members. The first board shall consist of three directors. Thereafter, within the limits above specified, the number of directors shall be determined by resolution of the board of directors or by the stockholders at the annual meeting or a special meeting. The directors shall be elected at the annual meeting of the stockholders, except as provided in Section 2 of this Article, and each director elected shall hold office until his or her successor is elected and qualified. Directors need not be stockholders.

Section 2. Vacancies and New Directorships. Vacancies and newly created directorships resulting from any increase in the authorized number of directors may be filled by a majority of the directors then in office, though less than a quorum, or by a sole remaining director, and the directors so chosen shall hold office until the next annual election and until their successors are duly elected and shall qualify, unless sooner displaced. If there are no directors in office, then an election of directors may be held in the manner provided by statute.

Section 3. Powers. The business and affairs of the Corporation shall be managed by or under the direction of its board of directors which may exercise all such powers of the Corporation and do all such lawful acts and things as are not by statute or by the Certificate of Incorporation or by these By-laws directed or required to be exercised or done by the stockholders.

Section 4. Place of Meetings. The board of directors of the Corporation may hold meetings, both regular and special, either within or without the State of Delaware.

Section 5. Regular Meetings. Regular meetings of the board of directors may be held without notice at such time and at such place as shall from time to time be determined by the board.

Section 6. Special Meetings. Special meetings of the board may be called by the chairman of the board or by the President on one day's notice to each director, either personally or by mail or by telegram; special meetings of the board shall be called by the president or secretary in like manner and on like notice on the written request of two directors.

Section 7. Quorum. At all meetings of the board, a majority of the directors then in office shall constitute a quorum for transaction of business, and the act of a majority of the directors present at any meeting at which there is a quorum shall be the act of the board of directors, except as may be otherwise specifically provided by statute or by the Certificate of Incorporation. If a quorum shall not be present at any meeting of the board of directors, the directors present thereat may adjourn the meeting from time to time, without notice other than announcement at the meeting, until a quorum shall be present.

Section 8. Written Action. Unless otherwise restricted by the Certificate of Incorporation or these By-laws, any action required or permitted to be taken at any meeting of the board of directors or of any committee thereof may be taken without a meeting, if all members of the board or committee, as the case may be, consent thereto in writing, and the writing or writings are filed with the minutes or proceedings of the board or committee.

Section 9. Participation in Meetings by Conference Telephone. Unless otherwise restricted by the certificate or incorporation or these By-laws, members of the board of directors, or any committee designated by the board of directors, may participate in a meeting of the board of directors, or any committee, by means of conference telephone or similar communications equipment by means of which all persons participating in the meeting can hear each other, and such participation in a meeting shall constitute presence in person at the meeting.

Section 10. Committees. The board of directors may from time to time, by resolution passed by a majority of the whole board of directors, designate one or more

committees, each committee to consist of one or more of the directors of the Corporation. The board of directors may designate one or more directors as alternate members of any committee, who may replace any absent or disqualified member at any meeting of the committee, and in the absence or disqualification of a member of a committee, the member or members thereof present at any meeting and not disqualified from voting, whether or not he or she or they constitute a quorum, may unanimously appoint another member of the board of directors to act at the meeting in the place of such absent or disqualified member. Any such committee, to the extent provided in the resolution of the board of directors, shall have and may exercise all of the powers and authority of the board of directors in the management of the business and affairs of the Corporation, and may authorize the seal of the Corporation to be affixed to all papers which may require it; but no such committee shall have the power or authority in reference to amending the Certificate of Incorporation (except that a committee may, to the extent authorized in the resolution or resolutions providing for the issuance of shares of stock adopted by the board of directors as provided in subsection (a) of Section 151 of the General Corporation Law of the State of Delaware, fix the designation and any of the preferences or rights of such shares relating to dividends, redemption, dissolution, any distribution of assets of the Corporation or the conversion into, or the exchange of such shares for, shares of any other class or classes or any other series of the same or any other class or classes of stock of the Corporation), adopting an agreement of merger or consolidation under Section 251 or 252 of the General Corporation Law of the State of Delaware, recommending to the stockholders the sale, lease or exchange of all or substantially all of the Corporation's property and assets, recommending to the stockholders a dissolution of the Corporation or a revocation of a dissolution, or amending the By-laws of the Corporation; and, unless the resolution designating such committee expressly so provides, no such committee shall have the power or authority to declare a dividend, to authorize the issuance of stock or to adopt a certificate of ownership and merger pursuant to Section 253 of the General Corporation Law of the State of Delaware.

Unless otherwise ordered by the board of directors, a majority of the members of any committee appointed by the board of directors pursuant to this section shall constitute a quorum at any meeting thereof, and the act of a majority of the members present at a meeting at which a quorum is present shall be the act of such committee. Any such committee shall prescribe its own rules for calling and holding meetings and its method of procedure, subject to any rules prescribed by the board of directors, and shall keep a written record of all action taken by it and report the same to the board of directors when required.

ARTICLE IV

NOTICES

Section 1. Generally. Whenever, under the provisions of the statutes or of the Certificate of Incorporation or of these By-laws, notice is required to be given to any director or stockholder, it shall not be construed to mean personal notice, but such notice may be given in writing, by mail, addressed to such director or stockholder, at his or her address as it appears on the records of the Corporation, with postage thereon prepaid, and such notice shall be deemed to be given at the time when the same shall be deposited in the United States mail. Notice to directors may also be given by telegram or telephone.

Section 2. Waiver. Whenever any notice is required to be given under the provisions of the statutes or of the Certificate of Incorporation or of these By-laws, a waiver thereof in writing, signed by the person or persons entitled to said notice, whether before or after the time stated therein, shall be deemed equivalent thereto.

ARTICLE V

OFFICERS

Section 1. Generally. The officers of the Corporation shall be chosen by the board of directors and shall be a president, a secretary and a treasurer. The board of directors may also choose a chairman of the board of directors, a vice chairman of the board of directors, one or more vice-presidents, and one or more assistant secretaries and assistant treasurers. Any number of offices may be held by the same person, unless the Certificate of Incorporation or these By-laws otherwise provide.

Section 2. Compensation. The compensation of all officers and agents of the Corporation who are also directors of the Corporation shall be fixed by the board of directors. The board of directors may delegate the power to fix the compensation of all other officers and agents of the Corporation to an officer of the Corporation.

Section 3. Succession. The officers of the Corporation shall hold office until their successors are chosen and qualified. Any officer elected or appointed by the board of directors may be removed at any time by the affirmative vote of a majority of the board of directors. Any vacancy occurring in any office of the Corporation shall be filled by the board of directors.

Section 4. Authorities and Duties. The officers of the Corporation shall have such authority and shall perform such duties as are customarily incident to their respective offices, or as may be specified from time to time by the directors regardless of whether such authority and duties are customarily incident to such office.

ARTICLE VI

CERTIFICATES OF STOCK

Section 1. Certificates. Every holder of stock in the Corporation shall be entitled to have a certificate, signed by, or in the name of the Corporation by the president or vice-president and the secretary or an assistant secretary of the Corporation, certifying the number of shares owned by him in the Corporation.

Section 2. Transfer. Upon surrender to the Corporation or the transfer agent of the Corporation of a certificate for shares duly endorsed or accompanied by proper evidence of succession, assignation or authority to transfer, it shall be the duty of the Corporation to, or to

cause its transfer agent to, issue a new certificate to the person entitled thereto, cancel the old certificate and record the transaction upon its books.

Section 3. Lost. Stolen or Destroyed Certificates. In the event of the loss, theft or destruction of any certificate for shares, another may be issued in its place pursuant to such requirements as the board of directors may establish concerning proof of such loss, theft or destruction and concerning the giving of a satisfactory bond or bonds of indemnity.

ARTICLE VII

PROTECTION OF DIRECTORS, OFFICERS AND OTHERS

Section 1. Limitation of Liability. Every director and officer of the Corporation in exercising his or her powers and discharging his or her duties shall act honestly and in good faith with a view to the best interests of the Corporation and shall exercise the care, diligence and skill that a reasonably prudent person would exercise in comparable circumstances. Subject to the foregoing, no director or officer shall be liable for the acts, neglects or defaults of any other director, officer or employee, or for joining in any act for conformity, or for any loss, damage or expense happening to the Corporation through the insufficiency or deficiency of title to any property acquired for or on behalf of the Corporation, or for the insufficiency or deficiency of any security in or upon which any of the monies of the Corporation shall be invested, or for any loss or damage arising from the bankruptcy, insolvency or tortious acts of any person with whom any of the monies, securities or effects of the Corporation shall be deposited, or for any loss occasioned by any error of judgment or oversight on his or her part, or for any other loss, damage or misfortune whatever which shall happen in the execution of the duties of his or her office or in relation thereto; provided that nothing herein shall relieve any director of or officer from the duty to act in accordance with the General Corporation Law of the State of Delaware or any regulations thereunder or from liability for any breach thereof.

Section 2. Indemnity. Subject to the limitations contained in the Act, the Corporation shall indemnify a director or officer, a former director or officer, or a person who acts or acted at the Corporation's request as a director or officer of a body corporate of which the Corporation is or was a shareholder or creditor, and his or her heirs and legal representatives, against all costs, charges and expenses, including an amount paid to settle an action or satisfy a judgment, reasonably incurred by him or her in respect of any civil, criminal or administrative action or proceeding to which he or she is made a party by reason of being or having been a director or officer of the Corporation or such body corporate, if

(a) he or she acted honestly and in good faith with a view to the best interests of the Corporation; and

(b) in the case of a criminal or administrative action or proceeding that is enforced by a monetary penalty, he or she had reasonable grounds for believing that his or her conduct was lawful.

The Corporation shall also indemnify such person in such other circumstances as the General Corporation Law of the State of Delaware permits or requires. Nothing in this by-law shall limit the right of any person entitled to indemnity to claim indemnity apart from the provisions of this by-law.

Section 3. Insurance. Subject to the General Corporation Law of the State of Delaware, the Corporation may purchase and maintain insurance for the benefit of any person referred to in section 2 of the Article against such liabilities and in such amounts as the board may from time to time determine and as are permitted by the General Corporation Law of the State of Delaware.

ARTICLE VIII

GENERAL PROVISIONS

Section 1. Dividends upon the capital stock of the Corporation, subject to the provisions of the Certificate of Incorporation, if any, may be declared by the board of directors at any regular or special meeting, pursuant to law. Dividends may be paid in cash, in property, or in shares of the capital stock, subject to the provisions of the Certificate of Incorporation.

Section 2. Before payment of any dividend, there may be set aside out of any funds of the Corporation available for dividends such sum or sums as the directors from time to time, in their absolute discretion, think proper as a reserve or reserves to meet contingencies, or for equalizing dividends, or for repairing or maintaining, any property of the Corporation, or for such other purpose as the directors shall think conducive to the interest of the Corporation, and the directors may modify or abolish any such reserve in the manner in which it was created.

Section 3. All checks or demands for money and notes of the Corporation shall be signed by such officers or such other person or persons as the board of directors may from time to time designate.

Section 4. The fiscal year of the Corporation shall be fixed by resolution of the board of directors.

Section 5. The board of directors may adopt a corporate seal and use the same by causing it or a facsimile thereof to be impressed or affixed or reproduced or otherwise.

ARTICLE IX

AMENDMENTS

These By-laws may be altered, amended or repealed or new By-laws may be adopted by the stockholders or by the board of directors.

The foregoing By-law No. 1 is hereby consented to and passed as evidenced by the signatures of all the directors of the Corporation pursuant to the General Corporation Law of the State of Delaware.

TO BE EFFECTIVE AS OF the 30th day of May, 1996.

/s/ Douglas Smith	/s/ Bruce R. Latimer
Douglas Smith	Bruce R. Latimer

The foregoing By-law No. 1 is hereby confirmed as evidenced by the signature of all the stockholders of the Corporation pursuant to the General Corporation Law of the State of Delaware.

DATED this day of October, 1996.

WESCAM INC.

By: /s/ Bruce R. Latimer
Name: Bruce Latimer
Title: Vice President

1179023 ONTARIO LIMITED

By: /s/ Bruce R. Latimer
Name: Bruce Latimer
Title: Vice President

Exhibit 3.109

FORM CD-72-30M-4/86-808881

- --------
EXAMINER

FEDERAL IDENTIFICATION
NO. 042482502

THE COMMONWEALTH OF MASSACHUSETTS
OFFICE OF THE MASSACHUSETTS SECRETARY OF STATE
MICHAEL JOSEPH CONNOLLY, SECRETARY
ONE ASHBURTON PLACE, BOSTON, MASS. 02108

ARTICLES OF AMENDMENT

GENERAL LAWS, CHAPTER 156B, SECTION 72

This certificate must be submitted to the Secretary of the Commonwealth within sixty days after the date of the vote of stockholders adopting the amendment. The fee for filing this certificate is prescribed by General laws, Chapter 156B, Section 114. Make check payable to the Commonwealth of Massachusetts.

I, Richard F. Wolf , President and
, Clerk

Wolf Coach, Inc.
- ---
(Name of Corporation)

located at 7 "B" Street, Auburn, MA 01501

- ---------
NAME APPROVED

do hereby certify that the following amendment to the articles of organization of the corporation was duly adopted by unanimous consent dated August 15, 1988, by vote of

[ ] 400 shares of common out of 400 shares outstanding,
[ ] ------ ---------- ------
(Class of Stock)
[ ] shares of out of shares outstanding,
------ ---------- ------
(Class of Stock)
shares of out of shares outstanding,
------ ---------- ------
(Class of Stock)

being at least a majority of each class outstanding and entitled to vote thereon.

CROSS OUT
INAPPLICABLE
CLAUSE

To amend Article 2 of the Articles of Organization of the Corporation in order to add thereto the following new purposes:

To conduct or engage in electrical contracting and installation and any other activity incident or advantageous to the electrical business.

(1) For amendments adopted pursuant to Chapter 156B, Section 70

(2) For amendments adopted pursuant to Chapter 156B, Section 71

Note: If the space provided under Amendment or item on this form is insufficient, additions shall be set forth on separate 8 1/2 x 11
- --------- sheets of paper leaving a left hand margin of at least 1 inch for
P.C. binding. Additions to more than one Amendment may be continued on a single sheet so long as each Amendment requiring each such addition is clearly indicated.

TO CHANGE the number of shares and the par value, if any, of each class of stock within the corporation fill in the following:

The total presently authorized is:

KIND OF STOCK	NO PAR VALUE NUMBER OF SHARES	WITH PAR VALUE NUMBER OF SHARES	PAR VALUE
COMMON			
PREFERRED			

CHANGE the total to:

KIND OF STOCK	NO PAR VALUE NUMBER OF SHARES	WITH PAR VALUE NUMBER OF SHARES	PAR VALUE
COMMON			
PREFERRED			

The foregoing amendment will become effective when these articles of amendment are filed in accordance with Chapter 156B, Section 6 of The General Laws unless these articles specify, in accordance with the vote adopting the amendment, a later effective date not more than thirty days after such filing, in which event the amendment will become effective on such later date.

IN WITNESS WHEREOF AND UNDER THE PENALTIES OF PERJURY, we have hereto signed our name this 15th day of August, in the year 1988.

/s/ Richard F. Wolf President

/s/ Richard F. Wolf Clerk

THE COMMONWEALTH OF MASSACHUSETTS

ARTICLES OF AMENDMENT

(General Laws, Chapter 156B, Section 72)

I HEREBY APPROVE THE WITHIN ARTICLES OF AMENDMENT AND, THE FILING FEE IN THE AMOUNT OF $75.00 HAVING BEEN PAID, SAID ARTICLES ARE DEEMED TO HAVE BEEN FILED WITH ME THIS 15TH DAY OF AUGUST, 1988.

/s/ Michael Joseph Connolly

MICHAEL JOSEPH CONNOLLY
Secretary of State

TO BE FILLED IN BY CORPORATION

PHOTO COPY OF AMENDMENT TO BE SENT

TO:

Sami S. Baghdady
Bowditch & Dewey
311 Main Street
Worcester, MA 01608
Telephone (508) 791-3511

COPY MAILED

FORM CD-72-30M-4/86-808881

- --------
EXAMINER

FEDERAL IDENTIFICATION
NO. 042482502

THE COMMONWEALTH OF MASSACHUSETTS
OFFICE OF THE MASSACHUSETTS SECRETARY OF STATE
MICHAEL JOSEPH CONNOLLY, SECRETARY
ONE ASHBURTON PLACE, BOSTON, MASS. 02108

ARTICLES OF AMENDMENT

GENERAL LAWS, CHAPTER 156B, SECTION 72

This certificate must be submitted to the Secretary of the Commonwealth within sixty days after the date of the vote of stockholders adopting the amendment. The fee for filing this certificate is prescribed by General laws, Chapter 156B, Section 114. Make check payable to the Commonwealth of Massachusetts.

I, Richard F. Wolf , President and
, Clerk

Wolf Coach, Inc.
- ---
(Name of Corporation)

located at Auburn Industrial Park, Auburn, MA 01501 - 7 B Street

- ---------
NAME APPROVED

do hereby certify that the following amendment to the articles of organization of the corporation was duly adopted by unanimous consent vote as of September 16, 1987, by vote of

[ ] 400 shares of Common Stock out of 400 shares outstanding,
[ ] (Class of Stock)

[ ] shares of out of shares outstanding,
(Class of Stock)

shares of out of shares outstanding,
(Class of Stock)

CROSS OUT INAPPLICABLE CLAUSE

being at least two-thirds of each class outstanding and entitled to vote thereon and of each class or series of stock whose rights are adversely affected thereby.

(1) For amendments adopted pursuant to Chapter 156B, Section 70

(2) For amendments adopted pursuant to Chapter 156B, Section 71

- ---------
P.C.

Note: If the space provided under any Amendment or item on this form is insufficient, additions shall be set forth on separate 8 1/2 x 11 sheets of paper leaving a left hand margin of at least 1 inch for binding. Additions to more than one Amendment may be continued on a single sheet so long as each Amendment requiring each such addition is clearly indicated.

TO CHANGE the number of shares and the par value, if any, of each class of stock within the corporation fill in the following:

The total presently authorized is:

KIND OF STOCK	NO PAR VALUE NUMBER OF SHARES	WITH PAR VALUE NUMBER OF SHARES	PAR VALUE
COMMON			
PREFERRED			

CHANGE the total to:

KIND OF STOCK	NO PAR VALUE NUMBER OF SHARES	WITH PAR VALUE NUMBER OF SHARES	PAR VALUE
COMMON			
PREFERRED			

VOTED: A director of the Corporation shall not be personally liable to the Corporation or its stockholders for monetary damages for breach of fiduciary duty as a director notwithstanding any provision of law imposing such liability, except for liability (i) for any breach of the director's duty of loyalty to the Corporation or its stockholders, (ii) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (iii) under sections sixty-one or sixty-two of Chapter 156B of the General Laws, as now in effect or hereafter amended, or (iv) for any transaction from which the director derived an improper personal benefit. No amendment to or repeal of this provision shall apply to or have any effect on the liability or alleged liability of any director for or with respect to any acts or omissions of such director occurring prior to such amendment or repeal.

The foregoing amendment will become effective when these articles of amendment are filed in accordance with Chapter 156B, Section 6 of The General Laws unless these articles specify, in accordance with the vote adopting the amendment, a later effective date not more than thirty days after such filing, in which event the amendment will become effective on such later date.

IN WITNESS WHEREOF AND UNDER THE PENALTIES OF PERJURY, I have hereto signed my name this 16th day of September, in the year 1987.

/s/ Richard F. Wolf President

/s/ Richard F. Wolf Clerk

THE COMMONWEALTH OF MASSACHUSETTS

ARTICLES OF AMENDMENT

(General Laws, Chapter 156B, Section 72)

I HEREBY APPROVE THE WITHIN ARTICLES OF AMENDMENT AND, THE FILING FEE IN THE AMOUNT OF $75.00 HAVING BEEN PAID, SAID ARTICLES ARE DEEMED TO HAVE BEEN FILED WITH ME THIS 22ND DAY OF SEPTEMBER, 1987.

MICHAEL JOSEPH CONNOLLY
Secretary of State

TO BE FILLED IN BY CORPORATION

PHOTO COPY OF AMENDMENT TO BE SENT

TO:

Peter R. Johnson, Esquire
Bowditch & Dewey
311 Main Street
Worcester, MA 01608
Telephone (617) 791-3511

COPY MAILED

THE COMMONWEALTH OF MASSACHUSETTS

ARTICLES OF ORGANIZATION
GENERAL LAWS, CHAPTER 156B, SECTION 12

==========

I HEREBY CERTIFY THAT, UPON AN EXAMINATION OF THE WITHIN-WRITTEN ARTICLES OF ORGANIZATION, DULY SUBMITTED TO ME, IT APPEARS THAT THE PROVISIONS OF THE GENERAL LAWS RELATIVE TO THE ORGANIZATION OF CORPORATIONS HAVE BEEN COMPLIED WITH, AND I HEREBY APPROVE SAID ARTICLES; AND THE FILING FEE IN THE AMOUNT OF $75.00 HAVING BEEN PAID, SAID ARTICLES ARE DEEMED TO HAVE BEEN FILED WITH ME THIS 20TH DAY OF MAY 1971

Effective Date

SECRETARY OF THE COMMONWEALTH

TO BE FILLED IN BY CORPORATION

PHOTO COPY OF ARTICLES OF ORGANIZATION TO BE SENT

TO:

John R. Blake, Esq.
340 Main Street, Room 565
Worcester, Mass. 01608

FILING FEE: 1/20 OF 1% OF THE TOTAL AMOUNT OF THE AUTHORIZED CAPITAL STOCK WITH PAR VALUE, AND ONE CENT A SHARE FOR ALL AUTHORIZED SHARES WITHOUT PAR VALUE, BUT NOT LESS THAN $75. GENERAL LAWS, CHAPTER 156B. SHARES OF STOCK WITH A PAR VALUE OF LESS THAN ONE DOLLAR SHALL BE DEEMED TO HAVE PAR VALUE OF ONE DOLLAR PER SHARE.

COPY MAILED

7. By-laws of the corporation have been duly adopted and the initial directors, president, treasurer and clerk, whose names are set out below, have been duly elected.

8. The effective date of organization of the corporation shall be the date of filing with the Secretary of the Commonwealth or if later date is desired, specify date, (not more than 30 days after date of filing).

9. The following information shall not for any purpose be treated as a permanent part of the Articles of Organization of the corporation.

   a. The post office address of the initial principal office of the corporation in Massachusetts is:

      94 Main Street, Northborough, Massachusetts 01532

   b. The name, residence, and post office address of each of the initial directors and following officers of the corporation are as follows:

	NAME	RESIDENCE	POST OFFICE ADDRESS
PRESIDENT:	Paul J. Wolf	Northborough, Mass.	63 Shady Lane Avenue
TREASURER:	David J. Milliken	Northborough, Mass.	331 Green Street
CLERK:	Richard P. Houlihan, Jr.	Worcester, Mass.	25 Otsego Road
DIRECTORS:	Paul J. Wolf	as above	as above
	Richard P. Houlihan, Jr.	as above	as above
	David J. Milliken	as above	as above

   c. The date initially adopted on which the corporation's fiscal year ends is:

      April 30th

   d. The date initially fixed in the by-laws for the annual meeting of stockholders of the corporation is:

      Third Tuesday in September

   e. The name and business address of the resident agent, of any, if the corporation is:

      None

IN WITNESS WHEREOF and under the penalties of perjury the above-named INCORPORATOR(S) sign(s) these Articles of Organization this 19th day of May 1971.

/s/ Paul J. Wolfe

Paul J. Wolfe

The signature of each incorporator which is not a natural person must be by an individual who shall show the capacity in which he acts and by signing shall represent under the penalties of perjury that he is duly authorized on its behalf to sign these Articles of Organization.

THE COMMONWEALTH OF MASSACHUSETTS
JOHN F. X. DAVOREN
SECRETARY OF THE COMMONWEALTH
STATE HOUSE
BOSTON, MASS.

ARTICLES OF ORGANIZATION
(UNDER G.L. CH. 156B)

INCORPORATORS

NAME	POST OFFICE ADDRESS
Include given name in full in case of natural persons; in case of a corporation, give state of incorporation.	
Paul J. Wolf	63 Shady Lane Avenue Northborough, Massachusetts 01532

THE ABOVE-NAMED INCORPORATOR(S) DO HEREBY ASSOCIATE (THEMSELVES) WITH THE INTENTION OF FORMING A CORPORATION UNDER THE PROVISIONS OF GENERAL LAWS, CHAPTER 156B AND HEREBY STATE(S):

1. THE NAME BY WHICH THE CORPORATION SHALL BE KNOWN IS:

Wolf Coach, Inc.

2. THE PURPOSES FOR WHICH THE CORPORATION IS FORMED ARE AS FOLLOWS:

To manufacture, assemble, fabricate, customize, design, improve alter, produce, purchase, import, or otherwise acquire, own, hold, store, use, repair, service, sell, market, distribute, export and otherwise dispose of, and generally to trade and deal in and with, as principal, agent or otherwise, mobile coaches and related or similar motor vehicles and any and all machinery, tools, equipment, appliances, devices, supplies and materials used car useful in connection with or incidental to any of the foregoing; to acquire, deal in, license or dispose of all kinds of inventions, processes, trade secrets and know how; to engage in research and development in any field; to engage in and transact any business or activity related, incidental or contributory to the foregoing; to the extent permitted by law, to be a partner in any business enterprise which this corporation would have power to conduct by itself; and in general to carry on any business permitted by the laws of the Commonwealth of Massachusetts to be carried on by a corporation organized under Chapter 156B of the Massachusetts General Laws; all the foregoing to be carried on, conducted or undertaken in this Commonwealth or anywhere on Earth or elsewhere.

NOTE: IF PROVISIONS FOR WHICH THE APACE PROVIDED UNDER ARTICLES 2, 4, 5 AND 6 IS NOT SUFFICIENT ADDITIONS SHOULD BE SET OUT ON CONTINUATION SHEETS TO BE NUMBERED 2A, 2B, ETC. INDICATE UNDER EACH ARTICLE WHERE THE PROVISION IS SET OUT. CONTINUATION SHEETS SHALL BE ON 8 1/2" X 11" PAPER AND MUST HAVE A LEFT-HAND MARGIN 1 INCH WIDE FOR BINDING. ONLY ONE SIDE SHOULD BE USED.

3. THE TOTAL NUMBER OF SHARES AND THE PAR VALUE, IF ANY, OF EACH CLASS OF STOCK WHICH THE CORPORATION IS AUTHORIZED IS AS FOLLOWS:

CLASS OF STOCK	WITHOUT PAR VALUE	WITH PAR VALUE		
	NUMBER OF SHARES	NUMBER OF SHARES	PAR VALUE	AMOUNT
PREFERRED				$
COMMON	7,500			

*4. IF MORE THAN ONE CLASS TO AUTHORIZED, A DESCRIPTION OF EACH OF THE DIFFERENT CLASSES OF STOCK WITH, IF ANY, THE PREFERENCES, VOTING POWERS, QUALIFICATIONS, SPECIAL OR RELATIVE RIGHTS OR PRIVILEGES AS TO EACH CLASS THEREOF AND ANY SERIES NOW ESTABLISHED:

None

*5. THE RESTRICTIONS, IF ANY, IMPOSED BY THE ARTICLES OF ORGANIZATION UPON THE TRANSFER OF SHARES OF STOCK OF ANY CLASS ARE AS FOLLOWS:

- see continuation sheets 1 through 3 attached hereto.

*6. OTHER LAWFUL PROVISIONS, IF ANY, FOR THE CONDUCT AND REGULATION OF THE BUSINESS AND AFFAIRS OF THE CORPORATION, FOR ITS VOLUNTARY DISSOLUTION, OR FOR LIMITING, DEFINING, OR REGULATING THE POWERS OF THE CORPORATION, OR OF ITS DIRECTORS OR STOCKHOLDERS, OR OF ANY CLASS OF STOCKHOLDERS:

To the extent permitted by the By-Laws, meeting of the stockholders of this corporation may be held anywhere in the United States.

To the extent permitted by law and by the By-laws, the directors (as well as the stockholders) of this corporation shall have the power to make, amend or repeal, in whole or in part, the By-laws.

* If there are no provisions state "None".

Restrictions imposed upon the transfer of shares:

Each share of common stock of the corporation is subject to the requirements and restrictions upon the transfer of such shares set forth below, and the same shall constitute a contract of each shareholder with the corporation, shall be binding upon each shareholder and his heirs, assigns, executors, administrators, or other legal representatives and upon all other persons succeeding to or standing in the place of or holding under the shareholder, whether by act of the :shareholder or by operation of law. These provisions shall not be discharged by any transfer of shares which may be made in compliance with the provisions hereof, but shall apply anew to such shares in the hands of the new holder thereof. These provisions shall not restrict the making of a bona fide pledge of any shares to secure an indebtedness, but shall apply fully with respect to any proposed transfer from the name of the shareholder pursuant to such pledge, whether upon foreclosure or otherwise and whether to the pledgee or to any other person.

1. Any shareholder desiring to sell or otherwise dispose of any of his shares of common stock, ("transferor shareholder") shall first give written notice thereof to the corporation, and shall therewith offer in writing to sell such shares to the remaining stockholders of the corporation at the "arbitrated price" as defined in paragraph 2 hereof. The transferor shareholder shall transmit with such offer the name of an arbitrator and the certificate or certificates representing the shares of stock which such shareholder desires to sell or otherwise dispose of for deposit with the Directors of the corporation, said certificates to be endorsed in blank for transfer.

2. Upon receipt of said offer, name and certificate or certificates, the Directors of the corporation shall within five (5) days notify the remaining shareholders of said receipt. The remaining shareholders shall then, within ten (10) days after the giving of said notice by the Directors, and by decision of a majority of shares held by said remaining shareholders, designate an arbitrator and shall notify the Directors in writing of such designation. The Directors shall then promptly notify the arbitrator designated by the transferor shareholder of the name of the arbitrator designated by the remaining shareholders. Both arbitrators shall then, within five (5) days after receipt of notice by the arbitrator designated by the transferor shareholder as aforesaid, meet and designate a third arbitrator, whereupon the three arbitrators shall meet to discuss, study and render a decision, within ten (l0) days after designation of the third arbitrator, as to the value of the shares proposed to be transferred by the transferor shareholder. Such valuation shall be based upon such standard valuation method or methods as the arbitrators may select and the decision of a majority of the arbitrators shall be binding upon all stockholders of the corporation. If the two arbitrators initially designated shall fail to agree upon a third arbitrator within the aforesaid five (5) day period, either arbitrator may request the American Arbitration Association ("Association") to designate a third arbitrator, whereupon the three arbitrators shall meet and promptly decide the matter in question as aforesaid and report their decision to the Directors of the corporation. The procedures for rendering a decision by the arbitrators shall be governed by the rules of the Association, with the transferor shareholder and the remaining shareholders to bear the costs and expenses of their respective arbitrator and with the costs and expenses of the third arbitrator to be shared one-half (1/2) by the transferor shareholder and one-half (1/2) by the remaining shareholders.

3. The Directors of the corporation, within five (5) days after receipt of the arbitrators' decision, shall notify all shareholders in writing as to the same. Each remaining shareholder shall be entitled to purchase, within five (5) days of the giving of notice by the Directors, such part of the shares proposed to be transferred as his then stockholdings in the corporation bear to the then stockholdings of all the remaining shareholders. Any of the shares proposed to be transferred which are not so purchased shall be reoffered for an additional five (5) day period to those remaining shareholders who have purchased their initial allocation in full, such reoffer to be in the proportion that each eligible remaining shareholder's then stockholdings in the corporation (including shares already purchased from the shares proposed to be transferred) bears to the then stockholdings (including shares already so purchased) of all the remaining shareholders eligible to purchase shares pursuant to such reoffering. The foregoing procedure shall be repeated until all remaining shareholders have declined to purchase further shares from among those proposed to be transferred and thereupon the unpurchased shares may be transferred as proposed within the fifteen (15) day period after all remaining shareholders have declined to purchase further shares from among those proposed to be transferred. Any such shares not transferred by the transferor shareholder within this fifteen (15) day period shall become again subject to the restrictions on transferability set forth herein.

4. Shares shall be purchased hereunder by delivery to the Directors of the corporation by the remaining shareholder making such purchase of cash or a certified, bank or tellers' check in the proper amount within the applicable five day period. Upon completion of purchases by the remaining shareholders of the shares proposed to be transferred, the Directors shall deliver to the remaining shareholders certificates for the shares of stock they have respectively purchased and shall deliver to the transferor shareholder the payments received for shares so purchased by the remaining shareholders and a certificate for the unpurchased shares.

5. In transmitting offers of the transferee shareholder's shares to the remaining shareholders hereunder, the Directors shall make such adjustments in the shares offered to each remaining shareholder as shall be necessary to eliminate any offer of a fractional share.

6. In any case arising under the foregoing restrictions on transfer, the stockholders of the corporation, by a unanimous vote at a meeting duly called and held at least in part for the purpose, may waive for the specific transfer proposed any one or more of the foregoing restrictions on transfer upon such terms and conditions as they by such vote shall determine.

7. Failure of the remaining shareholders to designate an arbitrator within the ten (10) day period specified in paragraph 2 shall entitle the transferor shareholder to transfer, without complying with the rest of these provisions, the shares as to which he has given notice of intention to transfer.

8. In the event that the three arbitrators designated pursuant to paragraph 2 are unable to render a decision within thirty (30) days after designation of the third arbitrator by the Association, the matter of valuation shall be referred to the Association far its prompt decision.

Exhibit 3.110

BY-LAWS

of

WOLF COACH, INC.

ARTICLE I

Stockholders

1. Annual Meeting The annual meeting of the stockholders shall be held on the third Tuesday in September in each year (or if that is a legal holiday in the place where the meeting is to be held, on the next succeeding full business day) at nine o'clock in the forenoon, or at such other hour as shall have been fixed by the Board of Directors or by the President and stated in the notice of the meeting. The purposes for which an annual meeting is to be held, in addition to those prescribed by law, by the Articles of Organization, or by these By-laws, may be specified by the Board of Directors or by the President. If an annual meeting is not held in accordance with the foregoing provisions, a special meeting may be held in place thereof with all the force and effect of an annual meeting.

2. Special Meetings Special meetings of the stockholders may be called by the Board of Directors or by the President. Upon the written application of one or more stockholders who hold at least ten (10%) per cent of the capital stock entitled to vote at a meeting, special meetings shall be called by the Clerk, or in case of the death, absence, incapacity, or refusal of the Clerk, by any other officer. The call for each special meeting shall state the date, hour, place, and the purposes of the meeting.

3. Place of Meetings All meetings of the stockholders shall be held at the principal office of the corporation unless a different place (within the United States) is fixed by the Board of Directors or by the President and stated in the notice of the meeting.

4. Notice of Meetings A written notice of every meeting, annual and special, of the stockholders, stating the place, date, and hour thereof, and the purposes for which the meeting is to be held, shall be given by the Clerk, or by an Assistant Clerk, Secretary, or an Assistant Secretary, if there is one, or by the person calling the meeting, at least seven days before the meeting, to each stockholder entitled to vote thereat and to each stockholder, who by law, by the Articles of Organization, or by these By-laws is entitled to such notice, by leaving such notice with him or at his residence or usual place of business or by mailing it postage prepaid and addressed to such stockholder at his address as it appears upon the records of the corporation. Notice need not be given to a stockholder if a written waiver of notice, executed before or after the meeting by such stockholder or by his attorney thereunto authorized, is filed with the records of the meeting.

5. Quorum The holders of a majority in interest of all stock issued, outstanding, and entitled to vote shall be required to constitute a quorum for the transaction of business at all meetings of the stockholders, but in the absence of a quorum, any meeting may be adjourned from time to time, and the meeting may be held as adjourned without further notice; except that, if two or more classes of stock are outstanding and entitled to vote as separate classes, then in the case of each class, a quorum shall consist of the holders of a majority in interest of the stock of that class issued, outstanding, and entitled to vote.

6. Voting and Proxies At all meetings of the stockholders, each stockholder entitled to vote shall have one vote for each share of stock entitled to vote and a proportionate vote for each fractional share entitled to vote held by him of record according to the records of the corporation, unless otherwise provided by law or by the Articles of Organization. Stockholders entitled to vote may vote either in person or by written proxy which need not be sealed or

attested, but which is dated not more than six months before the meeting named therein. Proxies shall be filed with the Clerk of the meeting, or of any adjournment thereof, before being voted. Except as otherwise limited therein, proxies shall entitle the persons named therein to vote at any adjournment of such meeting, but shall not be valid after the final adjournment of such meeting. A proxy with respect to stock held in the name of two or more persons shall be valid if executed by one of them unless at or prior to exercise of the proxy the corporation receives a specific written notice to the contrary from any one of them. A proxy purporting to be executed by or on behalf of a stockholder shall be deemed valid unless challenged at or prior to its exercise, and the burden of proving invalidity shall rest on the challenger.

7. Action at Meeting When a quorum is present at any meeting of the stockholders, a majority of the stock present or represented and voting on a matter (or if there are two or more classes of stock entitled to vote as separate classes, then in the case of each such class, the holders of a majority of the stock of that class present or represented and voting on a matter), except where a larger vote is required by law, by the Articles of Organization, or by these By-laws, shall decide any matter to be voted on by the stockholders. Any election by stockholders shall be determined by a plurality of the votes cast by the stockholders entitled to vote at the election. No ballot shall be required for such election unless requested by a stockholder present or represented at the meeting and entitled to vote in the election. The corporation shall not directly or indirectly vote any share of its stock, nor shall any stock be voted if any installment of the subscription therefor has been duly demanded by the corporation and is overdue and unpaid.

8. Action without Meeting Any action to be taken by stockholders may be taken without a meeting if all stockholders entitled to vote on the matter consent to the action by a

writing filed with the records of the meetings of stockholders. Such consent shall be treated.for all purposes as a vote at a meeting.

ARTICLE II

The Board of Directors

1. Powers The business of the corporation shall be managed by a Board of Directors who may exercise all the powers of the corporation, except as otherwise provided by law, by the Articles of Organization, or by these By-laws. In the event of a vacancy in the Board of Directors, the remaining directors, except as otherwise provided by law, may exercise the powers of the full Board until the vacancy is filled.

2. Membership and Election The Board of Directors shall consist of at least three members. The exact number shall be determined at the first meeting of the incorporators and thereafter at each annual meeting of the stockholders (subject to change as provided in Section 4 of this Article II). The incorporators shall elect the initial directors at their first meeting, and, thereafter, at each annual meeting of the stockholders the directors shall be elected by such stockholders as have the right to vote for the election of directors. No director need be a stockholder.

3. Vacancies Any vacancy in the Board of Directors, however occurring, may be filled by the stockholders or, in the absence of stockholder action, by vote of a majority of the directors then in office.

4. Enlargement of the Board The number constituting the Board of Directors may be increased and one or more additional directors elected at any special meeting of the stockholders or by the Board of Directors by vote of a majority of the directors then in office.

5. Tenure Except as otherwise provided by law, by the Articles of Organization, or by these By-laws, directors shall hold office until the next annual meeting of the stockholders

and thereafter until their successors are chosen and qualified. Any director may resign by delivering his written resignation to the corporation at its principal office or to the President, Clerk or Treasurer. Such resignation shall be effective upon receipt unless it is specified to be effective at some other time or upon the happening of some other event.

6. Removal A director may be removed from office (a) with or without cause by vote of the holders of a majority of the shares of stock entitled to vote in the election of directors, provided that the directors of a class elected by a particular class of stockholders may be removed only by the vote of the holders of a majority of the shares of such class or (b) for cause by vote of a majority of the directors then in office. A director may be removed for cause only after reasonable notice and opportunity to be heard before the body proposing to remove him.

7. Meetings Regular meetings of the Board of Directors may be held without call or notice at such places and at such times as the Board of Directors may from time to time determine, provided that any director who is absent when such determination is made shall be given notice of the determination. A regular meeting of the directors may be held without a call or notice at the same place as the annual meeting of stockholders, or the special meeting held in lieu thereof, following such meeting of stockholders. Special meetings of the directors may be held upon the oral or written call therefor by the President, Treasurer, or two or more directors, designating the time, date, and place thereof.

8. Notice of Special Meetings Notice of the time, date, and place of all special meetings of the Board of Directors shall be given to each director by the Secretary or an Assistant Secretary, or, if there be no Secretary or Assistant Secretary, by the Clerk or an Assistant Clerk, or, in case of the death, absence, incapacity, or refusal of such persons, by the officer or one of the directors calling the meeting. Notice shall be given to each director either in

person or by telephone, or by telegram sent to his business or home address at least twenty-four hours in advance of the meeting, or by written notice mailed to his business or home address at least forty-eight hours in advance of the meeting. Notice need not be given to any director if a written waiver of notice, executed by him before or after the meeting, is filed with the records of the meeting, or to any director who attends the meeting without protesting prior thereto or at its commencement of the lack of notice to him. A notice or waiver of notice of a meeting of the Board of Directors need not specify the purposes of the meeting.

9. Quorum At any meeting of the Board of Directors, a majority of the directors then in office shall constitute a quorum. Less than a quorum may adjourn any meeting from time to time, and the meeting may be held as adjourned without further notice.

10. Action at Meeting At any meeting of the Board of Directors at which a quorum is present, a majority of those present may take any action on behalf of the Board of Directors except to the extent that a larger number is required by law, by the Articles of Organization, or by these By-laws.

11. Action Without Meeting Any action by the Board of Directors may be taken without a meeting if a written consent thereto is signed by all the directors then in office and filed with the records of the meetings of the Board of Directors. Such consent shall be treated as a vote of the Board of Directors for all purposes.

12. Committees The Board of Directors may, by vote of a majority of the Directors then in office, elect from its number an Executive Committee or other committees and may by like vote delegate thereto some or all of its powers except those which by law, by the Articles of Organization, or by these By-laws it is prohibited from delegating. In no event shall the following powers be delegated by the Board of Directors to any committee established by it:

1. The power to change the principal office of the corporation;

2. The power to amend these By-laws;

3. The power to issue stock;

4. The power to establish and designate series of stock and to fix and determine the relative rights and preferences of any series of stock;

5. The power to elect officers required by law, by the Articles of Organization, or by these By-Laws to be elected by the stockholders or the directors and the power to fill vacancies in any such offices;

6. The power to change the number of members constituting the Board of Directors and the power to fill vacancies in the Board of Directors;

7. The power to remove officers from office or directors from the Board of Directors;

8. The power to authorize the payment of any dividend or distribution to stockholders;

9. The power to authorize the reacquisition for value of stock of the corporation;

10. The power to authorize a merger of the corporation.

Except as the Board of Directors may otherwise determine, any such committee may make rules for the conduct of its business, but, unless otherwise provided by the Board of Directors or in such rules, its business (including the record of its meetings) shall be conducted as nearly as may be in the same manner as is provided by these By-laws for the Board of Directors. Each such committee shall report its action to the Board of Directors, which shall

have the power to rescind any action taken, provided however, in the case of the Executive Committee no such rescission shall have retroactive effect.

ARTICLE III

Officers

1. Enumeration The officers of the corporation shall consist of a President, a Treasurer, a Clerk, and such other officers, including a Chairman of the Board, a General Manager, a Secretary, a Controller, and one or more Vice Presidents, Assistant Treasurers, Assistant Clerks, and Assistant Secretaries as the Board of Directors may determine.

2. Election The President, Treasurer and Clerk shall be elected annually by the Board of Directors at its first meeting following the annual meeting of stockholders. Other officers may be chosen by the Board of Directors at such meeting or at any other meeting.

3. Qualification No officer need be a stockholder, and only the President and the Chairman of the Board, if one be elected, need be a director. Any two or more offices may be held by the same person, provided that the President and Clerk shall not be the same person. The Clerk shall be a resident of Massachusetts, unless the corporation has a Resident Agent appointed for the purpose of service of process. Any officer may be required by the Board of Directors to give bond for the faithful performance of his duties to the corporation in such amount and with such sureties as the Board of Directors may determine.

4. Tenure Except as otherwise provided by law, by the Articles of Organization, or by these By-laws, the President, the Treasurer, and the Clerk shall hold office until the first meeting of the Board of Directors following the annual meeting of stockholders and until their respective successors are chosen and qualified; and all other officers shall hold office until the first meeting of the Board of Directors following the annual meeting of stockholders, unless a shorter term is specified in the vote choosing or appointing them. Any officer may resign by

delivering his written resignation to the corporation at its principal office or to the President, Clerk, or Treasurer, and such resignation shall be effective upon receipt unless it is specified to be effective at some other time or upon the happening of some other event.

5. Removal The Board of Directors may remove any officer with or without cause, provided that an officer may be removed for cause only after reasonable notice and opportunity to be heard by the Board of Directors.

6. Vacancies Any vacancy, however arising, in any office, may be filled for the unexpired portion of the term thereof by the Board of Directors.

7. Chairman of the Board, President, and Vice Presidents The Chairman of the Board, if elected, shall preside at all meetings of the Board of Directors (and of the stockholders if the President be absent or decline to preside) and shall perform such other duties and have such other powers as may be designated from time to time by the Board of Directors. The President shall be the chief executive officer of the corporation, shall, subject to the direction of the Board of Directors, have general supervision and control of the business of the corporation, shall preside at all meetings of the stockholders (and of the Board of Directors if no Chairman of the Board is elected, or if elected be absent or decline to preside), and shall perform such other duties and have such other powers as may be designated from time to time by the Board of Directors. Each Vice President shall perform such duties and have such powers as may be designated from time to time by the Board of Directors.

8. Treasurer and Assistant Treasurers The Treasurer shall, subject to the direction of the Board of Directors, have general charge of the financial affairs of the corporation and shall cause to be kept accurate books of account of the affairs of the corporation. He shall have custody of all funds, securities, and valuable documents of the corporation, except as the Board

of Directors may otherwise provide. In addition, he shall perform such other duties and have such other powers as may be designated from time to time by the Board of Directors. Each Assistant Treasurer shall perform such duties and have such powers as may be designated from time to time by the Board of Directors.

9. Clerk and Assistant Clerks The Clerk shall attend and keep a record of all the meetings of stockholders. In case a Secretary or an Assistant Secretary is not elected, the Clerk shall attend and keep a record of all the meetings of the Board of Directors. In addition, the Clerk shall perform such other duties and have such other powers as may be designated from time to time by the Board of Directors. Each Assistant Clerk shall perform such duties and have such powers as may be designated from time to time by the Board of Directors. In the absence of the Clerk from any meeting of the stockholders, an Assistant Clerk, if one is elected, otherwise a Temporary Clerk designated by the person presiding at the meeting, shall perform the duties of the Clerk at such meeting. Unless a Transfer Agent is appointed, the Clerk shall keep or cause to be kept, at the principal office of the corporation in Massachusetts or at his office if in Massachusetts, or if his office is not in Massachusetts, at the office of the Resident Agent, the stock and transfer records of the corporation, in which are contained the names of all stockholders and the record address and the amount of stock held by each.

10. Secretary and Assistant Secretaries If a Secretary is elected, he shall attend and keep a record of all the meetings of the Board of Directors. In addition, he shall perform such other duties and have such other powers as may be designated from time to time by the Board of Directors. Each Assistant Secretary shall perform such duties and have such powers as may be designated from time to time by the Board of Directors. In the absence of the Secretary, an Assistant Secretary, if one is elected and present, or the Clerk if he is present, or an Assistant

Clerk if one is elected and present, otherwise a Temporary Secretary designated by the person presiding at a meeting of the Board of Directors shall perform the duties of the Secretary at such meeting.

11. Other Officers Each other officer, including a General Manager and a Controller, if any, that may be elected by the Board of Directors shall perform such duties and have such powers as may be designated from time to time by the Board of Directors.

12. Other Powers and Duties Each officer shall, subject to these By-laws, and in addition to the duties and powers specifically set forth in these By-laws, have such duties and powers as are customarily incident to his office. The exercise of any power which by law, by the Articles of Organization, or by these By-laws, or under any vote of the stockholders or the Board of Directors, may be exercised by an officer of the corporation only in the event of absence of another officer or any other contingency, shall bind the corporation in favor of'anyone relying thereon in good faith, whether or not such absence or contingency existed.

ARTICLE IV

Capital Stock

1. Certificates of Stock Each stockholder shall be entitled to a certificate of the capital stock of the corporation stating the number and the class and the designation of the series, if any, of the shares held by him, in such form as may be prescribed from time to time by the Board of Directors. Such certificate shall be signed by the President or a Vice President and by the Treasurer or an Assistant Treasurer. Such signatures may be facsimile if the certificate is signed by a Transfer Agent or Registrar, other than a director, officer, or employee of the corporation. In case any officer who has signed or whose facsimile signature has been placed on any such certificate shall have ceased to be such officer before such certificate is issued, it may be issued by the corporation with the same effect as if he were such officer at the time of its

issue. Every certificate for shares of stock, which are subject to any restriction on transfer pursuant to the Articles of Organization, these By-laws, or any agreement to which the corporation is a party, shall. have the restriction noted conspicuously on the certificate and shall also set forth on its face or back either the full text of the restriction or a statement of the existence of such restriction and a statement that the corporation will furnish a copy of such restriction to the holder of such certificate upon written request and without charge. Every certificate issued when the corporation is authorized to issue more than one class or series of stock shall set forth on its face or back either the full text of the preferences, voting powers, qualifications, and special and relative rights of the shares of each class and series authorized to be issued or a statement of the existence of such preferences, powers, qualifications, and rights, and a statement that the corporation will furnish a copy thereof to the holder of such certificate upon written request and without charge.

2. Transfers Subject to the restrictions, if any, stated or noted on the stock certificates, shares of stock may be transferred on the books of the corporation by the surrender to the corporation or its Transfer Agent of the certificate therefor properly endorsed or accompanied by a written assignment and power of attorney properly executed, with necessary transfer stamps affixed, and with such proof of the authenticity of signature as the corporation or its Transfer Agent may reasonablyt require.

3. Record Holder Except as may be otherwise required by law, by the Articles of Organization, or by these By-laws, the corporation shall be entitled to treat the record holder of stock as shown on its books as the owner of such stock for all purposes, including the payment of dividends and the right to vote with respect thereto, regardless of any transfer, pledge, or other disposition of such stock, until the shares have been transferred on the books of the corporation

in accordance with the requirements of these By-laws. It shall be the duty of each stockholder to notify the corporation of his latest post office address.

4. Record Date The Board of Directors may fix in advance a time of not more than sixty (60) days preceding the date of any meeting of stockholders, or the date for the payment of any dividend or the making of any distribution to stockholders, or the last day on which the consent or dissent of stockholders may be effectively expressed for any purpose, as the record date for determining the stockholders having the right to notice of and to vote at such meeting, and any adjournment thereof, or the right to receive such dividend or distribution, or the right to give such consent or dissent. In such case, only stockholders of record on such record date shall have such right, notwithstanding any transfer of stock on the books of the corporation after the record date. Without fixing such record date, the Board of Directors may for all or any of such purposes close the transfer books for all or any part of such period.

5. Replacement of Certificates In case of the alleged loss or destruction or the mutilation of a certificate of stock, a duplicate certificate may be issued in place thereof, upon such terms as the Board of Directors may prescribe.

6. Issue of Stock Unless otherwise voted by the stockholders, the whole or any part of any unissued balance of the authorized capital stock of the corporation, or the whole or any part of any capital stock of the corporation held in its treasury, may be issued or disposed of by vote of the Board of Directors to such persons, in such manner, for such consideration (whether cash, property, good will, services, or expenses, or as a stock dividend), and on such terms as the Board of Directors may determine from time to time, without first offering the same for subscription to stockholders of the corporation.

ARTICLE V

Indemnification of Directors and Officers

The corporation shall indemnify each person now or hereafter elected or appointed a director or officer of the corporation (including each person who serves at its request as a director or officer of any other organization in which the corporation has any interest, as a stockholder, creditor, or otherwise) against all expense reasonably incurred or paid by him in connection with the defense or disposition of any actual or threatened claim, action, suit, or proceeding (civil, criminal, or other, including appeals) in which he may be involved as a party or otherwise by reason of his having served in any such capacity, or by reason of any action or omission or alleged action or omission (including those ante-dating the adoption of these By-laws) by him while serving in any such capacity; except for expense incurred or paid by him (i) with respect to any matter as to which he shall have been adjudicated in any proceeding not to have acted in the reasonable belief that his action was in the best interests of the corporation, or (ii) with respect to any matter as to which he shall agree or be ordered by any court of competent jurisdiction to make payment to the corporation, or (iii) which the corporation shall be prohibited by law or by order of any court of competent jurisdiction from indemnifying him.

No matter disposed of by settlement, compromise, or the entry of a consent decree, nor a judgment of conviction or the entry of any plea in a criminal proceeding, shall of itself be deemed an adjudication of not having acted in the reasonable belief that the action taken or omitted was in the best interests of the corporation. The term "expense" shall include, without limitation, settlements, attorneys' fees, costs, judgments, fines, penalties, and other liabilities. The right of indemnification herein provided for shall be severable, shall be in addition to any other right which any such person may have or obtain, shall continue as to any such person who

has ceased to be such director or officer and shall inure to the benefit of the heirs and personal representatives of any such person.

ARTICLE VI

Miscellaneous Provisions

1. Fiscal Year Except as from time to time otherwise determined by the Board of Directors, the fiscal year of the corporation shall begin on May 1st and end on April 30th in each year.

2. Seal The seal of the corporation shall, subject to alteration by the Board of Directors; bear its name, the word "Massachusetts", and year of its incorporation.

3. Execution of Instruments All deeds, leases, transfers. contracts, bonds, notes, and other obligations authorized to be executed by an officer of the corporation in its behalf shall be signed by the President or the Treasurer except as the Board of Directors may generally or in particular cases otherwise determine.

4. Voting of Securities Except as the Board of Directors may otherwise designate, the President or Treasurer may waive notice of and act on behalf of the corporation, or appoint any person or persons to act as proxy or attorney in fact for this corporation (with or without discretionary power and/or power of substitution) at any meeting of stockholders or shareholders or beneficial owners of any other corporation or organization, any of the securities of which may be held by this corporation.

5. Corporate Records The original, or attested copies, of the Articles of Organization, By-laws, and records of all meetings of the incorporators and stockholders and the stock and transfer records, which shall contain the names of all stockholders and the record address and the amount of stock held by each, shall be kept in Massachusetts at the principal office of the corporation or at an office of its Transfer Agent, Clerk, or Resident Agent. Said

copies and records need not all be kept in the same office. They shall be available at all reasonable times to the inspection of any stockholder for any proper purpose but not to secure a list of stockholders or other information for the purpose of selling said list or information or copies thereof or of using the same for a purpose other than in the interest of the applicant, as a stockholder, relative to the affairs of the corporation.

6. Power to Contract with the Corporation In the absence of fraud, (a) no contract or other transaction between this corporation and one or more of its stockholders, directors, or officers, or between this corporation and any other corporation or other organization in which one or more of this corporation's stockholders, directors, or officers are stockholders, directors, or officers, or are otherwise interested, and (b) no other contract or transaction by this corporation in which one or more of its stockholders, directors, or officers is otherwise interested, shall be in any way affected or invalidated even though the vote or action of the stockholders, directors, or officers having such interests (even if adverse) may have been necessary to obligate this corporation upon such contract or transaction; provided the nature of such interest (though not necessarily the extent or details thereof) shall be disclosed or shall have been known to at least a majority of the directors then in office; and no stockholder, director, or officer having such interest (even if adverse) shall be liable to this corporation, or to any stockholder or creditor thereof, or to any other person for any loss incurred by it under or by reason of such contract or transaction, nor shall any such stockholder, director, or officer be accountable for gains or profits realized thereon, or disqualified from owning or continuing to own stock of this corporation, or serving or continuing to serve as a director or officer thereof. Any stockholder, director, or officer in any way interested in any contract or transaction described in the foregoing sentence shall be deemed to have satisfied any requirement for

disclosure thereof to the directors if he gives to at least a majority of the directors then in office a general notice that he is or may be so interested.

7. Evidence of Authority A certificate by the Clerk, the Secretary, or an Assistant Clerk or Secretary as to any action taken by the stockholders, directors, or any officer or representative of the corporation shall, as to all who rely thereon in good faith, be conclusive evidence of such action.

8. Ratification Any action taken on behalf of the corporation by a director or any officer or representative of the corporation which requires authorization by the stockholders or by the Board of Directors shall be deemed to have been duly authorized if subsequently ratified by the stockholders, if action by them was necessary for authorization, or by the Board of Directors, if action by it was necessary for authorization.

9. Articles of Organization All references in these By-laws to the Articles of Organization shall be deemed to refer to the Articles of Organization of the corporation, as amended, and in effect from time to time.

ARTICLE VII

Amendments

The power to make, amend, or repeal these By-laws, in whole or in part, shall be in both the stockholders and the Board of Directors. Such power may be exercised by the stockholders at any meeting of the stockholders by vote of a majority of the stock represented at such meeting and entitled to vote thereat, provided that the notice for such meeting indicated a change in the By-laws was to be considered (but it shall not be necessary that such notice contain the subject matter of the proposed by-law change, unless the same shall be required by law, by the Articles of Organization, or by these By-laws). Such power may be exercised by the Board of Directors by vote of a majority of the directors then in office, provided that:

(a) The Board of Directors may not make any new by law or amend or repeal any provision of these By-laws which by-law, by the Articles of Organization, or by these By-laws requires action by the stockholders;

(b) The Board of Directors may not make any new by law or amend or repeal any provision of these By-laws which alters the procedure for making; amending, or repealing these By-laws;

(c) Any new by-law or any amendment or repeal of any provision of these By-laws made or adopted by the Board of Directors may be amended or repealed by the stockholders;

(d) Not later than the time of giving notice of the meeting of stockholders next following the making of any new by-law or the amending or repealing of any provision of these By-laws by the Board of Directors, notice thereof stating the substance of such new by-law or of such amendment or repeal shall be given to all stockholders entitled at the time of such notice to vote on amending these-By-laws.

In no event shall any change be made by the stockholders or by the Board of Directors in the date fixed in these By-laws for the annual meeting of the stockholders within sixty (60) days before the date stated in these By-laws; and, if any change in such annual meeting date be made without such sixty (60) day period, notice of such change of date shall be given to all stockholders at least twenty (20) days before the new date fixed for such meeting.

WOLF COACH, INC.

CONSENT TO ACTS OF INCORPORATOR

The undersigned, being the incorporator of WOLF COACH, INC., pursuant to Massachusetts General Laws, Chapter 156B, Section 12, hereby consents to havethe following action treated as votes of the incorporator of WOLF COACH, INC. and to have this written consent filed with the records of the meetings of the incorporator as evidence thereof:

VOTED: To fix the number of initial directors of the Corporation at three and to elect the following persons as directors and as President, Treasurer and Clerk of the Corporation:

Paul J. Wolf	Director and President
David J. Milliken	Director and Treasurer
Richard P. Houlihan, Jr.	Director and Clerk

VOTED: To authorize the President to execute the Articles of Organization of the Corporation, in the form attached hereto and made a part hereof, and thereupon to submit the same, together with the proper fee thereon, to the Secretary of the Commonwealth for his approval and filing.

VOTED: To adopt as the By-Laws of the Corporation those By-Laws attached hereto and made a part hereof.

VOTED: To adopt as the seal of the Corporation the form of seal, an imprint of which appears at the bottom of this page.

VOTED: To adopt as the certificate for Common Stock of the Corporation the form of certificate attached hereto and made a part hereof.

VOTED: To authorize the President to establish a checking account in the name of the Corporation with the Northborough National Bank, Northborough, Massachusetts; to authorize the President, the Treasurer and Normand J. Wilhelmy, signing singly, as authorized signatories for said account; and to adopt any resolution or vote required of the Corporation to establish said account and to constitute the aforesaid persons as authorized signatories thereto, such resolution or vote to be made a part hereof as if set forth in full herein.

VOTED: To authorize the President, the Treasurer, and Normand J. Wilhelmy as authorized agent, and each of them signing singly, (a) to negotiate and procure loans in the name of and on behalf of the Corporation from the Northborough National Bank, Northborough, Massachusetts, up to an amount not exceeding $100,000, (b) to discount with said Bank commercial or other business paper belonging to the Corporation and made or drawn upon third parties, without limit as to amount, (c) to give security for any liabilities of the Corporation to said Bank by pledge or assignment or by a lien upon any real or personal property, tangible or intangible, of the Corporation, and (d) to execute in such form as may be required by said Bank all notes and other evidences of such loans and all instruments of pledge, assignment or lien; and to adopt any resolution or vote required of the Corporation by said Bank to constitute the aforesaid persons as authorized to exercise the aforesaid powers, such resolution or vote hereby made a part hereof as if set forth in full herein.

VOTED: To adopt prior to the offer and sale of the Corporation's stock, a plan whereby 7,500 shares of the Corporation's authorized shares of Common Stock, no par value, may be issued in accordance with Section 1244 of the Internal Revenue Code of 1954, as amended, and that the Plan, a copy of which is annexed hereto and hereby made a part hereof, be and hereby is adopted as the Plan authorized by this vote.

VOTED: To authorize the officers of the Corporation and Normand J. Wilhelmy as agent of the Corporation, and each of them hereby is authorized and empowered to execute on behalf of and in the name of the Corporation a Purchase and Sale Agreement in the form attached hereto, by and between the Corporation and Paul J. Wolf, whereby the Corporation will purchase the entire business and related assets of said Paul J. Wolf d/b/a Wolf Coach in consideration for 760 shares of the Corporation's Common Stock and the assumption by the Corporation of certain liabilities of said Paul Wolf, all as more fully set forth in said Purchase and Sale Agreement.

VOTED: To issue to Paul J. Wolf, at the Closing of the transactions referred to in said Purchase and Sale Agreement, 760 shares of the Corporation's Common Stock pursuant to the Section 1244 Plan hereinabove adopted.

VOTED: To authorize the officers of the corporation and Normand J. Wilhelmy as agent of the Corporation and each of them hereby is authorized and empowered to execute such writings and take such other actions as any of them deems necessary or advisable to effectuate any of the matters hereinabove authorized.

IN WITNESS WHEREOF, the undersigned has hereunto set his hand as incorporator as of the 20th day of May, 1971.

/s/ Paul J. Wolf

Paul J. Wolf

Exhibit 4.1
EXECUTION COPY

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L-3 COMMUNICATIONS CORPORATION,
As Issuer

6-1/8% SENIOR SUBORDINATED NOTES DUE 2013

INDENTURE

Dated as of May 21, 2003

The Bank of New York,
As Trustee

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EXHIBITS

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	(a)(2)	7.10
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	(a)(5)	7.10
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317	(a)(1)	6.08

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*This Cross-Reference Table is not part of the Indenture.

N.A. means not applicable.

*This Cross-Reference Table is not part of the Indenture.

This INDENTURE, dated as of May 21, 2003, among L-3 Communications Corporation, a Delaware corporation (the "Company"), Broadcast Sports Inc., a Delaware corporation, Goodrich Aerospace Component Overhaul & Repair, Inc., a Delaware corporation, Goodrich Avionics Systems, Inc., a Delaware corporation, Henschel Inc., a Delaware corporation, Hygienetics Environmental Services, Inc., a Delaware corporation, KDI Precision Products, Inc., a Delaware corporation, L-3 Communications AIS GP Corporation, a Delaware corporation, L-3 Communications Aydin Corporation, a Delaware corporation, L-3 Communications ESSCO, Inc., a Delaware corporation, L-3 Communications ILEX Systems, Inc., a Delaware corporation, L-3 Communications Integrated Systems L.P., a Delaware limited partnership, L-3 Communications Investments, Inc., a Delaware corporation, L-3 Communications Security and Detection Systems Corporation Delaware, a Delaware corporation, L-3 Communications SPD Technologies, Inc., a Delaware corporation, MPRI, Inc., a Delaware corporation, Pac Ord Inc., a Delaware corporation, Power Paragon, Inc., a Delaware corporation, Ship Analytics International, Inc., a Delaware corporation, SPD Electrical Systems, Inc., a Delaware corporation, SPD Holdings, Inc., a Delaware corporation, SPD Switchgear Inc., a Delaware corporation, Wescam Air Ops Inc., a Delaware corporation, Wescam Air Ops LLC, a Delaware limited liability company, Wescam Holdings (US) Inc., a Delaware corporation, and Wescam LLC, a Delaware limited liability company, AMI Instruments, Inc., an Oklahoma corporation, Apcom, Inc., a Maryland corporation, Celerity Systems Incorporated, a California corporation, EER Systems, Inc., a Virginia corporation, Electrodynamics, Inc., an Arizona corporation, Goodrich FlightSystems, Inc., an Ohio corporation, Interstate Electronics Corporation, a California corporation, L-3 Communications Analytics Corporation, a California corporation, L-3 Communications Atlantic Science and Technology Corporation, a New Jersey corporation, L-3 Communications IMC Corporation, a Connecticut corporation, L-3 Communications Security and Detection Systems Corporation California, a California corporation, L-3 Communications Storm Control Systems, Inc., a California corporation, L-3 Communications TMA Corporation, a Virginia corporation, L-3 Communications Westwood Corporation, a Nevada corporation, MCTI Acquisition Corporation, a Maryland corporation, Microdyne Communications Technologies Incorporated, a Maryland corporation, Microdyne Corporation, a Maryland corporation, Microdyne Outsourcing Incorporated, a Maryland corporation, Ship Analytics, Inc., a Connecticut corporation, Ship Analytics USA, Inc., a Connecticut corporation, Southern California Microwave, Inc., a California corporation, SYColeman Corporation, a Florida corporation, Telos Corporation, a California corporation, Troll Technology Corporation, a California corporation, Wescam Incorporated, a Florida corporation, Wescam Sonoma Inc., a California corporation and Wolf Coach, Inc., a Massachusetts corporation (collectively, the "Guarantors"), and The Bank of New York, as trustee (the "Trustee").

The Company and the Trustee agree as follows for the benefit of each other and for the equal and ratable benefit of the Holders of the 6-1/8% Senior Subordinated Notes due 2013 (the "Series A Notes") and the 6-1/8% Senior Subordinated Notes due 2013 (the "Exchange Notes" and, together with the Series A Notes, the "Notes"):

ARTICLE 1.
DEFINITIONS AND INCORPORATION
BY REFERENCE

Section 1.01 Definitions.

"144A Global Note" means the global note in the form of Exhibit A hereto bearing the Global Note Legend and the Private Placement Legend and deposited with and registered in the name of the Depositary or its nominee that will be issued in a denomination equal to the outstanding principal amount of the Notes sold in reliance on Rule 144A.

"2000 Convertible Notes" means the $300,000,000 in aggregate principal amount of Holdings' 5.25% Convertible Senior Subordinated Notes due 2009, issued pursuant to the 2000 Convertible Note Indenture in November and December of 2000 and guaranteed by the Company and the other guarantors thereof.

"2000 Convertible Note Indenture" means the indenture, dated as of November 21, 2000, among The Bank of New York, as trustee, Holdings, the Company, as a guarantor, and the other guarantors party thereto, with respect to the 2000 Convertible Notes.

"2001 CODES" means the $420,000,000 in aggregate principal amount of Holdings' 4.00% Senior Subordinated Convertible Contingent Debt Securities (CODES) due 2011, issued pursuant to the 2001 CODES Indenture in October and November 2001 and guaranteed by the Company and the other guarantors thereof.

"2001 CODES Indenture" means the indenture, dated as of October 24, 2001, among The Bank of New York, as trustee, Holdings, the Company, as a guarantor, and the other guarantors party thereto, with respect to the 2001 CODES.

"2002 Indenture" means the indenture, dated as of June 28, 2002, among The Bank of New York, as trustee, the Company and the guarantors party thereto, with respect to the 2002 Notes.

"2002 Notes" means the $750,000,000 in aggregate principal amount of the Company's 7-5/8% Senior Subordinated Notes due 2012, issued pursuant to the 2002 Indenture on June 28, 2002.

"Acquired Debt" means, with respect to any specified Person, (i) Indebtedness of any other Person existing at the time such other Person is merged with or into or became a Restricted Subsidiary of such specified Person, including, without limitation, Indebtedness incurred in connection with, or in contemplation of, such other Person merging with or into or becoming a Restricted Subsidiary of such specified Person, and (ii) Indebtedness secured by a Lien encumbering any asset acquired by such specified Person.

"Additional Amounts" means all additional amounts then owing pursuant to Section 5 of the Registration Rights Agreement.

"Additional Notes" means any Notes (other than the Initial Notes) issued under this Indenture in accordance with Sections 2.02 and 4.09 hereof.

"Affiliate" of any specified Person means any other Person directly or indirectly controlling or controlled by or under direct or indirect common control with such specified Person. For purposes of this definition, "control" (including, with correlative meanings, the terms "controlling", "controlled by" and "under common control with"), as used with respect to any Person, shall mean the possession, directly or indirectly, of the power to direct or cause the direction of the management or policies of such Person, whether through the ownership of voting securities, by agreement or otherwise; provided that beneficial ownership of 10% or more of the voting securities of a Person shall be deemed to be control.

"Agent" means any Registrar, Paying Agent or co-registrar.

"Applicable Procedures" means, with respect to any transfer or exchange of or for beneficial interests in any Global Note, the rules and procedures of the Depositary, Euroclear and Clearstream that apply to such transfer or exchange.

"Asset Sale" means (i) the sale, lease, conveyance or other disposition of any assets or rights (including, without limitation, by way of a sale and leaseback) other than sales of inventory in the ordinary course of business (provided that the sale, lease, conveyance or other disposition of all or substantially all of the assets of the Company and its Restricted Subsidiaries taken as a whole shall be governed by the covenant contained in Section 4.15 and/or the covenant contained in Section 5.01 and not by the covenant contained in Section 4.10), and (ii) the issue or sale by the Company or any of its Subsidiaries of Equity Interests of any of the Company's Restricted Subsidiaries, in the case of either clause (i) or (ii), whether in a single transaction or a series of related transactions (A) that have a fair market value in excess of $5.0 million or (B) for net proceeds in excess of $5.0 million. Notwithstanding the foregoing: (i) a transfer of assets by the Company to a Restricted Subsidiary or by a Restricted Subsidiary to the Company or to another Restricted Subsidiary, (ii) an issuance of Equity Interests by a Restricted Subsidiary to the Company or to another Restricted Subsidiary, (iii) a Restricted Payment that is permitted by the covenant contained in Section 4.07 and (iv) a disposition of Cash Equivalents in the ordinary course of business shall not be deemed to be an Asset Sale.

"Attributable Debt" in respect of a sale and leaseback transaction means, at the time of determination, the present value (discounted at the rate of interest implicit in such transaction, determined in accordance with GAAP) of the obligation of the lessee for net rental payments during the remaining term of the lease included in such sale and leaseback transaction (including any period for which such lease has been extended or may, at the option of the lessor, be extended).

"Bankruptcy Law" means Title 11, U.S. Code or any similar federal or state law for the relief of debtors.

"Board of Directors" means the Board of Directors of the Company, or any authorized committee of the Board of Directors.

"Broker-Dealer" has the meaning set forth in the Registration Rights Agreement.

"Business Day" means any day other than a Legal Holiday.

"Capital Lease Obligation" means, at the time any determination thereof is to be made, the amount of the liability in respect of a capital lease that would at such time be required to be capitalized on a balance sheet in accordance with GAAP.

"Capital Stock" means (i) in the case of a corporation, corporate stock, (ii) in the case of an association or business entity, any and all shares, interests, participations, rights or other equivalents (however designated) of corporate stock, (iii) in the case of a partnership or limited liability company, partnership or membership interests (whether general or limited) and (iv) any other interest or participation that confers on a Person the right to receive a share of the profits and losses of, or distributions of assets of, the issuing Person.

"Cash Equivalents" means (i) United States dollars, (ii) securities issued or directly and fully guaranteed or insured by the United States government or any agency or instrumentality thereof having maturities of not more than one year from the date of acquisition, (iii) certificates of deposit and eurodollar time deposits with maturities of six months or less from the date of acquisition, bankers' acceptances with maturities not exceeding six months and overnight bank deposits, in each case with any domestic financial institution to the Senior Credit Facilities or with any domestic commercial bank having capital and surplus in excess of $500.0 million and a Thompson Bank Watch Rating of "B" or better, (iv) repurchase obligations with a term of not more than seven days for underlying securities of the types described in clauses (ii) and (iii) above entered into with any financial institution meeting the qualifications specified in clause (iii) above, (v) commercial paper having the highest rating obtainable from Moody's or S&P and in each case maturing within six months after the date of acquisition, (vi) investment funds investing 95% of their assets in securities of the types described in clauses (i)-(v) above, and (vii) readily marketable direct obligations issued by any State of the United States of America or any political subdivision thereof having maturities of not more than one year from the date of acquisition and having one of the two highest rating categories obtainable from either Moody's or S&P.

"Change of Control" means the occurrence of any of the following: (i) the sale, lease, transfer, conveyance or other disposition (other than by way of merger or consolidation), in one or a series of related transactions, of all or substantially all of the assets of the Company and its Restricted Subsidiaries taken as a whole to any "person" (as such term is used in Section 13(d)(3) of the Exchange Act) other than the Principals or their Related Parties (as defined below), (ii) the adoption of a plan relating to the liquidation or dissolution of the Company, (iii) the consummation of any transaction (including, without limitation, any merger or consolidation) the result of which is that any "person" (as defined above), other than the Principals and their Related Parties, becomes the "beneficial owner" (as such term is defined in Rule 13d-3 and Rule 13d-5 under the Exchange Act), directly or indirectly, of more than 50% of the Voting Stock of the Company (measured by voting power rather than number of shares) or (iv) the first day on which a majority of the members of the Board of Directors of the Company are not Continuing Directors.

"Clearstream" means Clearstream Banking, societe anonyme (formerly Cedelbank).

"Consolidated Cash Flow" means, with respect to any Person for any period, the Consolidated Net Income of such Person for such period plus (i) an amount equal to any extraordinary loss plus any net loss realized in connection with an Asset Sale (to the extent such losses were deducted in computing such Consolidated Net Income), plus (ii) provision for taxes based on income or profits of such Person and its Restricted Subsidiaries for such period, to the extent that such provision for taxes was included in computing such Consolidated Net Income, plus (iii) consolidated interest expense of such Person and its Restricted Subsidiaries for such period, whether paid or accrued and whether or not capitalized (including, without limitation, original issue discount, non-cash interest payments, the interest component of any deferred payment obligations, the interest component of all payments associated with Capital Lease Obligations, imputed interest with respect to Attributable Debt, commissions, discounts and other fees and charges incurred in respect of letter of credit or bankers' acceptance financings, and net payments (if any) pursuant to Hedging Obligations), to the extent that any such expense was deducted in computing such Consolidated Net Income, plus (iv) depreciation, amortization (including amortization of goodwill, debt issuance costs and other intangibles but excluding amortization of other prepaid cash expenses that were paid in a prior period) and other non-cash expenses (excluding any such non-cash expense to the extent that it represents an accrual of or reserve for cash expenses in any future period or amortization of a prepaid cash expense that was paid in a prior period) of such Person and its Restricted Subsidiaries for such period to the extent that such depreciation, amortization and other non-cash expenses were deducted in computing such Consolidated Net Income, minus (v) non-cash items (excluding any items that were accrued in the ordinary course of business) increasing such Consolidated Net Income for such period, in each case, on a consolidated basis and determined in accordance with GAAP.

"Consolidated Net Income" means, with respect to any Person for any period, the aggregate of the Net Income of such Person and its Restricted Subsidiaries for such period, on a consolidated basis, determined in accordance with GAAP; provided that (i) the Net Income of any Person that is not a Restricted Subsidiary or that is accounted for by the equity method of accounting shall be included only to the extent of the amount of dividends or distributions paid in cash to the referent Person or a Restricted Subsidiary thereof, (ii) the Net Income of any Restricted Subsidiary shall be excluded to the extent that the declaration or payment of dividends or similar distributions by that Restricted Subsidiary of that Net Income is not at the date of determination permitted without any prior governmental approval (that has not been obtained) or, directly or indirectly, by operation of the terms of its charter or any agreement, instrument, judgment, decree, order, statute, rule or governmental regulation applicable to that Restricted Subsidiary or its stockholders, (iii) the Net Income of any Person acquired in a pooling of interests transaction for any period prior to the date of such acquisition shall be excluded, (iv) the cumulative effect of a change in accounting principles shall be excluded, (v) the Net Income of any Unrestricted Subsidiary shall be excluded, whether or not distributed to the Company or one of its Restricted Subsidiaries, and (vi) the Net Income of any Restricted Subsidiary shall be calculated after deducting preferred stock dividends payable by such Restricted Subsidiary to Persons other than the Company and its other Restricted Subsidiaries.

"Consolidated Tangible Assets" means, with respect to the Company, the total consolidated assets of the Company and its Restricted Subsidiaries, less the total intangible assets of the Company and its Restricted Subsidiaries, as shown on the most recent internal

consolidated balance sheet of the Company and such Restricted Subsidiaries calculated on a consolidated basis in accordance with GAAP.

"Continuing Directors" means, as of any date of determination, any member of the Board of Directors of the Company who (i) was a member of such Board of Directors on the date of this Indenture or (ii) was nominated for election or elected to such Board of Directors with the approval of a majority of the Continuing Directors who were members of such Board at the time of such nomination or election.

"Corporate Trust Office of the Trustee" shall be at the address of the Trustee specified in Section 12.02 hereof or such other address as to which the Trustee may give notice to the Company.

"Credit Facilities" means, with respect to the Company, one or more debt facilities (including, without limitation, the Senior Credit Facilities) or commercial paper facilities with banks or other institutional lenders providing for revolving credit loans, term loans, receivables financing (including through the sale of receivables to such lenders or to special purpose entities formed to borrow from such lenders against such receivables) or letters of credit, in each case, as amended, restated, modified, renewed, refunded, replaced or refinanced in whole or in part from time to time.

"December 1998 Indenture" means the indenture, dated as of December 11, 1998, among The Bank of New York, as trustee, the Company and the guarantors party thereto, with respect to the December 1998 Notes.

"December 1998 Notes" means the $200,000,000 in aggregate principal amount of the Company's 8% Senior Subordinated Notes due 2008, issued pursuant to the December 1998 Indenture on December 11, 1998.

"Default" means any event that is, or with the passage of time or the giving of notice or both would be, an Event of Default.

"Definitive Note" means a certificated Note registered in the name of the Holder thereof and issued in accordance with Article 2 hereof, substantially in the form of Exhibit A hereto, except that such Note shall not bear the Global Note Legend and shall not have the "Schedule of Exchanges of Interests in the Global Note" attached thereto.

"Depositary" means, with respect to the Notes issuable or issued in whole or in part in global form, the Person specified in Section 2.03 hereof as the Depositary with respect to the Notes, until a successor shall have been appointed and become such pursuant to the applicable provision of this Indenture, and, thereafter, "Depositary" shall mean or include such successor.

"Designated Senior Debt" means (i) any Indebtedness outstanding under the Senior Credit Facilities and (ii) any other Senior Debt permitted under the Indenture the principal amount of which is $25.0 million or more and that has been designated by the Company as "Designated Senior Debt".

"Disqualified Stock" means any Capital Stock that, by its terms (or by the terms of any security into which it is convertible, or for which it is exchangeable, at the option of the holder thereof), or upon the happening of any event, matures or is mandatorily redeemable, pursuant to a sinking fund obligation or otherwise, or redeemable at the option of the Holder thereof, in whole or in part, on or prior to the date that is 91 days after the date on which the Notes mature; provided, however, that any Capital Stock that would constitute Disqualified Stock solely because the holders thereof have the right to require the Company to repurchase such Capital Stock upon the occurrence of a Change of Control or an Asset Sale shall not constitute Disqualified Stock if the terms of such Capital Stock provide that the Company may not repurchase or redeem any such Capital Stock pursuant to such provisions unless such repurchase or redemption complies with Section 4.07 hereof; and provided further, that if such Capital Stock is issued to any plan for the benefit of employees of the Company or its Subsidiaries or by any such plan to such employees, such Capital Stock shall not constitute Disqualified Stock solely because it may be required to be repurchased by the Company in order to satisfy applicable statutory or regulatory obligations.

"Equity Interests" means Capital Stock and all warrants, options or other rights to acquire Capital Stock (but excluding any debt security that is convertible into, or exchangeable for, Capital Stock).

"Equity Offering" means any public or private sale of equity securities (excluding Disqualified Stock) of the Company or Holdings, other than any private sales to an Affiliate of the Company or Holdings.

"Euroclear" means Morgan Guaranty Trust Company of New York, Brussels office, as operator of the Euroclear system.

"Exchange Act" means the Securities Exchange Act of 1934, as amended.

"Exchange Notes" means the Notes issued in the Exchange Offer pursuant to Section 2.06(f).

"Exchange Offer" has the meaning set forth in the Registration Rights Agreement.

"Exchange Offer Registration Statement" has the meaning set forth in the Registration Rights Agreement.

"Existing Indebtedness" means any Indebtedness of the Company and its Restricted Subsidiaries (other than Indebtedness under the Senior Credit Facilities and the Notes) in existence on the date of the Indenture, until such amounts are repaid.

"Fixed Charges" means, with respect to any Person for any period, the sum, without duplication, of (i) the consolidated interest expense of such Person and its Restricted Subsidiaries for such period, whether paid or accrued (including, without limitation, original issue discount, non-cash interest payments, the interest component of any deferred payment obligations, the interest component of all payments associated with Capital Lease Obligations, imputed interest with respect to Attributable Debt, commissions, discounts and other fees and charges incurred in respect of letter of credit or bankers' acceptance financings, and net

payments (if any) pursuant to Hedging Obligations, but excluding amortization of debt issuance costs) and (ii) the consolidated interest of such Person and its Restricted Subsidiaries that was capitalized during such period, and (iii) any interest expense on Indebtedness of another Person that is guaranteed by such Person or one of its Restricted Subsidiaries or secured by a Lien on assets of such Person or one of its Restricted Subsidiaries (whether or not such Guarantee or Lien is called upon) and (iv) the product of (A) all dividend payments, whether or not in cash, on any series of preferred stock of such Person or any of its Restricted Subsidiaries, other than dividend payments on Equity Interests payable solely in Equity Interests of the Company, times (B) a fraction, the numerator of which is one and the denominator of which is one minus the then current combined federal, state and local statutory tax rate of such Person, expressed as a decimal, in each case, on a consolidated basis and in accordance with GAAP.

"Fixed Charge Coverage Ratio" means with respect to any Person for any period, the ratio of the Consolidated Cash Flow of such Person for such period to the Fixed Charges of such Person and its Restricted Subsidiaries for such period. In the event that the Company or any of its Restricted Subsidiaries incurs, assumes, Guarantees or redeems any Indebtedness (other than revolving credit borrowings) or issues preferred stock subsequent to the commencement of the period for which the Fixed Charge Coverage Ratio is being calculated but on or prior to the date on which the event for which the calculation of the Fixed Charge Coverage Ratio is made (the "Calculation Date"), then the Fixed Charge Coverage Ratio shall be calculated giving pro forma effect to such incurrence, assumption, Guarantee or redemption of Indebtedness, or such issuance or redemption of preferred stock, as if the same had occurred at the beginning of the applicable four-quarter reference period. In addition, for purposes of making the computation referred to above, (i) acquisitions that have been made by the Company or any of its Restricted Subsidiaries, including through mergers or consolidations and including any related financing transactions, during the four-quarter reference period or subsequent to such reference period and on or prior to the Calculation Date shall be deemed to have occurred on the first day of the four-quarter reference period and Consolidated Cash Flow for such reference period shall be calculated without giving effect to clause (iii) of the proviso set forth in the definition of Consolidated Net Income, (ii) the Consolidated Cash Flow attributable to discontinued operations, as determined in accordance with GAAP, and operations or businesses disposed of prior to the Calculation Date, shall be excluded, and (iii) the Fixed Charges attributable to discontinued operations, as determined in accordance with GAAP, and operations or businesses disposed of prior to the Calculation Date, shall be excluded, but only to the extent that the obligations giving rise to such Fixed Charges will not be obligations of the referent Person or any of its Restricted Subsidiaries following the Calculation Date.

"Foreign Subsidiary" means a Restricted Subsidiary of the Company that was not organized or existing under the laws of the United States, any state thereof, the District of Columbia or any territory thereof or that has not guaranteed or otherwise provided direct credit support for any Indebtedness of the Company.

"GAAP" means generally accepted accounting principles set forth in the opinions and pronouncements of the Accounting Principles Board of the American Institute of Certified Public Accountants and statements and pronouncements of the Financial Accounting Standards Board or in such other statements by such other entity as have been approved by a significant segment of the accounting profession, which were in effect on April 30, 1997.

"Global Notes" means, individually and collectively, each of the Restricted Global Notes and the Unrestricted Global Notes, substantially in the form of Exhibit A hereto issued in accordance with Article 2 hereof.

"Global Note Legend" means the legend set forth in Section 2.06(g)(ii) to be placed on all Global Notes issued under this Indenture.

"Government Securities" means direct obligations of, or obligations guaranteed by, the United States of America for the payment of which guarantee or obligations the full faith and credit of the United States is pledged.

"Guarantee" means a guarantee (other than by endorsement of negotiable instruments for collection in the ordinary course of business), direct or indirect, in any manner (including, without limitation, letters of credit and reimbursement agreements in respect thereof), of all or any part of any Indebtedness.

"Guarantors" means each Person listed in the preamble to the Indenture and each Subsidiary of the Company that executes a Subsidiary Guarantee in accordance with the provisions of the Indenture, and their respective successors and assigns.

"Hedging Obligations" means, with respect to any Person, the obligations of such Person under (i) currency exchange or interest rate swap agreements, interest rate cap agreements and currency exchange or interest rate collar agreements and (ii) other agreements or arrangements designed to protect such Person against fluctuations in currency exchange rates or interest rates.

"Holder" means a Person in whose name a Note is registered.

"Holdings" means L-3 Communications Holdings, Inc., a Delaware corporation.

"IAI Global Note" means the global Note in the form of Exhibit A hereto bearing the Global Note Legend and the Private Placement Legend and deposited with and registered in the name of the Depositary or its nominee that will be issued in a denomination equal to the outstanding principal amount of the Notes sold to Institutional Accredited Investors.

"Indebtedness" means, with respect to any Person, any indebtedness of such Person, whether or not contingent, in respect of borrowed money or evidenced by bonds, notes, debentures or similar instruments or letters of credit (or reimbursement agreements in respect thereof) or banker's acceptances or representing Capital Lease Obligations or the balance deferred and unpaid of the purchase price of any property or representing any Hedging Obligations, except any such balance that constitutes an accrued expense or trade payable, if and to the extent any of the foregoing indebtedness (other than letters of credit and Hedging Obligations) would appear as a liability upon a balance sheet of such Person prepared in accordance with GAAP, as well as all indebtedness of others secured by a Lien on any asset of such Person (whether or not such indebtedness is assumed by such Person) and, to the extent not otherwise included, the Guarantee by such Person of any indebtedness of any other Person. The amount of any Indebtedness outstanding as of any date shall be (i) the accreted value thereof, in the case of any Indebtedness that does not require current payments of interest, and (ii) the

principal amount thereof, together with any interest thereon that is more than 30 days past due, in the case of any other Indebtedness.

"Indenture" means this Indenture, as amended or supplemented from time to time.

"Indirect Participant" means a Person who holds a beneficial interest in a Global Note through a Participant.

"Initial Notes" means $400.0 million in aggregate principal amount of Notes issued under this Indenture on the date hereof.

"Institutional Accredited Investor" means an institution that is an "accredited investor" as defined in Rule 501(a)(1), (2), (3) or (7) under the Securities Act.

"Investments" means, with respect to any Person, all investments by such Person in other Persons (including Affiliates) in the forms of direct or indirect loans (including guarantees of Indebtedness or other obligations), advances or capital contributions (excluding commission, travel, moving and similar loans or advances to officers and employees made in the ordinary course of business), purchases or other acquisitions for consideration of Indebtedness, Equity Interests or other securities, together with all items that are or would be classified as investments on a balance sheet prepared in accordance with GAAP. If the Company or any Restricted Subsidiary of the Company sells or otherwise disposes of any Equity Interests of any direct or indirect Restricted Subsidiary of the Company such that, after giving effect to any such sale or disposition, such Person is no longer a Subsidiary of the Company, the Company shall be deemed to have made an Investment on the date of any such sale or disposition equal to the fair market value of the Equity Interests of such Subsidiary not sold or disposed of in an amount determined as provided in the last paragraph of the covenant contained in Section 4.07.

"Legal Holiday" means a Saturday, a Sunday or a day on which banking institutions in The City of New York or at a place of payment are authorized by law, regulation or executive order to remain closed. If a payment date is a Legal Holiday at a place of payment, payment may be made at that place on the next succeeding day that is not a Legal Holiday, and no interest shall accrue for the intervening period.

"Lehman Investor" means Lehman Brothers Holdings Inc. and any of its Affiliates.

"Letter of Transmittal" means the letter of transmittal to be prepared by the Company and sent to all Holders of the Series A Notes for use by such Holders in connection with the Exchange Offer.

"Lien" means, with respect to any asset, any mortgage, lien, pledge, charge, security interest or encumbrance of any kind in respect of such asset, whether or not filed, recorded or otherwise perfected under applicable law (including any conditional sale or other title retention agreement, any lease in the nature thereof, any option or other agreement to sell or give a security interest in and any filing of or agreement to give any financing statement under the Uniform Commercial Code (or equivalent statutes) of any jurisdiction).

"Marketable Securities" means, with respect to any Asset Sale, any readily marketable equity securities that are (i) traded on The New York Stock Exchange, the American Stock Exchange or the Nasdaq National Market; and (ii) issued by a corporation having a total equity market capitalization of not less than $250.0 million; provided that the excess of (A) the aggregate amount of securities of any one such corporation held by the Company and any Restricted Subsidiary over (B) ten times the average daily trading volume of such securities during the 20 immediately preceding trading days shall be deemed not to be Marketable Securities; as determined on the date of the contract relating to such Asset Sale.

"May 1998 Notes" means the $180,000,000 in aggregate principal amount of the Company's 8 1/2% Senior Subordinated Notes due 2008, issued pursuant to the May 1998 Indenture on May 22, 1998.

"May 1998 Indenture" means the indenture, dated as of May 22, 1998, among The Bank of New York, as trustee, the Company and the guarantors party thereto, with respect to the May 1998 Notes.

"Moody's" means Moody's Investors Services, Inc.

"Net Income" means, with respect to any Person, the net income (loss) of such Person, determined in accordance with GAAP and before any reduction in respect of preferred stock dividends, excluding, however, (i) any gain or loss, together with any related provision for taxes thereon, realized in connection with (A) any Asset Sale (including, without limitation, dispositions pursuant to sale and leaseback transactions) or (B) the disposition of any securities by such Person or any of its Restricted Subsidiaries or the extinguishment of any Indebtedness of such Person or any of its Restricted Subsidiaries and (ii) any extraordinary gain or loss, together with any related provision for taxes on such extraordinary gain or loss and (iii) the cumulative effect of a change in accounting principles.

"Net Proceeds" means the aggregate cash proceeds received by the Company or any of its Subsidiaries in respect of any Asset Sale (including, without limitation, any cash received upon the sale or other disposition of any non-cash consideration received in any Asset Sale), net of the direct costs relating to such Asset Sale (including, without limitation, legal, accounting and investment banking fees, and sales commissions) and any relocation expenses incurred as a result thereof, taxes paid or payable as a result thereof (after taking into account any available tax credits or deductions and any tax sharing arrangements), amounts required to be applied to the repayment of Indebtedness secured by a Lien on the asset or assets that were the subject of such Asset Sale and any reserve for adjustment in respect of the sale price of such asset or assets established in accordance with GAAP.

"Non-Recourse Debt" means Indebtedness (i) as to which neither the Company nor any of its Restricted Subsidiaries (A) provides credit support of any kind (including any undertaking, agreement or instrument that would constitute Indebtedness), (B) is directly or indirectly liable (as a guarantor or otherwise), or (C) constitutes the lender; and (ii) no default with respect to which (including any rights that the holders thereof may have to take enforcement action against an Unrestricted Subsidiary) would permit (upon notice, lapse of time or both) any holder of any other Indebtedness (other than Indebtedness incurred under Credit Facilities) of the

Company or any of its Restricted Subsidiaries to declare a default on such other Indebtedness or cause the payment thereof to be accelerated or payable prior to its stated maturity; and (iii) as to which the lenders have been notified in writing that they will not have any recourse to the stock or assets of the Company or any of its Restricted Subsidiaries.

"Non-U.S. Person" means a person who is not a U.S. Person.

"Note Custodian" means the Trustee, as custodian with respect to the Notes in global form, or any successor entity thereto.

"Notes" has the meaning assigned to it in the preamble to this Indenture. The Initial Notes and the Additional Notes shall be treated as a single class for all purposes under this Indenture, and unless the context otherwise requires, all references to the Notes shall include the Initial Notes and any Additional Notes.

"Obligations" means any principal, premium and Additional Amounts (if any), interest (including interest accruing on or after the filing of any petition in bankruptcy or for reorganization, whether or not a claim for post-filing interest is allowed in such proceeding), penalties, fees, charges, expenses, indemnifications, reimbursement obligations, damages, guarantees and other liabilities or amounts payable under the documentation governing any Indebtedness or in respect thereto.

"Offering" means the offering of the Notes by the Company.

"Officer" means, with respect to any Person, the Chairman of the Board, the Chief Executive Officer, the President, the Chief Operating Officer, the Chief Financial Officer, the Treasurer, any Assistant Treasurer, the Controller, the Secretary, any Assistant Secretary or any Vice-President of such Person.

"Officers' Certificate" means a certificate signed on behalf of the Company by two Officers of the Company, one of whom must be the principal executive officer, the principal financial officer, the treasurer or the principal accounting officer of the Company, that meets the requirements of Section 12.05 hereof.

"Opinion of Counsel" means an opinion from legal counsel who is reasonably acceptable to the Trustee, that meets the requirements of Section 12.05 hereof. The counsel may be an employee of or counsel to the Company, any Subsidiary of the Company or the Trustee.

"Participant" means, with respect to DTC, Euroclear or Clearstream, a Person who has an account with DTC, Euroclear or Clearstream, respectively (and, with respect to DTC, shall include Euroclear and Clearstream).

"Permitted Investment" means (i) any Investment in the Company or in a Restricted Subsidiary of the Company that is a Guarantor; (ii) any Investment in cash or Cash Equivalents; (iii) any Investment by the Company or any Restricted Subsidiary of the Company in a Person, if as a result of such Investment (A) such Person becomes a Restricted Subsidiary of the Company and a Guarantor or (B) such Person is merged, consolidated or amalgamated with or into, or transfers or conveys substantially all of its assets to, or is liquidated into, the Company

or a Restricted Subsidiary of the Company that is a Guarantor; (iv) any Restricted Investment made as a result of the receipt of non-cash consideration from an Asset Sale that was made pursuant to and in compliance with Section 4.10 or any disposition of assets not constituting an Asset sale; (v) any acquisition of assets solely in exchange for the issuance of Equity Interests (other than Disqualified Stock) of the Company; (vi) advances to employees not to exceed $2.5 million at any one time outstanding; (vii) any Investment acquired in connection with or as a result of a workout or bankruptcy of a customer or supplier; (viii) Hedging Obligations permitted to be incurred under Section 4.09; (ix) any Investment in a Similar Business that is not a Restricted Subsidiary; provided that the aggregate fair market value of all Investments outstanding pursuant to this clause (ix) (valued on the date each such Investment was made and without giving effect to subsequent changes in value) may not at any one time exceed 10% of the Consolidated Tangible Assets of the Company; and (x) other Investments in any Person having an aggregate fair market value (measured on the date each such Investment was made and without giving effect to subsequent changes in value), when taken together with all other Investments made pursuant to this clause (x) that are at the time outstanding, not to exceed $30.0 million.

"Permitted Joint Venture" means any joint venture, partnership or other Person designated by the Board of Directors (until designation by the Board of Directors to the contrary); provided that (i) at least 25% of the Capital Stock thereof with voting power under ordinary circumstances to elect directors (or Persons having similar or corresponding powers and responsibilities) is at the time owned (beneficially or directly) by the Company and/or by one or more Restricted Subsidiaries of the Company and (ii) such joint venture, partnership or other Person is engaged in a Similar Business. Any such designation or designation to the contrary shall be evidenced to the Trustee by promptly filing with the Trustee a copy of the resolution giving effect to such designation and an Officers' Certificate certifying that such designation complied with the foregoing provisions.

"Permitted Junior Securities" means Equity Interests in the Company or debt securities that are subordinated to all Senior Debt (and any debt securities issued in exchange for Senior Debt) to substantially the same extent as, or to a greater extent than, the Notes and the Subsidiary Guarantees are subordinated to Senior Debt pursuant to Article 11 of this Indenture.

"Permitted Liens" means (i) Liens securing Senior Debt of the Company or any Guarantor that was permitted by the terms of this Indenture to be incurred; (ii) Liens in favor of the Company or any Guarantor; (iii) Liens on property of a Person existing at the time such Person is merged into or consolidated with the Company or any Restricted Subsidiary of the Company; provided that such Liens were in existence prior to the contemplation of such merger or consolidation and do not extend to any assets other than those of the Person merged into or consolidated with the Company; (iv) Liens on property existing at the time of acquisition thereof by the Company or any Subsidiary of the Company, provided that such Liens were in existence prior to the contemplation of such acquisition and do not extend to any other assets of the Company or any of its Restricted Subsidiaries; (v) Liens to secure the performance of statutory obligations, surety or appeal bonds, performance bonds or other obligations of a like nature incurred in the ordinary course of business; (vi) Liens to secure Indebtedness (including Capital Lease Obligations) permitted by clause (iv) of the second paragraph of Section 4.09 covering only the assets acquired with such Indebtedness; (vii) Liens existing on the date of this

Indenture; (viii) Liens for taxes, assessments or governmental charges or claims that are not yet delinquent or that are being contested in good faith by appropriate proceedings promptly instituted and diligently concluded, provided that any reserve or other appropriate provision as shall be required in conformity with GAAP shall have been made therefor; (ix) Liens incurred in the ordinary course of business of the Company or any Restricted Subsidiary of the Company with respect to obligations that do not exceed $50.0 million at any one time outstanding; (x) Liens on assets of Guarantors to secure Senior Debt of such Guarantors that was permitted by this Indenture to be incurred; (xi) Liens securing Permitted Refinancing Indebtedness, provided that any such Lien does not extend to or cover any property, shares or debt other than the property, shares or debt securing the Indebtedness so refunded, refinanced or extended; (xii) Liens incurred or deposits made to secure the performance of tenders, bids, leases, statutory obligations, surety and appeal bonds, government contracts, performance and return of money bonds and other obligations of a like nature, in each case incurred in the ordinary course of business (exclusive of obligations for the payment of borrowed money); (xiii) Liens upon specific items of inventory or other goods and proceeds of any Person securing such Person's obligations in respect of bankers' acceptances issued or created for the account of such Person to facilitate the purchase, shipment or storage of such inventory or other goods in the ordinary course of business; (xiv) Liens encumbering customary initial deposits and margin deposits, and other Liens incurred in the ordinary course of business that are within the general parameters customary in the industry, in each case securing Indebtedness under Hedging Obligations; and (xv) Liens encumbering deposits made in the ordinary course of business to secure nondelinquent obligations arising from statutory or regulatory, contractual or warranty requirements of the Company or its Subsidiaries for which a reserve or other appropriate provision, if any, as shall be required by GAAP shall have been made.

"Permitted Refinancing Indebtedness" means any Indebtedness of the Company or any of its Subsidiaries issued in exchange for, or the net proceeds of which are used to extend, refinance, renew, replace, defease or refund other Indebtedness of the Company or any of its Restricted Subsidiaries; provided that: (i) the principal amount (or accreted value, if applicable) of such Permitted Refinancing Indebtedness does not exceed the principal amount of (or accreted value, if applicable), plus accrued interest on, the Indebtedness so extended, refinanced, renewed, replaced, defeased or refunded (plus the amount of reasonable expenses and prepayment premiums incurred in connection therewith); (ii) such Permitted Refinancing Indebtedness has a final maturity date no earlier than the final maturity date of, and has a Weighted Average Life to Maturity equal to or greater than the Weighted Average Life to Maturity of, the Indebtedness being extended, refinanced, renewed, replaced, defeased or refunded; (iii) if the Indebtedness being extended, refinanced, renewed, replaced, defeased or refunded is subordinated in right of payment to the Notes, such Permitted Refinancing Indebtedness is subordinated in right of payment to the Notes on terms at least as favorable to the Holders of Notes as those contained in the documentation governing the Indebtedness being extended, refinanced, renewed, replaced, defeased or refunded; and (iv) such Indebtedness is incurred either by the Company or by the Restricted Subsidiary who is the obligor on the Indebtedness being extended, refinanced, renewed, replaced, defeased or refunded.

"Permitted Securities" means, with respect to any Asset Sale, Voting Stock of a Person primarily engaged in one or more Similar Businesses; provided that after giving effect to the Asset Sale such Person shall become a Restricted Subsidiary and, unless the Asset Sale

relates to a Foreign Subsidiary, a Guarantor (to the extent required by the terms of this Indenture).

"Person" means any individual, corporation, partnership, joint venture, association, joint-stock company, trust, unincorporated organization or government or agency or political subdivision thereof (including any subdivision or ongoing business of any such entity or substantially all of the assets of any such entity, subdivision or business).

"Principals" means any Lehman Investor, Frank C. Lanza and Robert V. LaPenta.

"Private Placement Legend" means the legend set forth in Section 2.06(g)(i) to be placed on all Notes issued under this Indenture except as otherwise permitted by the provisions of this Indenture.

"Purchase Agreement" means the Purchase Agreement, dated as of May 14, 2003, among the Company, the Guarantors, Lehman Brothers Inc., Morgan Stanley & Co. Incorporated, Banc of America Securities LLC and Credit Suisse First Boston LLC, as representatives of the several initial purchasers named therein.

"QIB" means a "qualified institutional buyer" as defined in Rule 144A.

"Registration Rights Agreement" means the Debt Registration Rights Agreement, dated as of the date hereof, by and among the Company and the other parties named on the signature pages thereof, as such agreement may be amended, modified or supplemented from time to time and, with respect to any Additional Notes, one or more registration rights agreements between the Company and the other parties thereto, as such agreement(s) may be amended, modified or supplemented from time to time, relating to rights given by the Company to the purchasers of Additional Notes to register such Additional Notes under the Securities Act.

"Regulation S" means Regulation S promulgated under the Securities Act.

"Regulation S Global Note" means a global Note bearing the Private Placement Legend and deposited with and registered in the name of the Depositary or its nominee that will be issued in a denomination equal to the outstanding principal amount of the Notes sold in reliance on Regulation S.

"Related Party" with respect to any Principal means (i) any controlling stockholder, 50% (or more) owned Subsidiary, or spouse or immediate family member (in the case of an individual) of such Principal or (ii) any trust, corporation, partnership or other entity, the beneficiaries, stockholders, partners, owners or Persons beneficially holding a more than 50% controlling interest of which consist of such Principal and/or such other Persons referred to in the immediately preceding clause (i).

"Representative" means the indenture trustee or other trustee, agent or representative for any Senior Debt.

"Responsible Officer" when used with respect to the Trustee, means any officer within the Corporate Trust Administration of the Trustee (or any successor group of the Trustee)

or any other officer of the Trustee customarily performing functions similar to those performed by any of the above designated officers and also means, with respect to a particular corporate trust matter, any other officer to whom such matter is referred because of his knowledge of and familiarity with the particular subject.

"Restricted Definitive Note" means a Definitive Note bearing the Private Placement Legend.

"Restricted Global Notes" means the 144A Global Note, the IAI Global Note and the Regulation S Global Note, each of which shall bear the Private Placement Legend.

"Restricted Investment" means an Investment other than a Permitted Investment.

"Restricted Period" means the 40-day restricted period as defined in Regulation S.

"Restricted Subsidiary" means, with respect to any Person, each Subsidiary of such Person that is not an Unrestricted Subsidiary.

"Rule 144" means Rule 144 under the Securities Act.

"Rule 144A" means Rule 144A under the Securities Act.

"Rule 903" means Rule 903 under the Securities Act.

"Rule 904" means Rule 904 under the Securities Act.

"SEC" means the Securities and Exchange Commission.

"Securities Act" means the Securities Act of 1933, as amended.

"Senior Credit Facilities" means the Second Amended and Restated 364 Day Credit Agreement, dated as of May 16, 2001, as in effect on the date of this Indenture, among the Company, the lenders party thereto, Bank of America, N.A., as administrative agent, and Lehman Commercial Paper Inc., as syndication agent and documentation agent, and the Third Amended and Restated Credit Agreement, dated as of May 16, 2001, as in effect on the date of this Indenture among the Company, the lenders party thereto, Bank of America, N.A., as administrative agent, and Lehman Commercial Paper Inc., as syndication agent and documentation agent, and any related notes, collateral documents, letters of credit and guarantees, including any appendices, exhibits or schedules to any of the foregoing (as the same may be in effect from time to time), in each case, as such agreements may be amended, modified, supplemented or restated from time to time, or refunded, refinanced, restructured, replaced, renewed, repaid or extended from time to time (whether with the original agents and lenders or other agents and lenders or otherwise, and whether provided under the original credit agreement or other credit agreements or otherwise).

"Senior Debt" means (i) all Indebtedness of the Company or any of its Restricted Subsidiaries outstanding under Credit Facilities and all Hedging Obligations with respect thereto, (ii) any other Indebtedness permitted to be incurred by the Company or any of its Restricted

Subsidiaries under the terms of the Indenture, unless the instrument under which such Indebtedness is incurred expressly provides that it is on a parity with or subordinated in right of payment to the Notes and (iii) all Obligations with respect to the foregoing. Notwithstanding anything to the contrary in the foregoing, Senior Debt will not include (i) any liability for federal, state, local or other taxes owed or owing by the Company, (ii) any Indebtedness of the Company to any of its Subsidiaries or other Affiliates, (iii) any trade payables or (iv) any Indebtedness that is incurred in violation of the Indenture. The May 1998 Notes, the December 1998 Notes, the 2000 Convertible Notes, the 2001 CODES and the 2002 Notes shall be deemed to rank pari pasu with the Notes and shall not constitute Senior Debt.

"Shelf Registration Statement" means the Shelf Registration Statement as defined in the Registration Rights Agreement.

"Significant Subsidiary" means any Subsidiary which is a "significant subsidiary" within the meaning of Rule 405 under the Securities Act.

"Similar Business" means a business, a majority of whose revenues in the most recently ended calendar year were derived from (i) the sale of defense products, electronics, communications systems, aerospace products, avionics products and/or communications products, (ii) any services related thereto, (iii) any business or activity that is reasonably similar thereto or a reasonable extension, development or expansion thereof or ancillary thereto, and (iv) any combination of any of the foregoing.

"Stated Maturity" means, with respect to any installment of interest or principal on any series of Indebtedness, the date on which such payment of interest or principal was scheduled to be paid in the original documentation governing such Indebtedness, and shall not include any contingent obligations to repay, redeem or repurchase any such interest or principal prior to the date originally scheduled for the payment thereof.

"Subsidiary" means, with respect to any Person, (i) any corporation, association or other business entity of which more than 50% of the total voting power of shares of Capital Stock entitled (without regard to the occurrence of any contingency) to vote in the election of directors, managers or trustees thereof is at the time owned or controlled, directly or indirectly, by such Person or one or more of the other Subsidiaries of that Person (or a combination thereof) and (ii) any partnership (A) the sole general partner or the managing general partner of which is such Person or a Subsidiary of such Person or (B) the only general partners of which are such Person or of one or more Subsidiaries of such Person (or any combination thereof).

"S&P" means Standard and Poor's Corporation.

"TIA" means the Trust Indenture Act of 1939 (15 U.S.C. ss.ss. 77aaa-77bbbb) as in effect on the date on which this Indenture is qualified under TIA.

"Transaction Documents" means the Indenture, the Notes, the Purchase Agreement and the Registration Rights Agreement.

"Transfer Restricted Securities" means securities that bear or are required to bear the Private Placement Legend set forth in Section 2.06(g)(i) hereof.

"Trustee" means the party named as such above until a successor replaces it in accordance with the applicable provisions of this Indenture and thereafter means the successor serving hereunder.

"Unrestricted Global Note" means one or more Global Notes, in the form of Exhibit A attached hereto, that do not and are not required to bear the Private Placement Legend and are deposited with and registered in the name of the Depositary or its nominee.

"Unrestricted Definitive Note" means one or more Definitive Notes that do not and are not required to bear the Private Placement Legend.

"Unrestricted Subsidiary" means any Subsidiary that is designated by the Board of Directors as an Unrestricted Subsidiary pursuant to a resolution of the Board of Directors, but only to the extent that such Subsidiary: (i) has no Indebtedness other than Non-Recourse Debt; (ii) is not party to any agreement, contract, arrangement or understanding with the Company or any Restricted Subsidiary of the Company unless the terms of any such agreement, contract, arrangement or understanding are no less favorable to the Company or such Restricted Subsidiary than those that might be obtained at the time from Persons who are not Affiliates of the Company; (iii) is a Person with respect to which neither the Company nor any of its Restricted Subsidiaries has any direct or indirect obligation (A) to subscribe for additional Equity Interests or (B) to maintain or preserve such Person's financial condition or to cause such Person to achieve any specified levels of operating results; (iv) has not guaranteed or otherwise directly or indirectly provided credit support for any Indebtedness of the Company or any of its Restricted Subsidiaries; and (v) has at least one director on its board of directors that is not a director or executive officer of the Company or any of its Restricted Subsidiaries. Any such designation by the Board of Directors shall be evidenced to the Trustee by filing with the Trustee a certified copy of a resolution of the Board of Directors giving effect to such designation and an Officers' Certificate certifying that such designation complied with the foregoing conditions and was permitted by Section 4.07. If, at any time, any Unrestricted Subsidiary would fail to meet the foregoing requirements as an Unrestricted Subsidiary, it shall thereafter cease to be an Unrestricted Subsidiary for purposes of this Indenture and any Indebtedness of such Subsidiary shall be deemed to be incurred by a Restricted Subsidiary of the Company as of such date (and, if such Indebtedness is not permitted to be incurred as of such date under Section 4.09, the Company shall be in default of such covenant). The Board of Directors of the Company may at any time designate any Unrestricted Subsidiary to be a Restricted Subsidiary; provided that such designation shall be deemed to be an incurrence of Indebtedness by a Restricted Subsidiary of the Company of any outstanding Indebtedness of such Unrestricted Subsidiary and such designation shall only be permitted if (i) such Indebtedness is permitted under Section 4.09, calculated on a pro forma basis as if such designation had occurred at the beginning of the four-quarter reference period, and (ii) no Default or Event of Default would be in existence following such designation.

"U.S. Person" means a U.S. person as defined in Rule 902(k) under the Securities Act.

"Voting Stock" of any Person as of any date means the Capital Stock of such Person that is at the time entitled to vote in the election of the Board of Directors of such Person.

"Weighted Average Life to Maturity" means, when applied to any Indebtedness at any date, the number of years obtained by dividing (i) the sum of the products obtained by multiplying (A) the amount of each then remaining installment, sinking fund, serial maturity or other required payments of principal, including payment at final maturity, in respect thereof, by (B) the number of years (calculated to the nearest one-twelfth) that will elapse between such date and the making of such payment, by (ii) the then outstanding principal amount of such Indebtedness.

"Wholly Owned" means, when used with respect to any Subsidiary or Restricted Subsidiary of a Person, a Subsidiary (or Restricted Subsidiary, as appropriate) of such Person all of the outstanding Capital Stock or other ownership interests of which (other than directors' qualifying shares) shall at the time be owned by such Person or by one or more Wholly Owned Subsidiaries (or Wholly Owned Restricted Subsidiaries, as appropriate) of such Person and one or more Wholly Owned Subsidiaries (or Wholly Owned Restricted Subsidiaries, as appropriate) of such Person.

Section 1.02 Other Definitions.

Term	Defined in Section
"Affiliate Transaction"	4.11
"Asset Sale Offer"	3.09
"Change of Control Offer"	4.15
"Change of Control Payment"	4.15
"Change of Control Payment Date"	4.15
"Covenant Defeasance"	8.03
"DTC"	2.03
"Event of Default"	6.01
"Excess Proceeds"	4.10
"Global Note Legend"	2.06
"incur"	4.09
"Legal Defeasance"	8.02
"Offer Amount"	3.09
"Offer Period"	3.09
"Paying Agent"	2.03
"Payment Blockage Notice"	11.03
"Permitted Debt"	4.09
"Purchase Date"	3.09
"Registrar"	2.03
"Restricted Payments"	4.07
"Series A Notes"	preamble

Section 1.03 Incorporation by Reference of Trust Indenture Act.

Whenever this Indenture refers to a provision of the TIA, the provision is incorporated by reference in and made a part of this Indenture.

The following TIA terms used in this Indenture have the following meanings:

"indenture securities" means the Notes;

"indenture security Holder" means a Holder of a Note;

"indenture to be qualified" means this Indenture;

"indenture trustee" or "institutional trustee" means the Trustee;

"obligor" on the Notes means the Company and any successor obligor upon the Notes.

All other terms used in this Indenture that are defined by the TIA, defined by TIA reference to another statute or defined by SEC rule under the TIA have the meanings so assigned to them.

Section 1.04 Rules of Construction.

Unless the context otherwise requires:

(1) a term has the meaning assigned to it;

(2) an accounting term not otherwise defined has the meaning assigned to it in accordance with GAAP;

(3) "or" is not exclusive;

(4) words in the singular include the plural, and in the plural include the singular;

(5) provisions apply to successive events and transactions; and

(6) references to sections of or rules under the Securities Act shall be deemed to include substitute, replacement of successor sections or rules adopted by the SEC from time to time.

ARTICLE 2.
THE NOTES

Section 2.01 Form and Dating.

The Notes and the Trustee's certificate of authentication shall be substantially in the form of Exhibit A hereto. The Notes may be issued in the form of Definitive Notes or Global Notes, as specified by the Company. The Notes may have notations, legends or endorsements required by law, stock exchange rule or usage. Each Note shall be dated the date of its authentication. The Notes shall be in denominations of $1,000 and integral multiples thereof.

The terms and provisions contained in the Notes shall constitute, and are hereby expressly made, a part of this Indenture and the Company and the Trustee, by their execution and delivery of this Indenture, expressly agree to such terms and provisions and to be bound thereby. However, to the extent any provision of any Note conflicts with the express provisions of this Indenture, the provisions of this Indenture shall govern and be controlling.

Notes issued in global form shall be substantially in the form of Exhibit A attached hereto (including the Global Note Legend and the "Schedule of Exchanges in the Global Note" attached thereto). Notes issued in definitive form shall be substantially in the form of Exhibit A attached hereto (but without the Global Note Legend and without the "Schedule of Exchanges of Interests in the Global Note" attached thereto). Each Global Note shall represent such of the outstanding Notes as shall be specified therein and each shall provide that it shall represent the aggregate principal amount of outstanding Notes from time to time endorsed thereon and that the aggregate principal amount of outstanding Notes represented thereby may from time to time be reduced or increased, as appropriate, to reflect exchanges and redemptions. Any endorsement of a Global Note to reflect the amount of any increase or decrease in the aggregate principal amount of outstanding Notes represented thereby shall be made by the Trustee or the Note Custodian, at the direction of the Trustee, in accordance with instructions given by the Holder thereof as required by Section 2.06 hereof.

The provisions of the "Operating Procedures of the Euroclear System" and "Terms and Conditions Governing Use of Euroclear" and the "General Terms and Conditions of Clearstream Banking" and "Customer Handbook" of Clearstream shall be applicable to interests in the Regulation S Global Notes that are held by the Agent Members through Euroclear or Clearstream.

Section 2.02 Execution and Authentication.

Two Officers shall sign the Notes for the Company by manual or facsimile signature.

If an Officer whose signature is on a Note no longer holds that office at the time a Note is authenticated, the Note shall nevertheless be valid.

A Note shall not be valid until authenticated by the manual signature of the Trustee. The signature shall be conclusive evidence that the Note has been authenticated under this Indenture.

The Trustee shall, upon a written order of the Company signed by two Officers, authenticate the Initial Notes for original issue up to $400.0 million in aggregate principal amount and, upon receipt of an authentication order in accordance with this Section 2.02, at any time and from time to time thereafter, the Trustee shall authenticate Additional Notes and Exchange Notes for original issue in an aggregate principal amount specified in such authentication order.

The Trustee may appoint an authenticating agent acceptable to the Company to authenticate Notes. An authenticating agent may authenticate Notes whenever the Trustee may do so. Each reference in this Indenture to authentication by the Trustee includes authentication

by such agent. An authenticating agent has the same rights as an Agent to deal with Holders or an Affiliate of the Company.

Section 2.03 Registrar and Paying Agent.

The Company shall maintain an office or agency where Notes may be presented for registration of transfer or for exchange ("Registrar") and an office or agency where Notes may be presented for payment ("Paying Agent"). The Registrar shall keep a register of the Notes and of their transfer and exchange. The Company may appoint one or more co-registrars and one or more additional paying agents. The term "Registrar" includes any co-registrar and the term "Paying Agent" includes any additional paying agent. The Company may change any Paying Agent or Registrar without notice to any Holder. The Company shall notify the Trustee in writing of the name and address of any Agent not a party to this Indenture. If the Company fails to appoint or maintain another entity as Registrar or Paying Agent, the Trustee shall act as such. The Company or any of its Subsidiaries may act as Paying Agent or Registrar.

The Company initially appoints The Depository Trust Company ("DTC") to act as Depositary with respect to the Global Notes.

The Company initially appoints the Trustee to act as the Registrar and Paying Agent and to act as Note Custodian with respect to the Global Notes.

Section 2.04 Paying Agent To Hold Money In Trust.

The Company shall require each Paying Agent other than the Trustee to agree in writing that the Paying Agent will hold in trust for the benefit of Holders or the Trustee all money held by the Paying Agent for the payment of principal, premium or Additional Amounts, if any, or interest on the Notes, and will notify the Trustee of any default by the Company in making any such payment. While any such default continues, the Trustee may require a Paying Agent to pay all money held by it to the Trustee. The Company at any time may require a Paying Agent to pay all money held by it to the Trustee. Upon payment over to the Trustee, the Paying Agent (if other than the Company or a Subsidiary) shall have no further liability for the money. If the Company or a Subsidiary acts as Paying Agent, it shall segregate and hold in a separate trust fund for the benefit of the Holders all money held by it as Paying Agent. Upon any bankruptcy or reorganization proceedings relating to the Company, the Trustee shall serve as Paying Agent for the Notes.

Section 2.05 Holder Lists.

The Trustee shall preserve in as current a form as is reasonably practicable the most recent list available to it of the names and addresses of all Holders and shall otherwise comply with TIA ss. 312(a). If the Trustee is not the Registrar, the Company shall furnish to the Trustee at least five Business Days before each interest payment date and at such other times as the Trustee may request in writing, a list in such form and as of such date as the Trustee may reasonably require of the names and addresses of the Holders of Notes and the Company shall otherwise comply with TIA ss. 312(a).

Section 2.06 Transfer and Exchange.

(a) Transfer and Exchange of Global Notes. A Global Note may not be transferred as a whole except by the Depositary to a nominee of the Depositary, by a nominee of the Depositary to the Depositary or to another nominee of the Depositary, or by the Depositary or any such nominee to a successor Depositary or a nominee of such successor Depositary. All Global Notes will be exchanged by the Company for Definitive Notes if (i) the Company delivers to the Trustee notice from the Depositary that it is unwilling or unable to continue to act as Depositary or that it is no longer a clearing agency registered under the Exchange Act and, in either case, a successor Depositary is not appointed by the Company within 120 days after the date of such notice from the Depositary or (ii) the Company in its sole discretion determines that the Global Notes (in whole but not in part) should be exchanged for Definitive Notes and delivers a written notice to such effect to the Trustee. Upon the occurrence of either of the preceding events in (i) or (ii) above, Definitive Notes shall be issued in such names as the Depositary shall instruct the Trustee. Global Notes also may be exchanged or replaced, in whole or in part, as provided in Sections 2.07 and 2.11 hereof. Every Note authenticated and made available for delivery in exchange for, or in lieu of, a Global Note or any portion thereof, pursuant to Section 2.07 or 2.11 hereof, shall be authenticated and made available for delivery in the form of, and shall be, a Global Note. A Global Note may not be exchanged for another Note other than as provided in this Section 2.06(a), however beneficial interests in a Global Note may be transferred and exchanged as provided in Section 2.06(b), (c) or (f) hereof.

(b) Transfer and Exchange of Beneficial Interests in the Global Notes. The transfer and exchange of beneficial interests in the Global Notes shall be effected through the Depositary, in accordance with the provisions of this Indenture and the procedures of the Depositary therefor. Beneficial interests in the Restricted Global Notes shall be subject to restrictions on transfer comparable to those set forth herein to the extent required by the Securities Act. The Trustee shall have no obligation to ascertain the Depositary's compliance with any such restrictions on transfer. Transfers of beneficial interests in the Global Notes also shall require compliance with either subparagraph (i) or (ii) below, as applicable, as well as one or more of the other following subparagraphs as applicable:

(i) Transfer of Beneficial Interests in the Same Global Note. Beneficial interests in any Restricted Global Note may be transferred to Persons who take delivery thereof in the form of a beneficial interest in the same Restricted Global Note in accordance with the transfer restrictions set forth in the Private Placement Legend; provided, however, that prior to the expiration of the Restricted Period transfers of beneficial interests in the Regulation S Global Note may not be made to a U.S. Person or for the account or benefit of a U.S. Person (other than an Initial Purchaser). Beneficial interests in any Unrestricted Global Note may be transferred only to Persons who take delivery thereof in the form of a beneficial interest in an Unrestricted Global Note. No written orders or instructions shall be required to be delivered to the Registrar to effect the transfers described in this Section 2.06(b)(i).

(ii) All Other Transfers and Exchanges of Beneficial Interests in Global Notes. In connection with all transfers and exchanges of beneficial interests (other than transfers of beneficial interests in a Global Note to Persons who take delivery thereof in

the form of a beneficial interest in the same Global Note), the transferor of such beneficial interest must deliver to the Registrar either (A)(1) a written order from a Participant or an Indirect Participant given to the Depositary in accordance with the Applicable Procedures directing the Depositary to credit or cause to be credited a beneficial interest in the specified Global Note in an amount equal to the beneficial interest to be transferred or exchanged and (2) instructions given in accordance with the Applicable Procedures containing information regarding the Participant account to be credited with such increase or (B)(1) a written order from a Participant or an Indirect Participant given to the Depositary in accordance with the Applicable Procedures directing the Depositary to cause to be issued a Definitive Note in an amount equal to the beneficial interest to be transferred or exchanged and (2) instructions given by the Depositary to the Registrar containing information regarding the Person in whose name such Definitive Note shall be registered to effect the transfer or exchange referred to in (1) above. Upon an Exchange Offer by the Company in accordance with Section 2.06(f) hereof, the requirements of this Section 2.06(b)(ii) shall be deemed to have been satisfied upon receipt by the Registrar of the instructions contained in the Letter of Transmittal delivered by the Holder of such beneficial interests in the Restricted Global Notes. Upon satisfaction of all of the requirements for transfer or exchange of beneficial interests in Global Notes contained in this Indenture, the Notes and otherwise applicable under the Securities Act, the Trustee shall adjust the principal amount of the relevant Global Note(s) pursuant to Section 2.06(h) hereof.

(iii) Transfer of Beneficial Interests to Another Restricted Global Note. Beneficial interests in any Restricted Global Note may be transferred to Persons who take delivery thereof in the form of a beneficial interest in another Restricted Global Note if the Registrar receives the following:

(A) if the transferee will take delivery in the form of a beneficial interest in the 144A Global Note, then the transferor must deliver a certificate in the form of Exhibit B hereto, including the certifications in item (1) thereof;

(B) if the transferee will take delivery in the form of a beneficial interest in the Regulation S Global Note, then the transferor must deliver a certificate in the form of Exhibit B hereto, including the certifications in item (2) thereof; and

(C) if the transferee will take delivery in the form of a beneficial interest in the IAI Global Note, then the transferor must deliver (x) a certificate in the form of Exhibit B hereto, including the certifications in item (3) thereof, (y) to the extent required by item 3(d) of Exhibit B hereto, an Opinion of Counsel in form reasonably acceptable to the Company to the effect that such transfer is in compliance with the Securities Act and such beneficial interest is being transferred in compliance with any applicable blue sky securities laws of any State of the United States and (z) if the transfer is being made to an Institutional Accredited Investor and effected pursuant to an exemption from the registration requirements of the Securities Act other than Rule 144A under the Securities Act,

Rule 144 under the Securities Act or Rule 904 under the Securities Act, a certificate from the transferee in the form of Exhibit D hereto.

(iv) Transfer and Exchange of Beneficial Interests in a Restricted Global Note for Beneficial Interests in the Unrestricted Global Note. Beneficial interests in any Restricted Global Note may be exchanged by any holder thereof for a beneficial interest in the Unrestricted Global Note or transferred to Persons who take delivery thereof in the form of a beneficial interest in the Unrestricted Global Note if:

(A) such exchange or transfer is effected pursuant to the Exchange Offer in accordance with the Registration Rights Agreement and the holder, in the case of an exchange, or the transferee, in the case of a transfer, is not (1) a broker-dealer, (2) a Person participating in the distribution of the Exchange Notes or (3) a Person who is an affiliate (as defined in Rule 144) of the Company;

(B) any such transfer is effected pursuant to the Shelf Registration Statement in accordance with the Registration Rights Agreement;

(C) any such transfer is effected by a Broker-Dealer pursuant to the Exchange Offer Registration Statement in accordance with the Registration Rights Agreement; or

(D) the Registrar receives the following:

(1) if the holder of such beneficial interest in a Restricted Global Note proposes to exchange such beneficial interest for a beneficial interest in the Unrestricted Global Note, a certificate from such holder in the form of Exhibit C hereto, including the certifications in item (1)(a) thereof;

(2) if the holder of such beneficial interest in a Restricted Global Note proposes to transfer such beneficial interest to a Person who shall take delivery thereof in the form of a beneficial interest in the Unrestricted Global Note, a certificate from such holder in the form of Exhibit B hereto, including the certifications in item (4) thereof;

(3) in each such case set forth in this subparagraph (D), an Opinion of Counsel in form reasonably acceptable to the Registrar to the effect that such exchange or transfer is in compliance with the Securities Act, that the restrictions on transfer contained herein and in the Private Placement Legend are not required in order to maintain compliance with the Securities Act, and such beneficial interest is being exchanged or transferred in compliance with any applicable blue sky securities laws of any State of the United States.

If any such transfer is effected pursuant to subparagraph (B) or (D) above at a time when an Unrestricted Global Note has not yet been issued, the Company shall issue and, upon receipt of an authentication order in accordance with Section 2.02 hereof, the Trustee shall

authenticate one or more Unrestricted Global Notes in an aggregate principal amount equal to the principal amount of beneficial interests transferred pursuant to subparagraph (B) or (D) above.

Beneficial interests in an Unrestricted Global Note cannot be exchanged for, or transferred to Persons who take delivery thereof in the form of, a beneficial interest in any Restricted Global Note.

(c) Transfer or Exchange of Beneficial Interests for Definitive Notes.

(i) If any holder of a beneficial interest in a Restricted Global Note proposes to exchange such beneficial interest for a Definitive Note or to transfer such beneficial interest to a Person who takes delivery thereof in the form of a Definitive Note, then, upon receipt by the Registrar of the following documentation (all of which may be submitted by facsimile):

(A) if the holder of such beneficial interest in a Restricted Global Note proposes to exchange such beneficial interest for a Definitive Note, a certificate from such holder in the form of Exhibit C hereto, including the certifications in item (2)(a) thereof;

(B) if such beneficial interest is being transferred to a QIB in accordance with Rule 144A under the Securities Act, a certificate to the effect set forth in Exhibit B hereto, including the certifications in item (1) thereof;

(C) if such beneficial interest is being transferred to a Non-U.S. Person in an offshore transaction in accordance with Rule 904 under the Securities Act, a certificate to the effect set forth in Exhibit B hereto, including the certifications in item (2) thereof;

(D) if such beneficial interest is being transferred pursuant to an exemption from the registration requirements of the Securities Act in accordance with Rule 144 under the Securities Act, a certificate to the effect set forth in Exhibit B hereto, including the certifications in item (3)(a) thereof;

(E) if such beneficial interest is being transferred to an Institutional Accredited Investor in reliance on an exemption from the registration requirements of the Securities Act other than those listed in subparagraphs (B) through (D) above, a certificate to the effect set forth in Exhibit B hereto, including the certifications in item (3)(d) thereof, a certificate from the transferee to the effect set forth in Exhibit D hereof and, to the extent required by item 3(d) of Exhibit B, an Opinion of Counsel from the transferee or the transferor reasonably acceptable to the Company to the effect that such transfer is in compliance with the Securities Act and such beneficial interest is being transferred in compliance with any applicable blue sky securities laws of any State of the United States;

(F) if such beneficial interest is being transferred to the Company or any of its Subsidiaries, a certificate to the effect set forth in Exhibit B hereto, including the certifications in item (3)(b) thereof; or

(G) if such beneficial interest is being transferred pursuant to an effective registration statement under the Securities Act, a certificate to the effect set forth in Exhibit B hereto, including the certifications in item (3)(c) thereof, the Trustee shall cause the aggregate principal amount of the applicable Global Note to be reduced accordingly pursuant to Section 2.06(h) hereof, and the Company shall execute and the Trustee shall authenticate and deliver to the Person designated in the instructions a Definitive Note in the appropriate principal amount. Definitive Notes issued in exchange for beneficial interests in a Restricted Global Note pursuant to this Section 2.06(c) shall be registered in such names and in such authorized denominations as the holder shall instruct the Registrar through instructions from the Depositary and the Participant or Indirect Participant. The Trustee shall deliver such Definitive Notes to the Persons in whose names such Notes are so registered. Definitive Notes issued in exchange for a beneficial interest in a Restricted Global Note pursuant to this Section 2.06(c)(i) shall bear the Private Placement Legend and shall be subject to all restrictions on transfer contained therein.

(ii) Notwithstanding 2.06(c)(i), a holder of a beneficial interest in a Restricted Global Note may exchange such beneficial interest for an Unrestricted Definitive Note or may transfer such beneficial interest to a Person who takes delivery thereof in the form of an Unrestricted Definitive Note only if:

(A) such exchange or transfer is effected pursuant to the Exchange Offer in accordance with the Registration Rights Agreement and the holder, in the case of an exchange, or the transferee, in the case of a transfer, is not (1) a broker-dealer, (2) a Person participating in the distribution of the Exchange Notes or (3) a Person who is an affiliate (as defined in Rule 144) of the Company;

(B) any such transfer is effected pursuant to the Shelf Registration Statement in accordance with the Registration Rights Agreement;

(C) any such transfer is effected by a Broker-Dealer pursuant to the Exchange Offer Registration Statement in accordance with the Registration Rights Agreement; or

(D) the Registrar receives the following:

(1) if the holder of such beneficial interest in a Restricted Global Note proposes to exchange such beneficial interest for a Definitive Note that does not bear the Private Placement Legend, a certificate from such holder in the form of Exhibit C hereto, including the certifications in item (1)(b) thereof;

(2) if the holder of such beneficial interest in a Restricted Global Note proposes to transfer such beneficial interest to a Person who shall take delivery thereof in the form of a Definitive Note that does not bear the Private Placement Legend, a certificate from such holder in the form of Exhibit B hereto, including the certifications in item (4) thereof; and

(3) in each such case set forth in this subparagraph (D), an Opinion of Counsel in form reasonably acceptable to the Company, to the effect that such exchange or transfer is in compliance with the Securities Act, that the restrictions on transfer contained herein and in the Private Placement Legend are not required in order to maintain compliance with the Securities Act, and such beneficial interest in a Restricted Global Note is being exchanged or transferred in compliance with any applicable blue sky securities laws of any State of the United States.

(iii) If any holder of a beneficial interest in an Unrestricted Global Note proposes to exchange such beneficial interest for a Definitive Note or to transfer such beneficial interest to a Person who takes delivery thereof in the form of a Definitive Note, then, upon satisfaction of the conditions set forth in Section 2.06(b)(ii), the Trustee shall cause the aggregate principal amount of the applicable Global Note to be reduced accordingly pursuant to Section 2.06(h) hereof, and the Company shall execute and the Trustee shall authenticate and deliver to the Person designated in the instructions a Definitive Note in the appropriate principal amount. Definitive Notes issued in exchange for a beneficial interest pursuant to this Section 2.06(c)(iii) shall be registered in such names and in such authorized denominations as the holder shall instruct the Registrar through instructions from the Depositary and the Participant or Indirect Participant. The Trustee shall deliver such Definitive Notes to the Persons in whose names such Notes are so registered. Definitive Notes issued in exchange for a beneficial interest pursuant to this section 2.06(c)(iii) shall not bear the Private Placement Legend. Beneficial interests in an Unrestricted Global Note cannot be exchanged for a Definitive Note bearing the Private Placement Legend or transferred to a Person who takes delivery thereof in the form of a Definitive Note bearing the Private Placement Legend.

(d) Transfer or Exchange of Definitive Notes for Beneficial Interests.

(i) If any Holder of Restricted Definitive Notes proposes to exchange such Notes for a beneficial interest in a Restricted Global Note or to transfer such Definitive Notes to a Person who takes delivery thereof in the form of a beneficial interest in a Restricted Global Note, then, upon receipt by the Registrar of the following documentation (all of which may be submitted by facsimile):

(A) if the Holder of such Restricted Definitive Notes proposes to exchange such Notes for a beneficial interest in a Restricted Global Note, a certificate from such Holder in the form of Exhibit C hereto, including the certifications in item (2)(b) thereof;

(B) if such Definitive Notes are being transferred to a QIB in accordance with Rule 144A under the Securities Act, a certificate to the effect set forth in Exhibit B hereto, including the certifications in item (1) thereof;

(C) if such Definitive Notes are being transferred to a Non-U.S. Person in an offshore transaction in accordance with Rule 904 under the Securities Act, a certificate to the effect set forth in Exhibit B hereto, including the certifications in item (2) thereof;

(D) if such Definitive Notes are being transferred pursuant to an exemption from the registration requirements of the Securities Act in accordance with Rule 144 under the Securities Act, a certificate to the effect set forth in Exhibit B hereto, including the certifications in item (3)(a) thereof;

(E) if such Definitive Notes are being transferred to an Institutional Accredited Investor in reliance on an exemption from the registration requirements of the Securities Act other than those listed in subparagraphs (B) through (D) above, a certificate to the effect set forth in Exhibit B hereto, including the certifications in item (3)(d) thereof, a certificate from the transferee to the effect set forth in Exhibit D hereof and, to the extent required by item 3(d) of Exhibit B, an Opinion of Counsel from the transferee or the transferor reasonably acceptable to the Company to the effect that such transfer is in compliance with the Securities Act and such Definitive Notes are being transferred in compliance with any applicable blue sky securities laws of any State of the United States;

(F) if such Definitive Notes are being transferred to the Company or any of its Subsidiaries, a certificate to the effect set forth in Exhibit B hereto, including the certifications in item (3)(b) thereof; or

(G) if such Definitive Notes are being transferred pursuant to an effective registration statement under the Securities Act, a certificate to the effect set forth in Exhibit B hereto, including the certifications in item (3)(c) thereof,

the Trustee shall cancel the Definitive Notes, increase or cause to be increased the aggregate principal amount of, in the case of clause (A) above, the appropriate Restricted Global Note, in the case of clause (B) above, the 144A Global Note, in the case of clause (C) above, the Regulation S Global Note, and in all other cases, the IAI Global Note.

(ii) A Holder of Restricted Definitive Notes may exchange such Notes for a beneficial interest in the Unrestricted Global Note or transfer such Restricted Definitive Notes to a Person who takes delivery thereof in the form of a beneficial interest in the Unrestricted Global Note only if:

(A) such exchange or transfer is effected pursuant to the Exchange Offer in accordance with the Registration Rights Agreement and the Holder, in the case of an exchange, or the transferee, in the case of a transfer, is not (1) a

broker-dealer, (2) a Person participating in the distribution of the Exchange Notes or (3) a Person who is an affiliate (as defined in Rule 144) of the Company;

(B) any such transfer is effected pursuant to the Shelf Registration Statement in accordance with the Registration Rights Agreement;

(C) any such transfer is effected by a Broker-Dealer pursuant to the Exchange Offer Registration Statement in accordance with the Registration Rights Agreement; or

(D) the Registrar receives the following:

(1) if the Holder of such Definitive Notes proposes to exchange such Notes for a beneficial interest in the Unrestricted Global Note, a certificate from such Holder in the form of Exhibit C hereto, including the certifications in item (1)(c) thereof;

(2) if the Holder of such Definitive Notes proposes to transfer such Notes to a Person who shall take delivery thereof in the form of a beneficial interest in the Unrestricted Global Note, a certificate from such Holder in the form of Exhibit B hereto, including the certifications in item (4) thereof; and

(3) in each such case set forth in this subparagraph (D), an Opinion of Counsel in form reasonably acceptable to the Company to the effect that such exchange or transfer is in compliance with the Securities Act, that the restrictions on transfer contained herein and in the Private Placement Legend are not required in order to maintain compliance with the Securities Act, and such Definitive Notes are being exchanged or transferred in compliance with any applicable blue sky securities laws of any State of the United States.

Upon satisfaction of the conditions of any of the subparagraphs in this Section 2.06(d)(ii), the Trustee shall cancel the Definitive Notes and increase or cause to be increased the aggregate principal amount of the Unrestricted Global Note.

(iii) A Holder of Unrestricted Definitive Notes may exchange such Notes for a beneficial interest in the Unrestricted Global Note or transfer such Definitive Notes to a Person who takes delivery thereof in the form of a beneficial interest in the Unrestricted Global Note. Upon receipt of a request for such an exchange or transfer, the Trustee shall cancel the Unrestricted Definitive Notes and increase or cause to be increased the aggregate principal amount of the Unrestricted Global Note.

If any such exchange or transfer from a Definitive Note to a beneficial interest is effected pursuant to subparagraphs (ii)(B), (ii)(D) or (iii) above at a time when an Unrestricted Global Note has not yet been issued, the Company shall issue and, upon receipt of an authentication order in accordance with Section 2.02 hereof, the Trustee shall authenticate one or

more Unrestricted Global Notes in an aggregate principal amount equal to the principal amount of beneficial interests transferred pursuant to subparagraphs (ii)(B), (ii)(D) or (iii) above.

(e) Transfer and Exchange of Definitive Notes. Upon request by a Holder of Definitive Notes and such Holder's compliance with the provisions of this Section 2.06(e), the Registrar shall register the transfer or exchange of Definitive Notes. Prior to such registration of transfer or exchange, the requesting Holder shall present or surrender to the Registrar the Definitive Notes duly endorsed or accompanied by a written instruction of transfer in form satisfactory to the Registrar duly executed by such Holder or by his attorney, duly authorized in writing. In addition, the requesting Holder shall provide any additional certifications, documents and information, as applicable, pursuant to the provisions of this Section 2.06(e).

(i) Restricted Definitive Notes may be transferred to and registered in the name of Persons who take delivery thereof if the Registrar receives the following:

(A) if the transfer will be made pursuant to Rule 144A under the Securities Act, then the transferor must deliver a certificate in the form of Exhibit B hereto, including the certifications in item (1) thereof;

(B) if the transfer will be made pursuant to Rule 904, then the transferor must deliver a certificate in the form of Exhibit B hereto, including the certifications in item (2) thereof; and

(C) if the transfer will be made pursuant to any other exemption from the registration requirements of the Securities Act, then the transferor must deliver (x) a certificate in the form of Exhibit B hereto, including the certifications in item (3) thereof, (y) to the extent required by item 3(d) of Exhibit B hereto, an Opinion of Counsel in form reasonably acceptable to the Company to the effect that such transfer is in compliance with the Securities Act and such beneficial interest is being transferred in compliance with any applicable blue sky securities laws of any State of the United States and (z) if the transfer is being made to an Institutional Accredited Investor and effected pursuant to an exemption from the registration requirements of the Securities Act other than Rule 144A under the Securities Act, Rule 144 under the Securities Act or Rule 904 under the Securities Act, a certificate from the transferee in the form of Exhibit D hereto.

(ii) Restricted Definitive Notes may be exchanged by any Holder thereof for an Unrestricted Definitive Note or transferred to Persons who take delivery thereof in the form of an Unrestricted Definitive Note if:

(A) such exchange or transfer is effected pursuant to the Exchange Offer in accordance with the Registration Rights Agreement and the holder, in the case of an exchange, or the transferee, in the case of a transfer, is not (1) a broker-dealer, (2) a Person participating in the distribution of the Exchange Notes or (3) a Person who is an affiliate (as defined in Rule 144) of the Company;

(B) any such transfer is effected pursuant to the Shelf Registration Statement in accordance with the Registration Rights Agreement;

(C) any such transfer is effected by a Broker-Dealer pursuant to the Exchange Offer Registration Statement in accordance with the Registration Rights Agreement; or

(D) the Registrar receives the following:

(1) if the Holder of such Restricted Definitive Notes proposes to exchange such Notes for an Unrestricted Definitive Note, a certificate from such Holder in the form of Exhibit C hereto, including the certifications in item (1)(a) thereof;

(2) if the Holder of such Restricted Definitive Notes proposes to transfer such Notes to a Person who shall take delivery thereof in the form of an Unrestricted Definitive Note, a certificate from such Holder in the form of Exhibit B hereto, including the certifications in item (4) thereof; and

(3) in each such case set forth in this subparagraph (D), an Opinion of Counsel in form reasonably acceptable to the Company to the effect that such exchange or transfer is in compliance with the Securities Act, that the restrictions on transfer contained herein and in the Private Placement Legend are not required in order to maintain compliance with the Securities Act, and such Restricted Definitive Note is being exchanged or transferred in compliance with any applicable blue sky securities laws of any State of the United States.

(iii) A Holder of Unrestricted Definitive Notes may transfer such Notes to a Person who takes delivery thereof in the form of an Unrestricted Definitive Note. Upon receipt of a request for such a transfer, the Registrar shall register the Unrestricted Definitive Notes pursuant to the instructions from the Holder thereof. Unrestricted Definitive Notes cannot be exchanged for or transferred to Persons who take delivery thereof in the form of a Restricted Definitive Note.

(f) Exchange Offer. Upon the occurrence of the Exchange Offer in accordance with the Registration Rights Agreement, the Company shall issue and, upon receipt of an authentication order in accordance with Section 2.02, the Trustee shall authenticate (i) one or more Unrestricted Global Notes in an aggregate principal amount equal to the principal amount of the beneficial interests in the Restricted Global Notes tendered for acceptance by persons that are not (x) broker-dealers, (y) Persons participating in the distribution of the Exchange Notes or (z) Persons who are affiliates (as defined in Rule 144) of the Company and accepted for exchange in the exchange Offer and (ii) Definitive Notes in an aggregate principal amount equal to the principal amount of the Restricted Definitive Notes accepted for exchange in the Exchange Offer. Concurrent with the issuance of such Notes, the Trustee shall cause the aggregate principal amount of the applicable Restricted Global Notes to be reduced accordingly, and the Company shall execute and the Trustee shall authenticate and make available for delivery to the Persons designated by the Holders of Definitive Notes so accepted Definitive Notes in the appropriate principal amount.

(g) Legends. The following legends shall appear on the face of all Global Notes and Definitive Notes issued under this Indenture unless specifically stated otherwise in the applicable provisions of this Indenture.

(i) Private Placement Legend.

(A) Except as permitted by subparagraph (B) below, each Global Note and each Definitive Note (and all Notes issued in exchange therefor or substitution thereof) shall bear the legend in substantially the following form:

"THE SECURITY (OR ITS PREDECESSOR) EVIDENCED HEREBY WAS ORIGINALLY ISSUED IN A TRANSACTION EXEMPT FROM REGISTRATION UNDER SECTION 5 OF THE UNITED STATES SECURITIES ACT OF 1933, AS AMENDED (THE "SECURITIES ACT"), AND THE SECURITY EVIDENCED HEREBY MAY NOT BE OFFERED, SOLD OR OTHERWISE TRANSFERRED IN THE ABSENCE OF SUCH REGISTRATION OR AN APPLICABLE EXEMPTION THEREFROM. EACH PURCHASER OF THE SECURITY EVIDENCED HEREBY IS HEREBY NOTIFIED THAT THE SELLER MAY BE RELYING ON THE EXEMPTION FROM THE PROVISIONS OF SECTION 5 OF THE SECURITIES ACT PROVIDED BY RULE 144A THEREUNDER. THE HOLDER OF THE SECURITY EVIDENCED HEREBY AGREES FOR THE BENEFIT OF L-3 COMMUNICATIONS CORPORATION THAT (A) SUCH SECURITY MAY BE RESOLD, PLEDGED OR OTHERWISE TRANSFERRED, ONLY (1)(a) TO A PERSON WHO THE SELLER REASONABLY BELIEVES IS A QUALIFIED INSTITUTIONAL BUYER (AS DEFINED IN RULE 144A UNDER THE SECURITIES ACT) IN A TRANSACTION MEETING THE REQUIREMENTS OF RULE 144A, (b) IN A TRANSACTION MEETING THE REQUIREMENTS OF RULE 144 UNDER THE SECURITIES ACT, (c) OUTSIDE THE UNITED STATES TO A FOREIGN PERSON IN A TRANSACTION MEETING THE REQUIREMENTS OF RULE 904 UNDER THE SECURITIES ACT OR (d) IN ACCORDANCE WITH ANOTHER EXEMPTION FROM THE REGISTRATION REQUIREMENTS OF THE SECURITIES ACT (AND BASED UPON AN OPINION OF COUNSEL IF L-3 COMMUNICATIONS CORPORATION SO REQUESTS), (2) TO L-3 COMMUNICATIONS CORPORATION OR (3) PURSUANT TO AN EFFECTIVE REGISTRATION STATEMENT AND, IN EACH CASE, IN ACCORDANCE WITH ANY APPLICABLE SECURITIES LAWS OF ANY STATE OF THE UNITED STATES OR ANY OTHER APPLICABLE JURISDICTION AND (B) THE HOLDER WILL, AND EACH SUBSEQUENT HOLDER IS REQUIRED TO, NOTIFY ANY PURCHASER FROM IT OF THE SECURITY EVIDENCED HEREBY OF THE RESALE RESTRICTIONS SET FORTH IN (A) ABOVE."

(B) Notwithstanding the foregoing, any Global Note or Definitive Note issued pursuant to subparagraphs (b)(iv), (c)(ii), (c)(iii), (d)(ii), (d)(iii), (e)(ii), (e)(iii) or (f) to this Section 2.06 (and all Notes issued in exchange therefor or substitution thereof) shall not bear the Private Placement Legend.

(ii) Global Note Legend. Each Global Note shall bear a legend in substantially the following form:

"THIS GLOBAL NOTE IS HELD BY THE DEPOSITARY (AS DEFINED IN THE INDENTURE GOVERNING THIS NOTE) OR ITS NOMINEE IN CUSTODY FOR THE BENEFIT OF THE BENEFICIAL OWNERS HEREOF, AND IS NOT TRANSFERABLE TO ANY PERSON UNDER ANY CIRCUMSTANCES EXCEPT THAT (I) THE TRUSTEE MAY MAKE SUCH NOTATIONS HEREON AS MAY BE REQUIRED PURSUANT TO SECTION 2.07 OF THE INDENTURE, (II) THIS GLOBAL NOTE MAY BE EXCHANGED IN WHOLE BUT NOT IN PART PURSUANT TO SECTION 2.06(a) OF THE INDENTURE, (III) THIS GLOBAL NOTE MAY BE DELIVERED TO THE TRUSTEE FOR CANCELLATION PURSUANT TO SECTION 2.11 OF THE INDENTURE AND (IV) THIS GLOBAL NOTE MAY BE TRANSFERRED TO A SUCCESSOR DEPOSITARY WITH THE PRIOR WRITTEN CONSENT OF THE COMPANY."

(h) Cancellation and/or Adjustment of Global Notes. At such time as all beneficial interests in a particular Global Note have been exchanged for Definitive Notes or a particular Global Note has been redeemed, repurchased or canceled in whole and not in part, each such Global Note shall be returned to or retained and canceled by the Trustee in accordance with Section 2.11 hereof. At any time prior to such cancellation, if any beneficial interest in a Global Note is exchanged for or transferred to a Person who will take delivery thereof in the form of a beneficial interest in another Global Note or for Definitive Notes, the principal amount of Notes represented by such Global Note shall be reduced accordingly and an endorsement shall be made on such Global Note, by the Trustee or by the Depositary at the direction of the Trustee, to reflect such reduction; and if the beneficial interest is being exchanged for or transferred to a Person who will take delivery thereof in the form of a beneficial interest in another Global Note, such other Global Note shall be increased accordingly and an endorsement shall be made on such Global Note, by the Trustee or by the Depositary at the direction of the Trustee, to reflect such increase.

(i) General Provisions Relating to Transfers and Exchanges.

(i) To permit registrations of transfers and exchanges, the Company shall execute and the Trustee shall authenticate Global Notes and Definitive Notes upon the Company's order or at the Registrar's request.

(ii) No service charge shall be made to a holder of a beneficial interest in a Global Note or to a Holder of a Definitive Note for any registration of transfer or exchange, but the Company may require payment of a sum sufficient to cover any transfer tax or similar governmental charge payable in connection therewith (other than any such transfer taxes or similar governmental charge payable upon exchange or transfer pursuant to Sections 2.10, 3.06, 4.10, 4.15 and 9.05 hereof).

(iii) The Registrar shall not be required to register the transfer of or exchange any Note selected for redemption in whole or in part, except the unredeemed portion of any Note being redeemed in part.

(iv) All Global Notes and Definitive Notes issued upon any registration of transfer or exchange of Global Notes or Definitive Notes shall be the valid obligations of the Company, evidencing the same debt, and entitled to the same benefits under this Indenture, as the Global Notes or Definitive Notes surrendered upon such registration of transfer or exchange.

(v) The Company shall not be required (A) to issue, to register the transfer of or to exchange Notes during a period beginning at the opening of business 15 days before the day of any selection of Notes for redemption under Section 3.02 hereof and ending at the close of business on the day of selection, (B) to register the transfer of or to exchange any Note so selected for redemption in whole or in part, except the unredeemed portion of any Note being redeemed in part or (C) to register the transfer of or to exchange a Note between a record date and the next succeeding interest payment date.

(vi) Prior to due presentment for the registration of a transfer of any Note, the Trustee, any Agent and the Company may deem and treat the Person in whose name any Note is registered as the absolute owner of such Note for the purpose of receiving payment of principal of and interest on such Notes and for all other purposes, and none of the Trustee, any Agent or the Company shall be affected by notice to the contrary.

(vii) The Trustee shall authenticate Global Notes and Definitive Notes in accordance with the provisions of Section 2.02 hereof.

Section 2.07 Replacement Notes.

If any mutilated Note is surrendered to the Trustee, or the Company and the Trustee receives evidence to its satisfaction of the destruction, loss or theft of any Note, the Company shall issue and the Trustee, upon the written order of the Company signed by two Officers of the Company, shall authenticate a replacement Note if the Trustee's requirements are met. If required by the Trustee or the Company, an indemnity bond must be supplied by the Holder that is sufficient in the judgment of the Trustee and the Company to protect the Company, the Trustee, any Agent and any authenticating agent from any loss that any of them may suffer if a Note is replaced. The Company may charge for its expenses in replacing a Note.

Every replacement Note is an additional obligation of the Company and shall be entitled to all of the benefits of this Indenture equally and proportionately with all other Notes duly issued hereunder.

Section 2.08 Outstanding Notes.

The Notes outstanding at any time are all the Notes authenticated by the Trustee except for those canceled by it, those delivered to it for cancellation, those reductions in the interest in a Global Note effected by the Trustee in accordance with the provisions hereof, and those described in this Section as not outstanding. Except as set forth in Section 2.09 hereof, a Note does not cease to be outstanding because the Company or an Affiliate of the Company holds the Note.

If a Note is replaced pursuant to Section 2.07 hereof, it ceases to be outstanding unless the Trustee receives proof satisfactory to it that the replaced Note is held by a bona fide purchaser.

If the principal amount of any Note is considered paid under Section 4.01 hereof, it ceases to be outstanding and interest on it ceases to accrue.

If the Paying Agent (other than the Company, a Subsidiary or an Affiliate of any thereof) holds, on a redemption date or maturity date, money sufficient to pay Notes payable on that date, then on and after that date such Notes shall be deemed to be no longer outstanding and shall cease to accrue interest.

Section 2.09 Treasury Notes.

In determining whether the Holders of the required principal amount of Notes have concurred in any direction, waiver or consent, Notes owned by the Company, or by any Person directly or indirectly controlling or controlled by or under direct or indirect common control with the Company, shall be considered as though not outstanding, except that for the purposes of determining whether the Trustee shall be protected in relying on any such direction, waiver or consent, only Notes that a Trustee knows are so owned shall be so disregarded.

Section 2.10 Temporary Notes.

Until Definitive Notes are ready for delivery, the Company may prepare and the Trustee shall authenticate temporary Notes upon a written order of the Company signed by two Officers of the Company. Temporary Notes shall be substantially in the form of Definitive Notes but may have variations that the Company considers appropriate for temporary Notes and as shall be reasonably acceptable to the Trustee. Without unreasonable delay, the Company shall prepare and the Trustee shall authenticate Definitive Notes in exchange for temporary Notes.

Holders of temporary Notes shall be entitled to all of the benefits of this Indenture.

Section 2.11 Cancellation.

The Company at any time may deliver Notes to the Trustee for cancellation. The Registrar and Paying Agent shall forward to the Trustee any Notes surrendered to them for registration of transfer, exchange or payment. The Trustee and no one else shall cancel all Notes surrendered for registration of transfer, exchange, payment, replacement or cancellation and shall destroy canceled Notes (subject to the record retention requirement of the Exchange Act). Certification of the destruction of all canceled Notes shall be delivered to the Company. The Company may not issue new Notes to replace Notes that it has paid or that have been delivered to the Trustee for cancellation.

Section 2.12 Defaulted Interest.

If the Company defaults in a payment of interest on the Notes, it shall pay the defaulted interest in any lawful manner plus, to the extent lawful, interest payable on the

defaulted interest, to the Persons who are Holders on a subsequent special record date, in each case at the rate provided in the Notes and in Section 4.01 hereof. The Company shall notify the Trustee in writing of the amount of defaulted interest proposed to be paid on each Note and the date of the proposed payment. The Company shall fix or cause to be fixed each such special record date and payment date, provided that no such special record date shall be less than 10 days prior to the related payment date for such defaulted interest. At least 15 days before the special record date, the Company (or, upon the written request of the Company, the Trustee in the name and at the expense of the Company) shall mail or cause to be mailed to Holders a notice that states the special record date, the related payment date and the amount of such interest to be paid.

Section 2.13 CUSIP Numbers.

The Company in issuing the Notes may use CUSIP numbers (if then generally in use), and, if so, the Trustee shall use CUSIP numbers in notices of redemption as a convenience to Holders; provided that any such notice may state that no representation is made as to the correctness of such numbers either as printed on the Notes or as contained in any notice of a redemption and that reliance may be placed only on the other identification numbers printed on the Notes, and any such redemption shall not be affected by any defect in or omission of such numbers. The Company will promptly notify the Trustee of any change in the CUSIP numbers.

ARTICLE 3.
REDEMPTION AND PREPAYMENT

Section 3.01 Notices to Trustee.

If the Company elects to redeem Notes pursuant to the optional redemption provisions of Section 3.07 hereof, it shall furnish to the Trustee, at least 30 days but not more than 60 days before a redemption date, an Officers' Certificate setting forth (i) the clause of this Indenture pursuant to which the redemption shall occur, (ii) the redemption date, (iii) the principal amount of Notes to be redeemed and (iv) the redemption price.

Section 3.02 Selection of Notes to Be Redeemed.

If less than all of the Notes are to be redeemed at any time, selection of Notes for redemption shall be made by the Trustee in compliance with the requirements of the principal national securities exchange, if any, on which the Notes are listed, or, if the Notes are not so listed, on a pro rata basis, by lot or by such method as the Trustee shall deem fair and appropriate; provided that no Notes of $1,000 or less shall be redeemed in part. Notices of redemption shall be mailed by first class mail at least 30 but not more than 60 days before the redemption date to each Holder of Notes to be redeemed at its registered address. Notices of redemption may not be conditional. If any Note is to be redeemed in part only, the notice of redemption that relates to such Note shall state the portion of the principal amount thereof to be redeemed. A new Note in principal amount equal to the unredeemed portion thereof shall be issued in the name of the Holder thereof upon cancellation of the original Note. Notes called for redemption become due on the date fixed for redemption. On and after the redemption date, interest ceases to accrue on Notes or portions of them called for redemption.

The Trustee shall promptly notify the Company in writing of the Notes selected for redemption and, in the case of any Note selected for partial redemption, the principal amount thereof to be redeemed. Notes and portions of Notes selected shall be in amounts of $1,000 or whole multiples of $1,000; except that if all of the Notes of a Holder are to be redeemed, the entire outstanding amount of Notes held by such Holder, even if not a multiple of $1,000, shall be redeemed. Except as provided in the preceding sentence, provisions of this Indenture that apply to Notes called for redemption also apply to portions of Notes called for redemption.

Section 3.03 Notice Of Redemption.

Subject to the provisions of Section 3.09 hereof, at least 30 days but not more than 60 days before a redemption date, the Company shall mail or cause to be mailed, by first class mail, a notice of redemption to each Holder whose Notes are to be redeemed at its registered address.

The notice shall identify the Notes to be redeemed (including CUSIP Numbers, if any) and shall state:

(a) the redemption date;

(b) the redemption price;

(c) if any Note is being redeemed in part, the portion of the principal amount of such Note to be redeemed and that, after the redemption date upon surrender of such Note, a new Note or Notes in principal amount equal to the unredeemed portion shall be issued upon cancellation of the original Note;

(d) the name and address of the Paying Agent;

(e) that Notes called for redemption must be surrendered to the Paying Agent to collect the redemption price;

(f) that, unless the Company defaults in making such redemption payment, interest on Notes called for redemption ceases to accrue on and after the redemption date;

(g) the paragraph of the Notes and/or Section of this Indenture pursuant to which the Notes called for redemption are being redeemed; and

(h) that no representation is made as to the correctness or accuracy of the CUSIP number, if any, listed in such notice or printed on the Notes.

At the Company's request, the Trustee shall give the notice of redemption in the Company's name and at its expense; provided, however, that the Company shall have delivered to the Trustee, at least 45 days prior to the redemption date, an Officers' Certificate requesting that the Trustee give such notice and setting forth the information to be stated in such notice as provided in the preceding paragraph.

Section 3.04 Effect Of Notice Of Redemption.

Once notice of redemption is mailed in accordance with Section 3.03 hereof, Notes called for redemption become irrevocably due and payable on the redemption date at the redemption price. A notice of redemption may not be conditional.

Section 3.05 Deposit Of Redemption Price.

Prior to 11:00 a.m. on the Business Day prior to the redemption date, the Company shall deposit with the Trustee or with the Paying Agent money sufficient to pay the redemption price of and accrued interest on all Notes to be redeemed on that date. The Trustee or the Paying Agent shall promptly return to the Company any money deposited with the Trustee or the Paying Agent by the Company in excess of the amounts necessary to pay the redemption price of, and accrued interest on, all Notes to be redeemed.

If the Company complies with the provisions of the preceding paragraph, on and after the redemption date, interest shall cease to accrue on the Notes or the portions of Notes called for redemption. If a Note is redeemed on or after an interest record date but on or prior to the related interest payment date, then any accrued and unpaid interest shall be paid to the Person in whose name such Note was registered at the close of business on such record date. If any Note called for redemption shall not be so paid upon surrender for redemption because of the failure of the Company to comply with the preceding paragraph, interest shall be paid on the unpaid principal, from the redemption date until such principal is paid, and to the extent lawful on any interest not paid on such unpaid principal, in each case at the rate provided in the Notes and in Section 4.01 hereof.

Section 3.06 Notes Redeemed In Part.

Upon surrender of a Note that is redeemed in part, the Company shall issue and, upon the Company's written request, the Trustee shall authenticate for the Holder at the expense of the Company a new Note equal in principal amount to the unredeemed portion of the Note surrendered.

Section 3.07 Optional Redemption.

(a) Except as set forth in clause (b) of this Section 3.7, the Notes shall not be redeemable at the Company's option prior to July 15, 2008. Thereafter, the Notes shall be subject to redemption at any time at the option of the Company, in whole or in part, upon not less than 30 nor more than 60 days' notice, at the redemption prices (expressed as percentages of principal amount) set forth below plus accrued and unpaid interest and Additional Amounts thereon, if any, to the applicable redemption date, if redeemed during the twelve-month period beginning on July 15 of the years indicated below:

Year	Percentage
2008.....	103.063%
2009.....	102.042%
2010.....	101.021%
2011 and thereafter.....	100.000%

(b) Notwithstanding the foregoing clause (a), before July 15, 2006, the Company may on any one or more occasions redeem up to an aggregate of 35% of the Notes originally issued at a redemption price of 106.125% of the principal amount thereof, plus accrued and unpaid interest and Additional Amounts thereon, if any, to the redemption date, with the net cash proceeds of one or more Equity Offerings by the Company or the net cash proceeds of one or more Equity Offerings by Holdings that are contributed to the Company as common equity capital; provided that at least 65% of the Notes originally issued remain outstanding immediately after the occurrence of each such redemption; and provided, further, that any such redemption must occur within 120 days of the date of the closing of such Equity Offering.

Section 3.08 Mandatory Redemption.

Except as set forth under Sections 4.10 and 4.15, the Company is not required to make mandatory redemption or sinking fund payments with respect to the Notes.

Section 3.09 Offer To Purchase By Application Of Excess Proceeds.

In the event that, pursuant to Section 4.10 hereof, the Company shall be required to commence an offer to all Holders to purchase Notes (an "Asset Sale Offer"), it shall follow the procedures specified below.

The Asset Sale Offer shall remain open for a period of 20 Business Days following its commencement and no longer, except to the extent that a longer period is required by applicable law (the "Offer Period"). No later than five Business Days after the termination of the Offer Period (the "Purchase Date"), the Company shall purchase the principal amount of Notes required to be purchased pursuant to Section 4.10 hereof (the "Offer Amount") or, if less than the Offer Amount has been tendered, all Notes tendered in response to the Asset Sale Offer. Payment for any Notes so purchased shall be made in the same manner as interest payments are made.

If the Purchase Date is on or after an interest record date and on or before the related interest payment date, any accrued and unpaid interest shall be paid to the Person in whose name a Note is registered at the close of business on such record date, and no additional interest shall be payable to Holders who tender Notes pursuant to the Asset Sale Offer.

Upon the commencement of an Asset Sale Offer, the Company shall send, by first class mail, a notice to the Trustee and each of the Holders, with a copy to the Trustee. The notice shall contain all instructions and materials necessary to enable such Holders to tender Notes pursuant to the Asset Sale Offer. The Asset Sale Offer shall be made to all Holders. The notice, which shall govern the terms of the Asset Sale Offer, shall state:

(a) that the Asset Sale Offer is being made pursuant to this Section 3.09 and Section 4.10 hereof and the length of time the Asset Sale Offer shall remain open;

(b) the Offer Amount, the purchase price and the Purchase Date;

(c) that any Note not tendered or accepted for payment shall continue to accrete or accrue interest;

(d) that, unless the Company defaults in making such payment, any Note accepted for payment pursuant to the Asset Sale Offer shall cease to accrete or accrue interest after the Purchase Date;

(e) that Holders electing to have a Note purchased pursuant to an Asset Sale Offer may only elect to have all of such Note purchased and may not elect to have only a portion of such Note purchased;

(f) that Holders electing to have a Note purchased pursuant to any Asset Sale Offer shall be required to surrender the Note, with the form entitled "Option of Holder to Elect Purchase" on the reverse of the Note completed, or transfer by book-entry transfer, to the Company, a depositary, if appointed by the Company, or a Paying Agent at the address specified in the notice at least three days before the Purchase Date;

(g) that Holders shall be entitled to withdraw their election if the Company, the Depositary or the Paying Agent, as the case may be, receives, not later than the expiration of the Offer Period, a facsimile transmission or letter setting forth the name of the Holder, the principal amount of the Note the Holder delivered for purchase and a statement that such Holder is withdrawing his election to have such Note purchased;

(h) that, if the aggregate principal amount of Notes surrendered by Holders exceeds the Offer Amount, the Company shall select the Notes to be purchased on a pro rata basis (with such adjustments as may be deemed appropriate by the Company so that only Notes in denominations of $1,000, or integral multiples thereof, shall be purchased); and

(i) that Holders whose Notes were purchased only in part shall be issued new Notes equal in principal amount to the unpurchased portion of the Notes surrendered (or transferred by book-entry transfer).

On or before the Purchase Date, the Company shall, to the extent lawful, accept for payment, on a pro rata basis to the extent necessary, the Offer Amount of Notes or portions thereof tendered pursuant to the Asset Sale Offer, or if less than the Offer Amount has been tendered, all Notes tendered, and shall deliver to the Trustee an Officers' Certificate stating that such Notes or portions thereof were accepted for payment by the Company in accordance with the terms of this Section 3.09. The Company, the Depositary or the Paying Agent, as the case may be, shall promptly (but in any case not later than five days after the Purchase Date) mail or deliver to each tendering Holder an amount equal to the purchase price of the Notes tendered by such Holder and accepted by the Company for purchase, and the Company shall promptly issue a new Note, and the Trustee, upon written request from the Company shall authenticate and mail or deliver such new Note to such Holder, in a principal amount equal to any unpurchased portion of the Note surrendered. Any Note not so accepted shall be promptly mailed or delivered by the Company to the Holder thereof. The Company shall publicly announce the results of the Asset Sale Offer on the Purchase Date.

Other than as specifically provided in this Section 3.09, any purchase pursuant to this Section 3.09 shall be made pursuant to the provisions of Sections 3.01 through 3.06 hereof.

ARTICLE 4.
COVENANTS

Section 4.01 Payment Of Notes.

The Company shall pay or cause to be paid the principal of, premium, if any, and interest on the Notes on the dates and in the manner provided in the Notes. Principal, premium, if any, and interest shall be considered paid on the date due if the Paying Agent, if other than the Company or a Subsidiary thereof, holds as of 10:00 a.m. Eastern Time on the due date money deposited by the Company in immediately available funds and designated for and sufficient to pay all principal, premium, if any, and interest then due. The Company shall pay all Additional Amounts, if any, in the same manner on the dates and in the amounts set forth in the Registration Rights Agreement.

The Company shall pay interest (including post-petition interest in any proceeding under any Bankruptcy Law) on overdue principal at the rate equal to 1.0% per annum in excess of the then applicable interest rate on the Notes to the extent lawful; it shall pay interest (including post-petition interest in any proceeding under any Bankruptcy Law) on overdue installments of interest and Additional Amounts (without regard to any applicable grace period) at the same rate to the extent lawful.

Section 4.02 Maintenance Of Office Or Agency.

The Company shall maintain in the Borough of Manhattan, The City of New York, an office or agency (which may be an office of the Trustee or an affiliate of the Trustee, Registrar or co-registrar) where Notes may be surrendered for registration of transfer or for exchange and where notices and demands to or upon the Company in respect of the Notes and this Indenture may be served. The Company shall give prompt written notice to the Trustee of the location, and any change in the location, of such office or agency. If at any time the Company shall fail to maintain any such required office or agency or shall fail to furnish the Trustee with the address thereof, such presentations, surrenders, notices and demands may be made or served at the Corporate Trust Office of the Trustee.

The Company may also from time to time designate one or more other offices or agencies where the Notes may be presented or surrendered for any or all such purposes and may from time to time rescind such designations; provided, however, that no such designation or rescission shall in any manner relieve the Company of its obligation to maintain an office or agency in the Borough of Manhattan, The City of New York for such purposes. The Company shall give prompt written notice to the Trustee of any such designation or rescission and of any change in the location of any such other office or agency.

The Company hereby designates the Corporate Trust Office of the Trustee as one such office or agency of the Company in accordance with Section 2.03.

Section 4.03 Reports.

Notwithstanding that the Company may not be subject to the reporting requirements of Section 13 or 15(d) of the Exchange Act or otherwise report on an annual and quarterly basis on forms provided for such annual and quarterly reporting pursuant to rules and regulations promulgated by the SEC, the Company shall file with the SEC (and provide the Trustee and Holders with copies thereof), without cost to each Holder, within 15 days after it files them with the SEC:

(a) within 90 days after the end of each fiscal year, annual reports on Form 10-K (or any successor or comparable form) containing the information required to be contained therein (or required in such successor or comparable form);

(b) within 45 days after the end of each of the first three fiscal quarters of each fiscal year, reports on Form 10-Q (or any successor or comparable form);

(c) promptly from time to time after the occurrence of an event required to be therein reported, such other reports on Form 8-K (or any successor or comparable form); and

(d) any other information, documents and other reports which the Company would be required to file with the SEC if it were subject to Section 13 or 15(d) of the Exchange Act; provided, however, the Company shall not be so obligated to file such reports with the SEC if the SEC does not permit such filing, in which event the Company will make available such information to prospective purchasers of Notes, in addition to providing such information to the Trustee and the Holders, in each case within 15 days after the time the Company would be required to file such information with the SEC, if it were subject to Sections 13 or 15(d) of the Exchange Act.

Subject to the provisions of Article 7, delivery of such reports, information and documents to the Trustee is for informational purposes only and the Trustee's receipt of such shall not constitute constructive notice of any information contained therein or determinable from information contained therein, including the Company's compliance with any of its covenants hereunder (as to which the Trustee is entitled to rely exclusively on Officers' Certificates).

Section 4.04 Compliance Certificate.

(a) The Company shall deliver to the Trustee, within 90 days after the end of each fiscal year, an Officers' Certificate stating that a review of the activities of the Company and its Subsidiaries during the preceding fiscal year has been made under the supervision of the signing Officers with a view to determining whether the Company has kept, observed, performed and fulfilled its obligations under this Indenture, and further stating, as to each such Officer signing such certificate, that to the best of his or her knowledge the Company has kept, observed, performed and fulfilled each and every covenant contained in this Indenture and is not in default in the performance or observance of any of the terms, provisions and conditions of this Indenture (or, if a Default or Event of Default shall have occurred, describing all such Defaults or Events of Default of which he or she may have knowledge and what action the Company is taking or

proposes to take with respect thereto) and that to the best of his or her knowledge no event has occurred and remains in existence by reason of which payments on account of the principal of or interest, if any, on the Notes is prohibited or if such event has occurred, a description of the event and what action the Company is taking or proposes to take with respect thereto.

(b) So long as not contrary to the then current recommendations of the American Institute of Certified Public Accountants, the year-end financial statements delivered pursuant to Section 4.03(a) above shall be accompanied by a written statement of the Company's independent public accountants (who shall be a firm of established national reputation) that in making the examination necessary for certification of such financial statements, nothing has come to their attention that would lead them to believe that the Company has violated any provisions of Article 4 or Article 5 hereof or, if any such violation has occurred, specifying the nature and period of existence thereof, it being understood that such accountants shall not be liable directly or indirectly to any Person for any failure to obtain knowledge of any such violation.

(c) The Company shall, so long as any of the Notes are outstanding, deliver to the Trustee, as soon as possible and in any event within five Business Days after any Officer becoming aware of any Default or Event of Default, an Officers' Certificate specifying such Default or Event of Default and what action the Company is taking or proposes to take with respect thereto.

Section 4.05 Taxes.

The Company shall pay, and shall cause each of its Subsidiaries to pay, prior to delinquency, all material taxes, assessments, and governmental levies except such as are contested in good faith and by appropriate proceedings or where the failure to effect such payment is not adverse in any material respect to the Holders of the Notes.

Section 4.06 Stay, Extension and Usury Laws

The Company and each of the Guarantors covenants (to the extent that it may lawfully do so) that it will not at any time insist upon, plead, or in any manner whatsoever claim or take the benefit or advantage of, any stay, extension or usury law wherever enacted, now or at any time hereafter in force, that may affect the covenants or the performance of this Indenture; and, to the extent that it may lawfully do so, the Company and each of the Guarantors hereby expressly waives all benefit or advantage of any such law, and covenants that it will not, by resort to any such law, hinder, delay or impede the execution of any power herein granted to the Trustee, but will suffer and permit the execution of every such power as though no such law has been enacted.

Section 4.07 Restricted Payments.

The Company shall not, and shall not permit any of its Restricted Subsidiaries to, directly or indirectly: (i) declare or pay any dividend or make any other payment or distribution on account of the Company's or any of its Restricted Subsidiaries' Equity Interests (including, without limitation, any payment in connection with any merger or consolidation involving the Company) or to the direct or indirect holders of the Company's or any of its Restricted

Subsidiaries' Equity Interests in their capacity as such (other than (A) dividends or distributions payable in Equity Interests (other than Disqualified Stock) of the Company or (B) dividends or distributions by a Restricted Subsidiary so long as, in the case of any dividend or distribution payable on or in respect of any class or series of securities issued by a Restricted Subsidiary other than a Wholly Owned Restricted Subsidiary, the Company or a Restricted Subsidiary receives at least its pro rata share of such dividend or distribution in accordance with its Equity Interests in such class or series of securities); (ii) purchase, redeem or otherwise acquire or retire for value (including without limitation, in connection with any merger or consolidation involving the Company) any Equity Interests of the Company or any direct or indirect parent of the Company; (iii) make any payment on or with respect to, or purchase, redeem, defease or otherwise acquire or retire for value any Indebtedness that is subordinated to the Notes except a payment of interest or principal at Stated Maturity; or (iv) make any Restricted Investment (all such payments and other actions set forth in clauses (i) through (iv) above being collectively referred to as "Restricted Payments"), unless, at the time of and after giving effect to such Restricted Payment:

(a) no Default or Event of Default shall have occurred and be continuing or would occur as a consequence thereof; and

(b) the Company would, at the time of such Restricted Payment and after giving pro forma effect thereto as if such Restricted Payment had been made at the beginning of the applicable four-quarter period, have been permitted to incur at least $1.00 of additional Indebtedness pursuant to the Fixed Charge Coverage Ratio test set forth in the first paragraph of Section 4.09; and

(c) such Restricted Payment, together with the aggregate amount of all other Restricted Payments made by the Company and its Restricted Subsidiaries since April 30, 1997 (excluding Restricted Payments permitted by clauses (ii) through (viii) of the next succeeding paragraph or of the kind contemplated by such clauses that were made prior to the date of this Indenture), is less than the sum of (i) 50% of the Consolidated Net Income of the Company for the period (taken as one accounting period) from July 1, 1997 to the end of the Company's most recently ended fiscal quarter for which internal financial statements are available at the time of such Restricted Payment (or, if such Consolidated Net Income for such period is a deficit, less 100% of such deficit), plus (ii) 100% of the aggregate net cash proceeds received by the Company since April 30, 1997 as a contribution to its common equity capital or from the issue or sale of Equity Interests of the Company (other than Disqualified Stock) or from the issue or sale of Disqualified Stock or debt securities of the Company that have been converted into such Equity Interests (other than Equity Interests (or Disqualified Stock or convertible debt securities) sold to a Subsidiary of the Company and other than Disqualified Stock or convertible debt securities that have been converted into Disqualified Stock), plus (iii) to the extent that any Restricted Investment that was made after April 30, 1997 is sold for cash or otherwise liquidated or repaid for cash, the amount of cash received in connection therewith (or from the sale of Marketable Securities received in connection therewith), plus (iv) to the extent not already included in such Consolidated Net Income of the Company for such period and without duplication, (A) 100% of the aggregate amount of cash received as a dividend from an Unrestricted Subsidiary, (B) 100% of the cash

received upon the sale of Marketable Securities received as a dividend from an Unrestricted Subsidiary, and (C) 100% of the net assets of any Unrestricted Subsidiary on the date that it becomes a Restricted Subsidiary.

The foregoing provisions shall not prohibit: (i) the payment of any dividend within 60 days after the date of declaration thereof, if at said date of declaration such payment would have complied with the provisions of this Indenture; (ii) the redemption, repurchase, retirement, defeasance or other acquisition of any subordinated Indebtedness or Equity Interests of the Company in exchange for, or out of the net cash proceeds of the substantially concurrent sale (other than to a Subsidiary of the Company) of, other Equity Interests of the Company (other than any Disqualified Stock); provided that the amount of any such net cash proceeds that are utilized for any such redemption, repurchase, retirement, defeasance or other acquisition shall be excluded from clause (c)(ii) of the preceding paragraph; (iii) the defeasance, redemption, repurchase or other acquisition of subordinated Indebtedness (other than intercompany Indebtedness) in exchange for, or with the net cash proceeds from an incurrence of, Permitted Refinancing Indebtedness; (iv) the repurchase, retirement or other acquisition or retirement for value of common Equity Interests of the Company or Holdings held by any future, present or former employee, director or consultant of the Company or any Subsidiary or Holdings issued pursuant to any management equity plan or stock option plan or any other management or employee benefit plan or agreement; provided, however, that the aggregate amount of Restricted Payments made under this clause (iv) does not exceed $1.5 million in any calendar year and provided further that cancellation of Indebtedness owing to the Company from members of management of the Company or any of its Restricted Subsidiaries in connection with a repurchase of Equity Interests of the Company shall not be deemed to constitute a Restricted Payment for purposes of this covenant or any other provision of this Indenture; (v) repurchases of Equity Interests deemed to occur upon exercise of stock options upon surrender of Equity Interests to pay the exercise price of such options; (vi) payments to Holdings (A) in amounts equal to the amounts required for Holdings to pay franchise taxes and other fees required to maintain its legal existence and provide for other operating costs of up to $500,000 per fiscal year and (B) in amounts equal to amounts required for Holdings to pay federal, state and local income taxes to the extent such income taxes are actually due and owing; provided that the aggregate amount paid under this clause (B) does not exceed the amount that the Company would be required to pay in respect of the income of the Company and its Subsidiaries if the Company were a stand alone entity that was not owned by Holdings; (vii) dividends paid to Holdings in amounts equal to amounts required for Holdings to pay interest and/or principal on Indebtedness that has been guaranteed by, or is otherwise considered Indebtedness of, the Company; and (viii) other Restricted Payments in an aggregate amount since May 22, 1998 not to exceed $20.0 million.

The Board of Directors of the Company may designate any Restricted Subsidiary to be an Unrestricted Subsidiary if such designation would not cause a Default. For purposes of making such determination, all outstanding Investments by the Company and its Restricted Subsidiaries (except to the extent repaid in cash) in the Subsidiary so designated shall be deemed to be Restricted Payments at the time of such designation and shall reduce the amount available for Restricted Payments under the first paragraph of this covenant. All such outstanding Investments shall be deemed to constitute Investments in an amount equal to the fair market value of such Investments at the time of such designation. Such designation shall only be

permitted if such Restricted Payment would be permitted at such time and if such Restricted Subsidiary otherwise meets the definition of an Unrestricted Subsidiary.

The amount of all Restricted Payments (other than cash) shall be the fair market value on the date of the Restricted Payment of the asset(s) or securities proposed to be transferred or issued by the Company or such Restricted Subsidiary, as the case may be, pursuant to the Restricted Payment. The fair market value of any non-cash Restricted Payment shall be determined by the Board of Directors whose resolution with respect thereto shall be delivered to the Trustee. Not later than the date of making any Restricted Payment, the Company shall deliver to the Trustee an Officers' Certificate stating that such Restricted Payment is permitted and setting forth the basis upon which the calculations required by Section 4.07 were computed.

Section 4.08 Dividend And Other Payment Restrictions Affecting Restricted Subsidiaries.

The Company shall not, and shall not permit any of its Restricted Subsidiaries to, directly or indirectly, create or otherwise cause or suffer to exist or become effective any encumbrance or restriction on the ability of any Restricted Subsidiary to (i)(A) pay dividends or make any other distributions to the Company or any of its Restricted Subsidiaries (1) on its Capital Stock or (2) with respect to any other interest or participation in, or measured by, its profits, or (B) pay any indebtedness owed to the Company or any of its Restricted Subsidiaries, (ii) make loans or advances to the Company or any of its Restricted Subsidiaries, or (iii) transfer any of its properties or assets to the Company or any of its Restricted Subsidiaries. However, the preceding restrictions will not apply to encumbrances or restrictions existing under or by reason of (A) the provisions of security agreements that restrict the transfer of assets that are subject to a Lien created by such security agreements, (B) the provisions of agreements governing Indebtedness incurred pursuant to clause (v) of the second paragraph of Section 4.09, (C) the Senior Credit Facilities, this Indenture, the Notes, the Exchange Notes, the May 1998 Indenture, the May 1998 Notes, the December 1998 Indenture, the December 1998 Notes, the 2002 Notes and the 2002 Indenture, (D) applicable law, (E) any instrument governing Indebtedness or Capital Stock of a Person acquired by the Company or any of its Restricted Subsidiaries as in effect at the time of such acquisition (except to the extent such Indebtedness was incurred in connection with or in contemplation of such acquisition), which encumbrance or restriction is not applicable to any Person, or the properties or assets of any Person, other than the Person, or the property or assets of the Person, so acquired, provided that, in the case of Indebtedness, such Indebtedness was permitted by the terms of this Indenture to be incurred, (F) by reason of customary non-assignment provisions in leases entered into in the ordinary course of business and consistent with past practices, (G) purchase money obligations for property acquired in the ordinary course of business that impose restrictions of the nature described in this clause (iii) of the preceding paragraph, (H) Permitted Refinancing Indebtedness, provided that the restrictions contained in the agreements governing such Permitted Refinancing Indebtedness are not materially more restrictive, taken as a whole, than those contained in the agreements governing the Indebtedness being refinanced, (I) contracts for the sale of assets, including, without limitation, customary restrictions with respect to a Subsidiary pursuant to an agreement that has been entered into for the sale or disposition of all or substantially all of the Capital Stock or assets of such Subsidiary, (J) agreements relating to secured Indebtedness otherwise permitted to be incurred pursuant to 4.09 and 4.12 that limit the right of the debtor to dispose of the assets securing such Indebtedness, (K) restrictions on cash or other deposits or net worth imposed by

customers under contracts entered into in the ordinary course of business, or (L) customary provisions in joint venture agreements and other similar agreements entered into in the ordinary course of business.

Section 4.09 Incurrence of Indebtedness and Issuance Of Preferred Stock.

The Company shall not, and shall not permit any of its Restricted Subsidiaries to, directly or indirectly, create, incur, issue, assume, guarantee or otherwise become directly or indirectly liable, contingently or otherwise, with respect to (collectively, "incur") any Indebtedness (including Acquired Debt) and that the Company shall not issue any Disqualified Stock and shall not permit any of its Restricted Subsidiaries to issue any shares of preferred stock; provided, however, that the Company and any Restricted Subsidiary may incur Indebtedness (including Acquired Debt) or issue shares of preferred stock if the Fixed Charge Coverage Ratio for the Company's most recently ended four full fiscal quarters for which internal financial statements are available immediately preceding the date on which such additional Indebtedness is incurred or such preferred stock is issued would have been at least 2.0 to 1.0, determined on a pro forma basis (including a pro forma application of the net proceeds therefrom), as if the additional Indebtedness had been incurred, or the preferred stock had been issued, as the case may be, at the beginning of such four-quarter period.

The provisions of the first paragraph of this Section 4.09 shall not apply to the incurrence of any of the following items of Indebtedness (collectively, "Permitted Debt"):

(i) the incurrence by the Company of additional Indebtedness under Credit Facilities (and the guarantee thereof by the Guarantors) in an aggregate principal amount outstanding pursuant to this clause (i) at any one time (with letters of credit being deemed to have a principal amount equal to the maximum potential liability of the Company and its Restricted Subsidiaries thereunder), including all Permitted Refinancing Indebtedness then outstanding incurred to refund, refinance or replace any other Indebtedness incurred pursuant to this clause (i), not to exceed $750.0 million less the aggregate amount of all Net Proceeds of Asset Sales applied to repay any such Indebtedness pursuant to Section 4.10;

(ii) the incurrence by the Company and its Restricted Subsidiaries of the Existing Indebtedness;

(iii) the incurrence by the Company and the Guarantors of $400.0 million in aggregate principal amount of each of the Notes and the Exchange Notes and the Subsidiary Guarantees thereof;

(iv) the incurrence by the Company or any of its Restricted Subsidiaries of Indebtedness represented by Capital Lease Obligations, mortgage financings or purchase money obligations, in each case incurred for the purpose of financing all or any part of the purchase price or cost of construction or improvement of property, plant or equipment used in the business of the Company or such Restricted Subsidiary, in an aggregate principal amount, including all Permitted Refinancing Indebtedness then outstanding

incurred to refund, refinance or replace any other Indebtedness incurred pursuant to this clause (iv), not to exceed $100.0 million at any time outstanding;

(v) the incurrence by the Company or any of its Restricted Subsidiaries of Indebtedness in connection with the acquisition of assets or a new Restricted Subsidiary; provided that such Indebtedness was incurred by the prior owner of such assets or such Restricted Subsidiary prior to such acquisition by the Company or one of its Restricted Subsidiaries and was not incurred in connection with, or in contemplation of, such acquisition by the Company or one of its Restricted Subsidiaries; and provided further that the principal amount (or accreted value, as applicable) of such Indebtedness, together with any other outstanding Indebtedness incurred pursuant to this clause (v), does not exceed $50.0 million;

(vi) the incurrence by the Company or any of its Restricted Subsidiaries of Permitted Refinancing Indebtedness in exchange for, or the net proceeds of which are used to refund, refinance or replace, Indebtedness that was permitted by this Indenture to be incurred (other than intercompany Indebtedness or Indebtedness incurred pursuant to clause (i) above);

(vii) Indebtedness incurred by the Company or any of its Restricted Subsidiaries constituting reimbursement obligations with respect to letters of credit issued in the ordinary course of business in respect of workers' compensation claims or self-insurance, or other Indebtedness with respect to reimbursement type obligations regarding workers' compensation claims; provided, however, that upon the drawing of such letters of credit or the incurrence of such Indebtedness, such obligations are reimbursed within 30 days following such drawing or incurrence;

(viii) Indebtedness arising from agreements of the Company or a Restricted Subsidiary providing for indemnification, adjustment of purchase price or similar obligations, in each case, incurred or assumed in connection with the disposition of any business, assets or a Subsidiary, other than guarantees of Indebtedness incurred by any Person acquiring all or any portion of such business, assets or a Subsidiary for the purpose of financing such acquisition; provided, however, that (A) such Indebtedness is not reflected on the balance sheet of the Company or any Restricted Subsidiary (contingent obligations referred to in a footnote to financial statements and not otherwise reflected on the balance sheet shall not be deemed to be reflected on such balance sheet for purposes of this clause (A)) and (B) the maximum assumable liability in respect of all such Indebtedness shall at no time exceed the gross proceeds including noncash proceeds (the fair market value of such noncash proceeds being measured at the time received and without giving effect to any subsequent changes in value) actually received by the Company and its Restricted Subsidiaries in connection with such disposition;

(ix) the incurrence by the Company or any of its Restricted Subsidiaries of intercompany Indebtedness between or among the Company and any of its Restricted Subsidiaries; provided, however, that (A) if the Company is the obligor on such Indebtedness, such Indebtedness is expressly subordinated to the prior payment in full in cash of all Obligations with respect to the Notes and (B)(1) any subsequent issuance or

transfer of Equity Interests that results in any such Indebtedness being held by a Person other than the Company or one of its Restricted Subsidiaries and (2) any sale or other transfer of any such Indebtedness to a Person that is not either the Company or one of its Restricted Subsidiaries shall be deemed, in each case, to constitute an incurrence of such Indebtedness by the Company or such Restricted Subsidiary, as the case may be;

(x) the incurrence by the Company or any of the Guarantors of Hedging Obligations that are incurred for the purpose of (A) fixing, hedging or capping interest rate risk with respect to any floating rate Indebtedness that is permitted by the terms of this Indenture to be outstanding or (B) protecting the Company and its Restricted Subsidiaries against changes in currency exchange rates;

(xi) the guarantee by the Company or any of the Guarantors of Indebtedness of the Company or a Restricted Subsidiary of the Company that was permitted to be incurred by another provision of this Section 4.09;

(xii) the incurrence by the Company's Unrestricted Subsidiaries of Non-Recourse Debt, provided, however, that if any such Indebtedness ceases to be Non-Recourse Debt of an Unrestricted Subsidiary, such event shall be deemed to constitute an incurrence of Indebtedness by a Restricted Subsidiary of the Company that was not permitted by this clause (xii), and the issuance of preferred stock by Unrestricted Subsidiaries;

(xiii) obligations in respect of performance and surety bonds and completion guarantees provided by the Company or any Restricted Subsidiaries in the ordinary course of business; and

(xiv) the incurrence by the Company or any of its Restricted Subsidiaries of additional Indebtedness in an aggregate principal amount (or accreted value, as applicable) at any time outstanding, including all Permitted Refinancing Indebtedness then outstanding incurred to refund, refinance or replace any other Indebtedness incurred pursuant to this clause (xiv), not to exceed $100.0 million.

For purposes of determining compliance with this Section 4.09, in the event that an item of Indebtedness meets the criteria of more than one of the categories of Permitted Debt described in clauses (i) through (xiv) above or is entitled to be incurred pursuant to the first paragraph of this Section 4.09, the Company shall, in its sole discretion, classify, or later reclassify, such item of Indebtedness in any manner that complies with this covenant. Accrual of interest, the accretion of accreted value and the payment of interest in the form of additional Indebtedness shall not be deemed to be an incurrence of Indebtedness for purposes of this Section 4.09.

Section 4.10 Asset Sales.

The Company shall not, and shall not permit any of its Restricted Subsidiaries to, consummate an Asset Sale unless (i) the Company or the Restricted Subsidiary, as the case may be, receives consideration at the time of such Asset Sale at least equal to the fair market value (evidenced by an Officers' Certificate delivered to the Trustee which will include a resolution of

the Board of Directors with respect to such fair market value in the event such Asset Sale involves aggregate consideration in excess of $10.0 million) of the assets or Equity Interests issued or sold or otherwise disposed of and (ii) at least 80% of the consideration therefor received by the Company or such Restricted Subsidiary, as the case may be, consists of cash, Cash Equivalents and/or Marketable Securities; provided, however, that (A) the amount of any Senior Debt of the Company or such Restricted Subsidiary that is assumed by the transferee in any such transaction and (B) any consideration received by the Company or such Restricted Subsidiary, as the case may be, that consists of (1) all or substantially all of the assets of one or more Similar Businesses, (2) other long-term assets that are used or useful in one or more Similar Businesses and (3) Permitted Securities shall be deemed to be cash for purposes of this provision.

Within 365 days after the receipt of any Net Proceeds from an Asset Sale, the Company may apply such Net Proceeds, at its option, (i) to repay Indebtedness under a Credit Facility, (ii) to the acquisition of Permitted Securities, (iii) to the acquisition of all or substantially all of the assets of one or more Similar Businesses, (iv) to the making of a capital expenditure or (v) to the acquisition of other long-term assets in a Similar Business. Pending the final application of any such Net Proceeds, the Company may temporarily reduce Indebtedness under a Credit Facility or otherwise invest such Net Proceeds in any manner that is not prohibited by this Indenture. Any Net Proceeds from Asset Sales that are not applied or invested as provided in the first sentence of this paragraph shall be deemed to constitute "Excess Proceeds". When the aggregate amount of Excess Proceeds exceeds $10.0 million, the Company will be required to make an offer to all Holders of the Notes (an "Asset Sale Offer") and any other Indebtedness that ranks pari passu with the Notes (including, without limitation, the May 1998 Notes, the December 1998 Notes and the 2002 Notes) that, by its terms, requires the Company to offer to repurchase such Indebtedness with such Excess Proceeds to purchase the maximum principal amount of Notes and pari passu Indebtedness that may be purchased out of such Excess Proceeds at an offer price in cash in an amount equal to 100% of the principal amount thereof plus accrued and unpaid interest thereon, if any, to the date of purchase, in accordance with the procedures set forth in this Indenture. To the extent that the aggregate amount of Notes or pari passu Indebtedness tendered pursuant to an Asset Sale Offer is less than the Excess Proceeds, the Company may use any Excess Proceeds for general corporate purposes. If the aggregate principal amount of Notes or pari passu Indebtedness surrendered by Holders thereof exceeds the amount of Excess Proceeds in an Asset Sale Offer, the Company shall repurchase such Indebtedness on a pro rata basis and the Trustee shall select the Notes to be purchased on a pro rata basis. Upon completion of such offer to purchase, the amount of Excess Proceeds shall be reset at zero.

Section 4.11 Transactions With Affiliates.

The Company shall not, and shall not permit any of its Restricted Subsidiaries to, make any payment to, or sell, lease, transfer or otherwise dispose of any of its properties or assets to, or purchase any property or assets from, or enter into or make or amend any transaction, contract, agreement, understanding, loan, advance or guarantee with, or for the benefit of, any Affiliate (each of the foregoing, an "Affiliate Transaction"), unless (i) such Affiliate Transaction is on terms that are no less favorable to the Company or the relevant Restricted Subsidiary than those that would have been obtained in a comparable transaction by

the Company or such Restricted Subsidiary with an unrelated Person and (ii) the Company delivers to the Trustee (A) with respect to any Affiliate Transaction or series of related Affiliate Transactions involving aggregate consideration in excess of $5.0 million, a resolution of the Board of Directors set forth in an Officers' Certificate certifying that such Affiliate Transaction complies with clause (i) above and that such Affiliate Transaction has been approved by a majority of the disinterested members of the Board of Directors and (B) with respect to any Affiliate Transaction or series of related Affiliate Transactions involving aggregate consideration in excess of $15.0 million, an opinion as to the fairness to the Holders of such Affiliate Transaction from a financial point of view issued by an accounting, appraisal or investment banking firm of national standing.

The foregoing provisions shall not prohibit: (i) any employment agreement entered into by the Company or any of its Restricted Subsidiaries in the ordinary course of business; (ii) any transaction with a Lehman Investor; (iii) any transaction between or among the Company and/or its Restricted Subsidiaries; (iv) transactions between the Company or any of its Restricted Subsidiaries, on the one hand, and a Permitted Joint Venture, on the other hand, on terms that are not materially less favorable to the Company or the applicable Restricted Subsidiary of the Company than those that could have been obtained from an unaffiliated third party; provided that (A) in the case of any such transaction or series of related transactions pursuant to this clause (iv) involving aggregate consideration in excess of $5.0 million but less than $25.0 million, such transaction or series of transactions (or the agreement pursuant to which the transactions were executed) was approved by the Company's Chief Executive Officer or Chief Financial Officer and (B) in the case of any such transaction or series of related transactions pursuant to this clause (iv) involving aggregate consideration equal to or in excess of $25.0 million, such transaction or series of related transactions (or the agreement pursuant to which the transactions were executed) was approved by a majority of the disinterested members of the Board of Directors; (v) any transaction pursuant to and in accordance with the provisions of the Transaction Documents as the same are in effect on the date of this Indenture; and (vi) any Restricted Payment that is permitted by the provisions of Section 4.07.

Section 4.12 Liens.

The Company shall not, and shall not permit any of its Restricted Subsidiaries to, directly or indirectly, create, incur, assume or suffer to exist any Lien (other than Permitted Liens) securing Indebtedness on any asset now owned or hereafter acquired, or any income or profits therefrom or assign or convey any right to receive income therefrom, unless all payments due under this Indenture and the Notes are secured on an equal and ratable basis with the Obligations so secured until such time as such Obligations are no longer secured by a Lien.

Section 4.13 Future Subsidiary Guarantees.

If the Company or any of its Subsidiaries shall acquire or create a Subsidiary (other than a Foreign Subsidiary or an Unrestricted Subsidiary) after the date of this Indenture, then such Subsidiary shall execute a Subsidiary Guarantee, in the form of the Supplemental Indenture attached hereto as Exhibit E, and the Form of Notation on Senior Subordinated Note, attached hereto as Exhibit F, and deliver an opinion of counsel as to the validity of such Subsidiary Guarantee, in accordance with the terms of this Indenture. The Subsidiary Guarantee

of each Guarantor will be subordinated to the prior payment in full of all Senior Debt of such Guarantor, which would include the guarantees of amounts borrowed under the Senior Credit Facilities. The obligations of each Guarantor under its Subsidiary Guarantee will be limited so as not to constitute a fraudulent conveyance under applicable law.

Notwithstanding the foregoing paragraph, for so long as certain covenants are suspended pursuant to Section 4.18 hereof, no newly acquired or created Subsidiary will be required to execute a Subsidiary Guarantee or the related Notation on Senior Subordinated Note unless such Subsidiary Guarantees Indebtedness of the Company under a Credit Facility. However, any Subsidiary (other than a Foreign Subsidiary or an Unrestricted Subsidiary) that Guarantees any Indebtedness of the Company under a Credit Facility will become a Subsidiary Guarantor and, if at any time certain covenants are reinstituted pursuant to Section 4.18 hereof, any newly acquired or created Subsidiary (other than a Foreign Subsidiary or an Unrestricted Subsidiary) will Guarantee the Notes on the terms and conditions set forth in this Indenture.

No Guarantor may consolidate with or merge with or into (whether or not such Guarantor is the surviving Person) another Person (except the Company or another Guarantor) unless (i) subject to the provisions of the following paragraph, the Person formed by or surviving any such consolidation or merger (if other than such Guarantor) or to which such sale, assignment, transfer, lease, conveyance or other disposition shall have been made assumes all the obligations of such Guarantor pursuant to a supplemental indenture in form and substance reasonably satisfactory to the Trustee, under the Notes and this Indenture; (ii) immediately after giving effect to such transaction, no Default or Event of Default exists; and (iii) the Company (A) would be permitted by virtue of the Company's pro forma Fixed Charge Coverage Ratio, immediately after giving effect to such transaction, to incur at least $1.00 of additional Indebtedness pursuant to the Fixed Charge Coverage Ratio test set forth in Section 4.09 or (B) would have a pro forma Fixed Charge Coverage Ratio that is greater than the actual Fixed Charge Coverage Ratio for the same four-quarter period without giving pro forma effect to such transaction.

Notwithstanding the foregoing clause (iii), (i) any Guarantor may consolidate with, merge into or transfer all or part of its properties and assets to the Company or to another Guarantor and (ii) any Guarantor may merge with an Affiliate that has no significant assets or liabilities and was incorporated solely for the purpose of reincorporating such Guarantor in another State of the United States so long as the amount of Indebtedness of the Company and its Restricted Subsidiaries is not increased thereby.

In the event of a sale or other disposition of all of the assets of any Guarantor, by way of merger, consolidation or otherwise, or a sale or other disposition of all of the capital stock of any Guarantor, then such Guarantor (in the event of a sale or other disposition, by way of such a merger, consolidation or otherwise, of all of the capital stock of such Guarantor) or the corporation acquiring the property (in the event of a sale or other disposition of all of the assets of such Guarantor) will be released and relieved of any obligations under its Subsidiary Guarantee; provided that the Net Proceeds of such sale or other disposition are applied in accordance with the applicable provisions of Section 4.10.

Section 4.14 Corporate Existence.

Subject to Article 5 hereof, the Company shall do or cause to be done all things necessary to preserve and keep in full force and effect (i) its corporate existence, and the corporate, partnership or other existence of each of its Restricted Subsidiaries, in accordance with the respective organizational documents (as the same may be amended from time to time) of the Company or any such Restricted Subsidiary and (ii) the rights (charter and statutory), licenses and franchises of the Company and its Restricted Subsidiaries; provided, however, that the Company shall not be required to preserve any such right, license or franchise, or the corporate, partnership or other existence of any of its Restricted Subsidiaries, if the Board of Directors shall determine that the preservation thereof is no longer desirable in the conduct of the business of the Company and its Restricted Subsidiaries, taken as a whole, and that the loss thereof is not adverse in any material respect to the Holders of the Notes.

Section 4.15 Offer To Repurchase Upon Change Of Control.

(a) Upon the occurrence of a Change of Control, each Holder of Notes shall have the right to require the Company to repurchase all or any part (equal to $1,000 or an integral multiple thereof) of such Holder's Notes pursuant to the offer described below (the "Change of Control Offer") at an offer price in cash equal to 101% of the aggregate principal amount thereof plus accrued and unpaid interest and Additional Amounts thereon, if any, to the date of purchase (the "Change of Control Payment"). Within ten days following any Change of Control, the Company shall mail a notice to each Holder describing the transaction or transactions that constitute the Change of Control and offering to repurchase Notes on the date specified in such notice, which date shall be no earlier than 30 days and no later than 60 days from the date such notice is mailed (the "Change of Control Payment Date"). Such notice, which shall govern the terms of the Change of Control offer, shall state: (i) that the Change of Control Offer is being made pursuant to this Section 4.15 and that all Notes tendered will be accepted for payment; (ii) the purchase price and the purchase date; (iii) that any Note not tendered will continue to accrue interest; (iv) that, unless the Company defaults in the payment of the Change of Control Payment, all Notes accepted for payment pursuant to the Change of Control Offer shall cease to accrue interest after the Change of Control Payment Date; (v) that Holders electing to have any Notes purchased pursuant to a Change of Control Offer will be required to surrender the Notes, with the form entitled "Option of Holder to Elect Purchase" on the reverse of the Notes completed, to the Paying Agent at the address specified in the notice prior to the close of business on the third Business Day preceding the Change of Control Payment Date; (vi) that Holders will be entitled to withdraw their election if the Paying Agent receives, not later than the close of business on the second Business Day preceding the Change of Control Payment Date, a telegram, telex, facsimile transmission or letter setting forth the name of the Holder, the principal amount of Notes delivered for purchase, and a statement that such Holder is withdrawing his election to have the Notes purchased; and (vii) that Holders whose Notes are being purchased only in part will be issued new Notes equal in principal amount to the unpurchased portion of the Notes surrendered, which unpurchased portion must be equal to $1,000 in principal amount or an integral multiple thereof. The Company shall comply with the requirements of Rule 14e-1 under the Exchange Act and any other securities laws and regulations thereunder to the extent such laws and regulations are applicable in connection with the repurchase of Notes in connection with a Change of Control.

(b) On the Change of Control Payment Date, the Company shall, to the extent lawful, (i) accept for payment all Notes or portions thereof properly tendered pursuant to the Change of Control Offer, (ii) deposit with the Paying Agent an amount equal to the Change of Control Payment in respect of all Notes or portions thereof so tendered and (iii) deliver or cause to be delivered to the Trustee the Notes so accepted together with an Officers' Certificate stating the aggregate principal amount of Notes or portions thereof being purchased by the Company. The Paying Agent shall promptly mail to each Holder of Notes so tendered the Change of Control Payment for such Notes, and the Trustee shall promptly authenticate and mail (or cause to be transferred by book entry) to each Holder a new Note equal in principal amount to any unpurchased portion of the Notes surrendered, if any; provided that each such new Note shall be in a principal amount of $1,000 or an integral multiple thereof. Prior to mailing a Change of Control Offer, but in any event within 90 days following a Change of Control, the Company shall either repay all outstanding Senior Debt or offer to repay all Senior Debt and terminate all commitments thereunder of each lender who has accepted such offer or obtain the requisite consents, if any, under all agreements governing outstanding Senior Debt to permit the repurchase of Notes required by this Section 4.15. The Company shall publicly announce the results of the Change of Control Offer on or as soon as practicable after the Change of Control Payment Date.

Section 4.16 No Senior Subordinated Debt.

The Company shall not incur, create, issue, assume, guarantee or otherwise become liable for any Indebtedness that is subordinate or junior in right of payment to any Senior Debt and senior in any respect in right of payment to the Notes. No Guarantor shall incur, create, issue, assume, guarantee or otherwise become liable for any Indebtedness that is subordinate or junior in right of payment to any Senior Debt of a Guarantor and senior in any respect in right of payment to any of the Subsidiary Guarantees.

Section 4.17 Payments For Consent.

Neither the Company nor any of its Subsidiaries shall, directly or indirectly, pay or cause to be paid any consideration, whether by way of interest, fee or otherwise, to any Holder of any Notes for or as an inducement to any consent, waiver or amendment of any of the terms or provisions of this Indenture or the Notes unless such consideration is offered to be paid or is paid to all Holders of the Notes that consent, waive or agree to amend in the time frame set forth in the solicitation documents relating to such consent, waiver or agreement.

Section 4.18 Changes in Covenants when Notes Rated Investment Grade.

If on any date following the date of this Indenture: (i) the Notes are rated Baa3 or better by Moody's and BBB- or better by S&P (or, if either such entity ceases to rate the Notes for reasons outside of the control of the Company, the equivalent investment grade credit rating from any other "nationally recognized statistical rating organization" within the meaning of Rule 15c3-1(c)(2)(vi)(F) under the Exchange Act selected by Company as a replacement agency) and (ii) no Default or Event of Default shall have occurred and be continuing, then, beginning on that day and subject to the provisions of the following paragraph, the provisions and covenants contained in Sections 4.07, 4.08, 4.09, 4.10, 4.11 and 4.17 hereof, clauses (iii)(A) and (B) of the

third paragraph of Section 4.13 hereof and clauses (iv)(A) and (B) of the first paragraph of Section 5.01 hereof will be suspended.

In addition, following the achievement of such investment grade ratings, (i) the Subsidiary Guarantees of the Company's Restricted Subsidiaries will be released at the time of the release of Guarantees under all outstanding Credit Facilities; provided that in the event that any such Restricted Subsidiary thereafter Guarantees any Indebtedness of the Company under any Credit Facility (or if any released Guarantee under any Credit Facility is reinstated or renewed), or if at any time certain covenants are reinstituted as provided in the following paragraph, then such Restricted Subsidiary will Guarantee the Notes on the terms and conditions set forth in this Indenture and (ii) as described in Section 4.13 hereof, no Restricted Subsidiary thereafter acquired or created will be required to execute a Subsidiary Guarantee unless such Subsidiary Guarantees Indebtedness of the Company under a Credit Facility.

Notwithstanding the foregoing, if the rating assigned to the Notes by any such rating agency should subsequently decline to below Baa3 or BBB-, respectively, the foregoing covenants shall be reinstituted as of and from the date of such rating decline. For purposes of determining whether a Restricted Payment exceeds the allowable amount under the calculation described in subparagraphs (i) through (iv) of Section 4.07(c) hereof, the covenant contained in Section 4.07 hereof will be interpreted as if it had been in effect since the date of this Indenture. However, no default will be deemed to have occurred as a result of the provisions and covenants contained in Sections 4.07, 4.08, 4.09, 4.10, 4.11 and 4.17 hereof, clauses (iii)(A) and (B) of the third paragraph of Section 4.13 hereof and clauses (iv)(A) and (B) of the first paragraph of Section 5.01 hereof while those provisions and covenants were suspended.

ARTICLE 5.
SUCCESSORS

Section 5.01 Merger, Consolidation, Or Sale Of Assets.

The Company may not consolidate or merge with or into (whether or not the Company is the surviving corporation), or sell, assign, transfer, lease, convey or otherwise dispose of all or substantially all of its properties or assets in one or more related transactions, to another Person unless (i) the Company is the surviving corporation or the Person formed by or surviving any such consolidation or merger (if other than the Company) or to which such sale, assignment, transfer, lease, conveyance or other disposition shall have been made is a corporation organized or existing under the laws of the United States, any state thereof or the District of Columbia; (ii) the Person formed by or surviving any such consolidation or merger (if other than the Company) or the Person to which such sale, assignment, transfer, lease, conveyance or other disposition shall have been made assumes all the obligations of the Company under the Registration Rights Agreement, the Notes and this Indenture pursuant to a supplemental indenture in a form reasonably satisfactory to the Trustee; (iii) immediately after such transaction no Default or Event of Default exists; and (iv) except in the case of a merger of the Company with or into a Wholly Owned Restricted Subsidiary of the Company, the Company or the Person formed by or surviving any such consolidation or merger (if other than the Company), or to which such sale, assignment, transfer, lease, conveyance or other disposition shall have been made, after giving pro forma effect to such transaction as if such transaction had

occurred at the beginning of the most recently ended four full fiscal quarters for which internal financial statements are available immediately preceding such transaction either: (A) would be permitted to incur at least $1.00 of additional Indebtedness pursuant to the Fixed Charge Coverage Ratio test set forth in the first paragraph of Section 4.09 or (B) would have a pro forma Fixed Charge Coverage Ratio that is greater than the actual Fixed Charge Coverage Ratio for the same four-quarter period without giving pro forma effect to such transaction.

Notwithstanding clause (iv) in the immediately foregoing paragraph, (i) any Restricted Subsidiary may consolidate with, merge into or transfer all or part of its properties and assets to the Company; and (ii) the Company may merge with an Affiliate that has no significant assets or liabilities and was incorporated solely for the purpose of reincorporating the Company in another State of the United States so long as the amount of Indebtedness of the Company and its Restricted Subsidiaries is not increased thereby.

Section 5.02 Successor Corporation Substituted.

Upon any consolidation or merger, or any sale, assignment, transfer, lease, conveyance or other disposition of all or substantially all of the assets of the Company in accordance with Section 5.01 hereof, the successor corporation formed by such consolidation or into or with which the Company is merged or to which such sale, assignment, transfer, lease, conveyance or other disposition is made shall succeed to, be substituted for (so that from and after the date of such consolidation, merger, sale, lease, conveyance or other disposition, the provisions of this Indenture referring to the "Company" shall refer instead to the successor corporation and not to the Company), and may exercise every right and power of, the Company under this Indenture with the same effect as if such successor Person had been named as the Company herein; provided, however, that the predecessor Company shall not be relieved from the obligation to pay the principal of and interest on the Notes except in the case of a sale of all of the Company's assets that meets the requirements of Section 5.01 hereof.

ARTICLE 6.
DEFAULTS AND REMEDIES

Section 6.01 Events of Default.

An "Event of Default" occurs if:

(a) the Company defaults in the payment when due of interest on, or Additional Amounts, if any, with respect to, the Notes and such default continues for a period of 30 days (whether or not prohibited by the subordination provisions of this Indenture);

(b) the Company defaults in the payment when due of the principal of or premium, if any, on the Notes (whether or not prohibited by the subordination provisions of this Indenture);

(c) the Company fails to comply with any of the provisions of Section 4.10, 4.15, or 5.01 hereof;

(d) the Company fails to observe or perform any other covenant or other agreement in this Indenture or the Notes for 60 days after notice to the Company by the Trustee or the Holders of at least 25% in aggregate principal amount of the Notes then outstanding;

(e) a default occurs under any mortgage, indenture or instrument under which there may be issued or by which there may be secured or evidenced any Indebtedness for money borrowed by the Company or any of its Restricted Subsidiaries (or the payment of which is guaranteed by the Company or any of its Restricted Subsidiaries), whether such Indebtedness or guarantee now exists, or is created after the date of this Indenture, which default results in the acceleration of such Indebtedness prior to its express maturity and, in each case, the principal amount of such Indebtedness, together with the principal amount of any other such Indebtedness, the maturity of which has been so accelerated, aggregates $25.0 million or more;

(f) the Company or any of its Restricted Subsidiaries is subject to a final judgments aggregating in excess of $25.0 million, which judgments are not paid, discharged or stayed for a period of 60 days;

(g) the Company or any of its Significant Subsidiaries or any group of Subsidiaries that, taken as a whole, would constitute a Significant Subsidiary pursuant to or within the meaning of Bankruptcy Law:

(i) commences a voluntary case,

(ii) consents to the entry of an order for relief against it in an involuntary case,

(iii) consents to the appointment of a custodian of it or for all or substantially all of its property,

(iv) makes a general assignment for the benefit of its creditors, or

(v) generally is not paying its debts as they become due;

(h) a court of competent jurisdiction enters an order or decree under any Bankruptcy Law that:

(i) is for relief against the Company or any of its Significant Subsidiaries or any group of Subsidiaries that, taken as a whole, would constitute a Significant Subsidiary in an involuntary case;

(ii) appoints a custodian of the Company or any of its Significant Subsidiaries or any group of Subsidiaries that, taken as a whole, would constitute a Significant Subsidiary or for all or substantially all of the property of the Company or any of its Significant Subsidiaries or any group of Subsidiaries that, taken as a whole, would constitute a Significant Subsidiary; or

(iii) orders the liquidation of the Company or any of its Significant Subsidiaries or any group of Subsidiaries that, taken as a whole, would constitute a Significant Subsidiary;

and the order or decree remains unstayed and in effect for 60 consecutive days; or

(i) except as permitted herein, any Subsidiary Guarantee shall be held in any judicial proceeding to be unenforceable or invalid.

The Holders of a majority in aggregate principal amount of the Notes then outstanding by notice to the Trustee may on behalf of the Holders of all of the Notes waive any existing Default or Event of Default and its consequences under this Indenture except a continuing Default or Event of Default in the payment of interest on, or the principal of, the Notes.

Section 6.02 Acceleration.

If any Event of Default occurs and is continuing, the Trustee or the Holders of at least 25% in principal amount of the then outstanding Notes may declare all the Notes to be due and payable immediately; provided, however, that so long as any Designated Senior Debt is outstanding, such declaration shall not become effective until the earlier of (i) the day which is five Business Days after receipt by the Representatives of Designated Senior Debt of such notice of acceleration or (ii) the date of acceleration of any Designated Senior Debt. Notwithstanding the foregoing, in the case of an Event of Default arising from certain events of bankruptcy or insolvency, with respect to the Company or any Significant Subsidiary or any group of Subsidiaries that, taken as a whole, would constitute a Significant Subsidiary, all outstanding Notes will become due and payable without further action or notice. Holders of the Notes may not enforce this Indenture or the Notes except as provided in this Indenture. Subject to certain limitations, Holders of a majority in principal amount of the then outstanding Notes may direct the Trustee in its exercise of any trust or power. The Trustee may withhold from Holders of the Notes notice of any continuing Default or Event of Default (except a Default or Event of Default relating to the payment of principal or interest) if it determines that withholding notice is in their interest.

In the case of any Event of Default occurring by reason of any willful action (or inaction) taken (or not taken) by or on behalf of the Company with the intention of avoiding payment of the premium that the Company would have had to pay if the Company then had elected to redeem the Notes pursuant to the optional redemption provisions of this Indenture, an equivalent premium shall also become and be immediately due and payable to the extent permitted by law upon the acceleration of the Notes. If an Event of Default occurs prior to July 15, 2008 by reason of any willful action (or inaction) taken (or not taken) by or on behalf of the Company with the intention of avoiding the prohibition on redemption of the Notes prior to July 15, 2008 then the premium specified below (expressed as a percentage of the principal amount of the Notes on the date of payment that would otherwise be due but for the provisions of this sentence) shall also become immediately due and payable to the extent permitted by law upon the acceleration of the Notes during the twelve-month period ending on July 15 of the years indicated below:

Year	Percentage
2003	6.125%
2004	5.513%
2005	4.900%
2006	4.288%
2007	3.675%
2008	3.063%

Section 6.03 Other Remedies.

If an Event of Default occurs and is continuing, the Trustee may pursue any available remedy to collect the payment of principal, premium, if any, and interest on the Notes or to enforce the performance of any provision of the Notes or this Indenture.

The Trustee may maintain a proceeding even if it does not possess any of the Notes or does not produce any of them in the proceeding. A delay or omission by the Trustee or any Holder of a Note in exercising any right or remedy accruing upon an Event of Default shall not impair the right or remedy or constitute a waiver of or acquiescence in the Event of Default. All remedies are cumulative to the extent permitted by law.

Section 6.04 Waiver of Past Defaults.

Holders of not less than a majority in aggregate principal amount of the then outstanding Notes by notice to the Trustee may on behalf of the Holders of all of the Notes waive an existing Default or Event of Default and its consequences hereunder, except a continuing Default or Event of Default in the payment of the principal of, premium or Additional Amounts, if any, or interest on, the Notes including in connection with an offer to purchase; provided, however, that the Holders of a majority in aggregate principal amount at maturity of the then outstanding Notes may rescind an acceleration and its consequences, including any related payment default that resulted from such acceleration. Upon any such waiver, such Default shall cease to exist, and any Event of Default arising therefrom shall be deemed to have been cured for every purpose of this Indenture; but no such waiver shall extend to any subsequent or other Default or impair any right consequent thereon.

Section 6.05 Control By Majority.

Holders of a majority in principal amount of the then outstanding Notes may direct the time, method and place of conducting any proceeding for exercising any remedy available to the Trustee or exercising any trust or power conferred on it. However, the Trustee may refuse to follow any direction that conflicts with law or this Indenture or that the Trustee determines may be unduly prejudicial to the rights of other Holders of Notes or that may involve the Trustee in personal liability.

Section 6.06 Limitation On Suits.

A Holder of a Note may pursue a remedy with respect to this Indenture or the Notes only if:

(a) the Holder of a Note gives to the Trustee written notice of a continuing Event of Default;

(b) the Holders of at least 25% in principal amount of the then outstanding Notes make a written request to the Trustee to pursue the remedy;

(c) such Holder of a Note or Holders of Notes offer and, if requested, provide to the Trustee indemnity satisfactory to the Trustee against any loss, liability or expense;

(d) the Trustee does not comply with the request within 60 days after receipt of the request and the offer and, if requested, the provision of indemnity; and

(e) during such 60-day period the Holders of a majority in principal amount of the then outstanding Notes do not give the Trustee a direction inconsistent with the request.

A Holder of a Note may not use this Indenture to prejudice the rights of another Holder of a Note or to obtain a preference or priority over another Holder of a Note.

Section 6.07 Rights of Holders of Notes to Receive Payment.

Notwithstanding any other provision of this Indenture, the right of any Holder of a Note to receive payment of principal, premium and Additional Amounts, if any, and interest on the Note, on or after the respective due dates expressed in the Note (including in connection with an offer to purchase), or to bring suit for the enforcement of any such payment on or after such respective dates, shall not be impaired or affected without the consent of such Holder.

Section 6.08 Collection Suit by Trustee.

If an Event of Default specified in Section 6.01(a) or (b) occurs and is continuing, the Trustee is authorized to recover judgment in its own name and as trustee of an express trust against the Company for the whole amount of principal of, premium and Additional Amounts, if any, and interest remaining unpaid on the Notes and interest on overdue principal and, to the extent lawful, interest and such further amount as shall be sufficient to cover the costs and expenses of collection, including the reasonable compensation, expenses, disbursements and advances of the Trustee, its agents and counsel.

Section 6.09 Trustee May File Proofs Of Claim.

The Trustee is authorized to file such proofs of claim and other papers or documents as may be necessary or advisable in order to have the claims of the Trustee (including any claim for the reasonable compensation, expenses, disbursements and advances of the Trustee, its agents and counsel) and the Holders of the Notes allowed in any judicial proceedings relative to the Company (or any other obligor upon the Notes), its creditors or its property and shall be entitled and empowered to collect, receive and distribute any money or other property payable or deliverable on any such claims and any custodian in any such judicial proceeding is hereby authorized by each Holder to make such payments to the Trustee, and in the event that the Trustee shall consent to the making of such payments directly to the Holders, to pay to the

Trustee any amount due to it for the reasonable compensation, expenses, disbursements and advances of the Trustee, its agents and counsel, and any other amounts due the Trustee under Section 7.07 hereof. To the extent that the payment of any such compensation, expenses, disbursements and advances of the Trustee, its agents and counsel, and any other amounts due the Trustee under Section 7.07 hereof out of the estate in any such proceeding, shall be denied for any reason, payment of the same shall be secured by a Lien on, and shall be paid out of, any and all distributions, dividends, money, securities and other properties that the Holders may be entitled to receive in such proceeding whether in liquidation or under any plan of reorganization or arrangement or otherwise. Nothing herein contained shall be deemed to authorize the Trustee to authorize or consent to or accept or adopt on behalf of any Holder any plan of reorganization, arrangement, adjustment or composition affecting the Notes or the rights of any Holder, or to authorize the Trustee to vote in respect of the claim of any Holder in any such proceeding.

Section 6.10 Priorities.

If the Trustee collects any money pursuant to this Article, it shall pay out the money in the following order:

First: to the Trustee, its agents and attorneys for amounts due under Section 7.07 hereof, including payment of all compensation, expense and liabilities incurred, and all advances made, by the Trustee and the costs and expenses of collection;

Second: to Holders of Notes for amounts due and unpaid on the Notes for principal, premium and Additional Amounts, if any, and interest, ratably, without preference or priority of any kind, according to the amounts due and payable on the Notes for principal, premium and Additional Amounts, if any, and interest, respectively; and

Third: to the Company or to such party as a court of competent jurisdiction shall direct.

The Trustee may fix a record date and payment date for any payment to Holders of Notes pursuant to this Section 6.10.

Section 6.11 Undertaking for Costs.

In any suit for the enforcement of any right or remedy under this Indenture or in any suit against the Trustee for any action taken or omitted by it as a Trustee, a court in its discretion may require the filing by any party litigant in the suit of an undertaking to pay the costs of the suit, and the court in its discretion may assess reasonable costs, including reasonable attorneys' fees, against any party litigant in the suit, having due regard to the merits and good faith of the claims or defenses made by the party litigant. This Section does not apply to a suit by the Trustee, a suit by a Holder of a Note pursuant to Section 6.07 hereof, or a suit by Holders of more than 10% in principal amount of the then outstanding Notes.

ARTICLE 7.
TRUSTEE

Section 7.01 Duties Of Trustee.

(a) If an Event of Default has occurred and is continuing, the Trustee shall exercise such of the rights and powers vested in it by this Indenture, and use the same degree of care and skill in its exercise, as a prudent person would exercise or use under the circumstances in the conduct of such person's affairs.

(b) Except during the continuance of an Event of Default:

(i) the duties of the Trustee shall be determined solely by the express provisions of this Indenture and the Trustee need perform only those duties that are specifically set forth in this Indenture and no others, and no implied covenants or obligations shall be read into this Indenture against the Trustee; and

(ii) in the absence of bad faith or negligence on its part, the Trustee may conclusively rely, as to the truth of the statements and the correctness of the opinions expressed therein, upon certificates or opinions furnished to the Trustee and conforming to the requirements of this Indenture. However, the Trustee shall examine the certificates and opinions to determine whether or not they conform to the requirements of this Indenture (but need not confirm or investigate the accuracy of mathematical calculations or other facts stated therein).

(c) The Trustee may not be relieved from liabilities for its own negligent action, its own negligent failure to act, or its own willful misconduct, except that:

(i) this paragraph does not limit the effect of paragraph (b) of this Section;

(ii) the Trustee shall not be liable for any error of judgment made in good faith by a Responsible Officer, unless it is proved that the Trustee was negligent in ascertaining the pertinent facts; and

(iii) the Trustee shall not be liable with respect to any action it takes or omits to take in good faith in accordance with a direction received by it pursuant to Section 6.05 hereof.

(d) Whether or not therein expressly so provided, every provision of this Indenture that in any way relates to the Trustee is subject to paragraphs (a), (b), and (c) of this Section.

(e) No provision of this Indenture shall require the Trustee to expend or risk its own funds or incur any liability. The Trustee shall be under no obligation to exercise any of its rights and powers under this Indenture at the request of any Holders, unless such Holder shall have offered to the Trustee security and indemnity satisfactory to it against any loss, liability or expense.

(f) The Trustee shall not be liable for interest on any money received by it except as the Trustee may agree in writing with the Company. Money held in trust by the Trustee need not be segregated from other funds except to the extent required by law.

Section 7.02 Rights Of Trustee.

(a) The Trustee may conclusively rely upon any document believed by it to be genuine and to have been signed or presented by the proper Person. The Trustee need not investigate any fact or matter stated in such document.

(b) Before the Trustee acts or refrains from acting, it may require an Officers' Certificate or an Opinion of Counsel or both. The Trustee shall not be liable for any action it takes or omits to take in good faith in reliance on such Officers' Certificate or Opinion of Counsel. The Trustee may consult with counsel and the advice of such counsel or any Opinion of Counsel shall be full and complete authorization and protection from liability in respect of any action taken, suffered or omitted by it hereunder in good faith and in reliance thereon.

(c) The Trustee may act through its attorneys and agents and shall not be responsible for the misconduct or negligence of any agent appointed with due care.

(d) The Trustee shall not be liable for any action it takes or omits to take in good faith that it believes to be authorized or within the rights or powers conferred upon it by this Indenture.

(e) Unless otherwise specifically provided in this Indenture, any demand, request, direction or notice from the Company shall be sufficient if signed by an Officer of the Company.

(f) The Trustee shall be under no obligation to exercise any of the rights or powers vested in it by this Indenture at the request or direction of any of the Holders unless such Holders shall have offered to the Trustee reasonable security or indemnity against the costs, expenses and liabilities that might be incurred by it in compliance with such request or direction.

(g) The Trustee may execute any of the trusts or powers hereunder or perform any duties hereunder either directly or by or through agents or attorneys and the Trustee shall not be responsible for any misconduct or negligence on the part of any agent or attorney appointed with due care by it hereunder.

(h) The Trustee shall not be deemed to have notice of any Default or Event of Default unless a Responsible Officer of the Trustee has actual knowledge thereof or unless written notice of any event which is in fact such a default is received by the Trustee at the Corporate Trust Office of the Trustee, and such notice references the Notes and this Indenture.

(i) Money held by the Trustee in trust hereunder need not be segregated from other funds except to the extent required by law. The Trustee shall be under no liability for interest on any money received by it hereunder except as otherwise agreed in writing with the Company.

(j) The rights, privileges, protections, immunities and benefits given to the Trustee, including, without limitation, its right to be indemnified, are extended to, and shall be enforceable by, the Trustee in each of its capacities hereunder, and to each agent, custodian and other Person employed to act hereunder.

(k) The Trustee may request that the Company deliver an Officers' Certificate setting forth the names of individuals and/or titles of officers authorized at such time to take specified actions pursuant to this Indenture, which Officers' Certificate may be signed by any person authorized to sign an Officers' Certificate, including any person specified as so authorized in any such certificate previously delivered send not superseded.

Section 7.03 Individual Rights of Trustee.

The Trustee in its individual or any other capacity may become the owner or pledgee of Notes and may otherwise deal with the Company or any Affiliate of the Company with the same rights it would have if it were not Trustee. However, in the event that the Trustee acquires any conflicting interest it must eliminate such conflict within 90 days, apply to the SEC for permission to continue as trustee or resign. Any Agent may do the same with like rights and duties. The Trustee is also subject to Sections 7.10 and 7.11 hereof.

Section 7.04 Trustee's Disclaimers.

The Trustee shall not be responsible for and makes no representation as to the validity or adequacy of this Indenture or the Notes, it shall not be accountable for the Company's use of the proceeds from the Notes or any money paid to the Company or upon the Company's direction under any provision of this Indenture, it shall not be responsible for the use or application of any money received by any Paying Agent other than the Trustee, and it shall not be responsible for any statement or recital herein or any statement in the Notes or any other document in connection with the sale of the Notes or pursuant to this Indenture other than its certificate of authentication.

Section 7.05 Notice of Defaults.

If a Default or Event of Default occurs and is continuing and if it is known to the Trustee, the Trustee shall mail to Holders of Notes a notice of the Default or Event of Default within 90 days after it occurs. Except in the case of a Default or Event of Default in payment of principal of, premium, if any, or interest on any Note, the Trustee may withhold the notice if and so long as a committee of its Responsible Officers in good faith determines that withholding the notice is in the interests of the Holders of the Notes.

Section 7.06 Reports by Trustee to Holders of the Notes.

Within 60 days after each July 15 beginning with the July 15 following the date of this Indenture, and for so long as Notes remain outstanding, the Trustee shall mail to the Holders of the Notes a brief report dated as of such reporting date that complies with TIA ss. 313(a) (but if no event described in TIA ss. 313(a) has occurred within the twelve months preceding the reporting date, no report need be transmitted). The Trustee also shall comply with TIA ss. 313(b)(2). The Trustee shall also transmit by mail all reports as required by TIA ss. 313(c).

A copy of each report at the time of its mailing to the Holders of Notes shall be mailed to the Company and filed with the SEC and each stock exchange on which the Notes are listed in accordance with TIA ss. 313(d). The Company shall promptly notify the Trustee when the Notes are listed on any stock exchange.

Section 7.07 Compensation and Indemnity.

The Company shall pay to the Trustee from time to time such compensation as the Company and the Trustee shall from time to time agree in writing for its acceptance of this Indenture and services hereunder. The Trustee's compensation shall not be limited by any law on compensation of a trustee of an express trust. The Company shall reimburse the Trustee promptly upon request for all reasonable disbursements, advances and expenses incurred or made by it in addition to the compensation for its services. Such expenses shall include the reasonable compensation, disbursements and expenses of the Trustee's agents and counsel.

The Company shall indemnify the Trustee or any predecessor Trustee against any and all losses, liabilities or expenses, including taxes (except for taxes based upon the income of the Trustee), incurred by it arising out of or in connection with the acceptance or administration of its duties under this Indenture, including the costs and expenses of enforcing this Indenture against the Company (including this Section 7.07) and defending itself against any claim (whether asserted by the Company or any Holder or any other person) or liability in connection with the exercise or performance of any of its powers or duties hereunder, except to the extent any such loss, liability or expense may be attributable to its negligence or bad faith. The Trustee shall notify the Company promptly of any claim for which it may seek indemnity. Failure by the Trustee to so notify the Company shall not relieve the Company of its obligations hereunder. The Company shall defend the claim and the Trustee shall cooperate in the defense. The Trustee may have separate counsel and the Company shall pay the reasonable fees and expenses of such counsel. The Company need not pay for any settlement made without its consent, which consent shall not be unreasonably withheld.

The obligations of the Company under this Section 7.07 shall survive the satisfaction and discharge of this Indenture and the resignation or removal of the Trustee.

When the Trustee incurs expenses or renders services after an Event of Default specified in Section 6.01(g) or (h) hereof occurs, the expenses and the compensation for the services (including the fees and expenses of its agents and counsel) are intended to constitute expenses of administration under any Bankruptcy Law.

The Trustee shall comply with the provisions of TIA ss. 313(b)(2) to the extent applicable.

Section 7.08 Replacement of Trustee.

A resignation or removal of the Trustee and appointment of a successor Trustee shall become effective only upon the successor Trustee's acceptance of appointment as provided in this Section.

The Trustee may resign in writing at any time and be discharged from the trust hereby created by so notifying the Company. The Holders of Notes of a majority in principal amount of the then outstanding Notes may remove the Trustee by so notifying the Trustee and the Company in writing. The Company may remove the Trustee if:

(a) the Trustee fails to comply with Section 7.10 hereof;

(b) the Trustee is adjudged a bankrupt or an insolvent or an order for relief is entered with respect to the Trustee under any Bankruptcy Law;

(c) a custodian or public officer takes charge of the Trustee or its property; or

(d) the Trustee becomes incapable of acting.

If the Trustee resigns or is removed or if a vacancy exists in the office of Trustee for any reason, the Company shall promptly appoint a successor Trustee. Within one year after the successor Trustee takes office, the Holders of a majority in principal amount of the then outstanding Notes may appoint a successor Trustee to replace the successor Trustee appointed by the Company.

If a successor Trustee does not take office within 30 days after the retiring Trustee resigns or is removed, the retiring Trustee (at the Company's expense), the Company, or the Holders of Notes of at least 10% in principal amount of the then outstanding Notes may petition any court of competent jurisdiction for the appointment of a successor Trustee.

If the Trustee, after written request by any Holder of a Note who has been a Holder of a Note for at least six months, fails to comply with Section 7.10, such Holder of a Note may petition any court of competent jurisdiction for the removal of the Trustee and the appointment of a successor Trustee.

A successor Trustee shall deliver a written acceptance of its appointment to the retiring Trustee and to the Company. Thereupon, the resignation or removal of the retiring Trustee shall become effective, and the successor Trustee shall have all the rights, powers and duties of the Trustee under this Indenture. The successor Trustee shall mail a notice of its succession to Holders of the Notes. The retiring Trustee shall promptly transfer all property held by it as Trustee to the successor Trustee, provided all sums owing to the Trustee hereunder have been paid and subject to the Lien provided for in Section 7.07 hereof. Notwithstanding replacement of the Trustee pursuant to this Section 7.08, the Company's obligations under Section 7.07 hereof shall continue for the benefit of the retiring Trustee.

Section 7.09 Successor Trustee by Merger, Etc.

If the Trustee consolidates, merges or converts into, or transfers all or substantially all of its corporate trust business to, another corporation, the successor corporation without any further act shall be the successor Trustee.

Section 7.10 Eligibility; Disqualification.

There shall at all times be a Trustee hereunder that is a corporation organized and doing business under the laws of the United States of America or of any state thereof that is authorized under such laws to exercise corporate trustee power, that is subject to supervision or examination by federal or state authorities and that has a combined capital and surplus of at least $50 million as set forth in its most recent published annual report of condition.

This Indenture shall always have a Trustee who satisfies the requirements of TIA ss. 310(a)(1), (2) and (5). The Trustee is subject to TIA ss. 310(b).

Section 7.11 Preferential Collection of Claims Against Company.

The Trustee is subject to TIA ss. 311(a), excluding any creditor relationship listed in TIA ss. 311(b). A Trustee who has resigned or been removed shall be subject to TIA ss. 311(a) to the extent indicated therein.

ARTICLE 8.
LEGAL DEFEASANCE AND COVENANT DEFEASANCE

Section 8.01 Option to Effect Legal Defeasance or Covenant Defeasance.

The Company may, at the option of its Board of Directors evidenced by a resolution set forth in an Officers' Certificate, at any time, elect to have either Section 8.02 or 8.03 hereof be applied to all outstanding Notes upon compliance with the conditions set forth below in this Article 8.

Section 8.02 Legal Defeasance and Discharge.

Upon the Company's exercise under Section 8.01 hereof of the option applicable to this Section 8.02, the Company shall, subject to the satisfaction of the conditions set forth in Section 8.04 hereof, be deemed to have been discharged from its obligations with respect to all outstanding Notes on the date the conditions set forth below are satisfied (hereinafter, "Legal Defeasance"). For this purpose, Legal Defeasance means that the Company shall be deemed to have paid and discharged the entire Indebtedness represented by the outstanding Notes, which shall thereafter be deemed to be "outstanding" only for the purposes of Section 8.05 hereof and the other Sections of this Indenture referred to in (a) and (b) below, and to have satisfied all its other obligations under such Notes and this Indenture (and the Trustee, on demand of and at the expense of the Company, shall execute proper instruments acknowledging the same), except for the following provisions which shall survive until otherwise terminated or discharged hereunder: (a) the rights of Holders of outstanding Notes to receive solely from the trust fund described in Section 8.04 hereof, and as more fully set forth in such Section, payments in respect of the principal of, premium and Additional Amounts, if any, and interest on such Notes when such payments are due, (b) the Company's obligations with respect to such Notes under Sections 2.06, 2.07, 2.10 and 4.02 hereof, (c) the rights, powers, trusts, duties and immunities of the Trustee hereunder and the Company's obligations in connection therewith and (d) this Article 8. Subject to compliance with this Article 8, the Company may exercise its option under this Section 8.02 notwithstanding the prior exercise of its option under Section 8.03 hereof.

Section 8.03 Covenant defeasance.

Upon the Company's exercise under Section 8.01 hereof of the option applicable to this Section 8.03, the Company shall, subject to the satisfaction of the conditions set forth in Section 8.04 hereof, be released from its obligations under Sections 4.03, 4.07, 4.08, 4.09, 4.10, 4.11, 4.12, 4.13, 4.15 and 4.16 and Article 5 hereof with respect to the outstanding Notes on and after the date the conditions set forth below are satisfied (hereinafter, "Covenant Defeasance"), and the Notes shall thereafter be deemed not "outstanding" for the purposes of any direction, waiver, consent or declaration or act of Holders (and the consequences of any thereof) in connection with such covenants, but shall continue to be deemed "outstanding" for all other purposes hereunder (it being understood that such Notes shall not be deemed outstanding for accounting purposes). For this purpose, Covenant Defeasance means that, with respect to the outstanding Notes, the Company may omit to comply with and shall have no liability in respect of any term, condition or limitation set forth in any such covenant, whether directly or indirectly, by reason of any reference elsewhere herein to any such covenant or by reason of any reference in any such covenant to any other provision herein or in any other document and such omission to comply shall not constitute a Default or an Event of Default under Section 6.01 hereof, but, except as specified above, the remainder of this Indenture and such Notes shall be unaffected thereby. In addition, upon the Company's exercise under Section 8.01 hereof of the option applicable to this Section 8.03 hereof, subject to the satisfaction of the conditions set forth in Section 8.04 hereof, Sections 6.01(d) through 6.01(f) hereof shall not constitute Events of Default.

Section 8.04 Conditions to Legal or Covenant Defeasance.

The following shall be the conditions to the application of either Section 8.02 or 8.03 hereof to the outstanding Notes:

In order to exercise either Legal Defeasance or Covenant Defeasance:

(a) the Company must irrevocably deposit with the Trustee, in trust, for the benefit of the Holders, cash in United States dollars, non-callable Government Securities, or a combination thereof, in such amounts as will be sufficient, in the opinion of a nationally recognized firm of independent public accountants, to pay the principal of, premium and Additional Amounts, if any, and interest on the outstanding Notes on the stated date for payment thereof or on the applicable redemption date, as the case may be, and the Company must specify whether the Notes are being defeased to maturity or to a particular redemption date;

(b) in the case of an election under Section 8.02 hereof, the Company shall have delivered to the Trustee an Opinion of Counsel in the United States reasonably acceptable to the Trustee confirming that (A) the Company has received from, or there has been published by, the Internal Revenue Service a ruling or (B) since the date of this Indenture, there has been a change in the applicable federal income tax law, in either case to the effect that, and based thereon such Opinion of Counsel shall confirm that, the Holders of the outstanding Notes will not recognize income, gain or loss for federal income tax purposes as a result of such Legal Defeasance and will be subject to federal

income tax on the same amounts, in the same manner and at the same times as would have been the case if such Legal Defeasance had not occurred;

(c) in the case of an election under Section 8.03 hereof, the Company shall have delivered to the Trustee an Opinion of Counsel in the United States reasonably acceptable to the Trustee confirming that the Holders of the outstanding Notes will not recognize income, gain or loss for federal income tax purposes as a result of such Covenant Defeasance and will be subject to federal income tax on the same amounts, in the same manner and at the same times as would have been the case if such Covenant Defeasance had not occurred;

(d) no Default or Event of Default shall have occurred and be continuing on the date of such deposit (other than a Default or Event of Default resulting from the incurrence of Indebtedness all or a portion of the proceeds of which will be used to defease the Notes pursuant to this Article 8 concurrently with such incurrence) or insofar as Sections 6.01(g) or 6.01(h) hereof is concerned, at any time in the period ending on the 91st day after the date of deposit;

(e) such Legal Defeasance or Covenant Defeasance shall not result in a breach or violation of, or constitute a default under, any material agreement or instrument (other than this Indenture) to which the Company or any of its Restricted Subsidiaries is a party or by which the Company or any of its Restricted Subsidiaries is bound;

(f) the Company shall have delivered to the Trustee an opinion of counsel to the effect that on the 91st day following the deposit, the trust funds will not be subject to the effect of any applicable bankruptcy, insolvency, reorganization or similar laws affecting creditors' rights generally;

(g) the Company shall have delivered to the Trustee an Officers' Certificate stating that the deposit was not made by the Company with the intent of preferring the Holders over any other creditors of the Company or with the intent of defeating, hindering, delaying or defrauding any other creditors of the Company; and

(h) the Company shall have delivered to the Trustee an Officers' Certificate and an Opinion of Counsel, each stating that all conditions precedent provided for or relating to the Legal Defeasance or the Covenant Defeasance have been complied with.

Section 8.05 Deposited Money and Government Securities to be held in Trust; Other Miscellaneous Provisions.

Subject to Section 8.06 hereof, all money and non-callable Government Securities (including the proceeds thereof) deposited with the Trustee (or other qualifying trustee, collectively for purposes of this Section 8.05, the "Trustee") pursuant to Section 8.04 hereof in respect of the outstanding Notes shall be held in trust and applied by the Trustee, in accordance with the provisions of such Notes and this Indenture, to the payment, either directly or through any Paying Agent (including the Company acting as Paying Agent) as the Trustee may determine, to the Holders of such Notes of all sums due and to become due thereon in respect of

principal, premium and Additional Amounts, if any, and interest, but such money need not be segregated from other funds except to the extent required by law.

The Company shall pay and indemnify the Trustee against any tax, fee or other charge imposed on or assessed against the cash or non-callable Government Securities deposited pursuant to Section 8.04 hereof or the principal and interest received in respect thereof other than any such tax, fee or other charge which by law is for the account of the Holders of the outstanding Notes.

Anything in this Article 8 to the contrary notwithstanding, the Trustee shall deliver or pay to the Company from time to time upon the request of the Company any money or non-callable Government Securities held by it as provided in Section 8.04 hereof which, in the opinion of a nationally recognized firm of independent public accountants expressed in a written certification thereof delivered to the Trustee (which may be the opinion delivered under Section 8.04(a) hereof), are in excess of the amount thereof that would then be required to be deposited to effect an equivalent Legal Defeasance or Covenant Defeasance.

Section 8.06 Repayment to Company.

Any money deposited with the Trustee or any Paying Agent, or then held by the Company, in trust for the payment of the principal of, premium and Additional Amounts, if any, or interest on any Note and remaining unclaimed for two years after such principal, premium and Additional Amounts, if any, or interest has become due and payable shall be paid to the Company on its request or (if then held by the Company) shall be discharged from such trust; and the Holder of such Note shall thereafter, as a secured creditor, look only to the Company for payment thereof, and all liability of the Trustee or such Paying Agent with respect to such trust money, and all liability of the Company as trustee thereof, shall thereupon cease; provided, however, that the Trustee or such Paying Agent, before being required to make any such repayment, may at the expense of the Company cause to be published once, in The New York Times and The Wall Street Journal (national edition), notice that such money remains unclaimed and that, after a date specified therein, which shall not be less than 30 days from the date of such notification or publication, any unclaimed balance of such money then remaining will be repaid to the Company.

Section 8.07 Reinstatement.

If the Trustee or Paying Agent is unable to apply any United States dollars or non-callable Government Securities in accordance with Section 8.02 or 8.03 hereof, as the case may be, by reason of any order or judgment of any court or governmental authority enjoining, restraining or otherwise prohibiting such application, then the Company's obligations under this Indenture and the Notes shall be revived and reinstated as though no deposit had occurred pursuant to Section 8.02 or 8.03 hereof until such time as the Trustee or Paying Agent is permitted to apply all such money in accordance with Section 8.02 or 8.03 hereof, as the case may be; provided, however, that, if the Company makes any payment of principal of, premium, if any, or interest on any Note following the reinstatement of its obligations, the Company shall be subrogated to the rights of the Holders of such Notes to receive such payment from the money held by the Trustee or Paying Agent.

ARTICLE 9.
AMENDMENT, SUPPLEMENT AND WAIVER

Section 9.01 Without Consent of Holders of Notes.

Notwithstanding Section 9.02 of this Indenture, the Company and the Trustee may amend or supplement this Indenture or the Notes without the consent of any Holder of a Note:

(a) to cure any ambiguity, defect or inconsistency;

(b) to provide for uncertificated Notes in addition to or in place of certificated Notes;

(c) to provide for the assumption of the Company's obligations to the Holders of the Notes in the case of a merger or consolidation pursuant to Article 5 hereof;

(d) to make any change that would provide any additional rights or benefits to the Holders of the Notes or that does not adversely affect the legal rights hereunder of any Holder of the Note; or

(e) to comply with requirements of the SEC in order to effect or maintain the qualification of this Indenture under the TIA.

Upon the request of the Company accompanied by a resolution of its Board of Directors authorizing the execution of any such amended or supplemental Indenture, and upon receipt by the Trustee of the documents described in Section 7.02 hereof, the Trustee shall join with the Company in the execution of any amended or supplemental Indenture authorized or permitted by the terms of this Indenture and to make any further appropriate agreements and stipulations that may be therein contained, but the Trustee shall not be obligated to enter into such amended or supplemental Indenture that affects its own rights, duties or immunities under this Indenture or otherwise.

Section 9.02 With Consent of Holders of Notes.

Except as provided below in this Section 9.02, the Company and the Trustee may amend or supplement this Indenture (including Section 3.09, 4.10 and 4.15 hereof) and the Notes may be amended or supplemented with the consent of the Holders of at least a majority in principal amount of the Notes then outstanding (including consents obtained in connection with a tender offer or exchange offer for the Notes), and, subject to Sections 6.04 and 6.07 hereof, any existing Default or Event of Default (other than a Default or Event of Default in the payment of the principal of, premium, if any, or interest on the Notes, except a payment default resulting from an acceleration that has been rescinded) or compliance with any provision of this Indenture or the Notes may be waived with the consent of the Holders of a majority in principal amount of the then outstanding Notes (including consents obtained in connection with a tender offer or exchange offer for the Notes).

Upon the request of the Company accompanied by a resolution of its Board of Directors authorizing the execution of any such amended or supplemental Indenture, and upon the filing with the Trustee of evidence satisfactory to the Trustee of the consent of the Holders of Notes as aforesaid, and upon receipt by the Trustee of the documents described in Section 7.02 hereof, the Trustee shall join with the Company in the execution of such amended or supplemental Indenture unless such amended or supplemental Indenture affects the Trustee's own rights, duties or immunities under this Indenture or otherwise, in which case the Trustee may in its discretion, but shall not be obligated to, enter into such amended or supplemental Indenture.

The Company may, but shall not be obligated to, fix a record date for the purpose of determining the Persons entitled to consent to any indenture supplemental hereto. If a record date is fixed, the Holders on such record date, or their duly designated proxies, and only such Persons, shall be entitled to consent to such supplemental indenture, whether or not such Holders remain Holders after such record date; provided, that unless such consent shall have become effective by virtue of the requisite percentage having been obtained prior to the date which is 180 days after such record date, any such consent previously given shall automatically and without further action by any Holder be canceled and of no further effect.

It shall not be necessary for the consent of the Holders of Notes under this Section 9.02 to approve the particular form of any proposed amendment or waiver, but it shall be sufficient if such consent approves the substance thereof.

After an amendment, supplement or waiver under this Section becomes effective, the Company shall mail to the Holders of Notes affected thereby a notice briefly describing the amendment, supplement or waiver. Any failure of the Company to mail such notice, or any defect therein, shall not, however, in any way impair or affect the validity of any such amended or supplemental Indenture or waiver. Subject to Sections 6.04 and 6.07 hereof, the Holders of a majority in aggregate principal amount of the Notes then outstanding may waive compliance in a particular instance by the Company with any provision of this Indenture or the Notes. However, without the consent of each Holder affected, an amendment or waiver may not (with respect to any Notes held by a non-consenting Holder):

(a) reduce the principal amount of Notes whose Holders must consent to an amendment, supplement or waiver;

(b) reduce the principal of or change the fixed maturity of any Note or alter or waive any of the provisions with respect to the redemption of the Notes except as provided above with respect to Sections 4.10 and 4.15 hereof;

(c) reduce the rate of or change the time for payment of interest, including default interest, on any Note;

(d) waive a Default or Event of Default in the payment of principal of, or premium and Additional Amounts, if any, or interest on the Notes (except a rescission of acceleration of the Notes by the Holders of at least a majority in aggregate principal

amount of the then outstanding Notes and a waiver of the payment default that resulted from such acceleration);

(e) make any Note payable in money other than that stated in the Notes;

(f) make any change in the provisions of this Indenture relating to waivers of past Defaults or the rights of Holders of Notes to receive payments of principal of or premium and Additional Amounts, if any, or interest on the Notes;

(g) waive a redemption payment with respect to any Note (other than a payment required by Sections 3.09, 4.10 and 4.15 hereof); or

(h) make any change in Section 6.04 or 6.07 hereof or in the foregoing amendment and waiver provisions.

Section 9.03 Compliance with Trust Indenture Act.

Every amendment or supplement to this Indenture or the Notes shall be set forth in a amended or supplemental Indenture that complies with the TIA as then in effect.

Section 9.04 Revocation and Effect of Consents.

Until an amendment, supplement or waiver becomes effective, a consent to it by a Holder of a Note is a continuing consent by the Holder of a Note and every subsequent Holder of a Note or portion of a Note that evidences the same debt as the consenting Holder's Note, even if notation of the consent is not made on any Note. However, any such Holder of a Note or subsequent Holder of a Note may revoke the consent as to its Note if the Trustee receives written notice of revocation before the date the waiver, supplement or amendment becomes effective. An amendment, supplement or waiver becomes effective in accordance with its terms and thereafter binds every Holder.

Section 9.05 Notation on or Exchange of Notes.

The Trustee may place an appropriate notation about an amendment, supplement or waiver on any Note thereafter authenticated. The Company in exchange for all Notes may issue and the Trustee shall authenticate new Notes that reflect the amendment, supplement or waiver.

Failure to make the appropriate notation or issue a new Note shall not affect the validity and effect of such amendment, supplement or waiver.

Section 9.06 Trustee to Sign Amendments, Etc.

The Trustee shall sign any amended or supplemental Indenture authorized pursuant to this Article 9 if the amendment or supplement does not adversely affect the rights, duties, liabilities or immunities of the Trustee. The Company may not sign an amendment or supplemental indenture until the Board of Directors approves it. In executing any amended or supplemental indenture, the Trustee shall be entitled to receive and (subject to Section 7.01) shall

be fully protected in relying upon, an Officers' Certificate and an Opinion of Counsel stating that the execution of such amended or supplemental indenture is authorized or permitted by this Indenture.

ARTICLE 10.
SUBSIDIARY GUARANTEES

Section 10.01 Agreement to Guarantee.

Each of the Guarantors hereby agrees as follows:

(a) Such Guarantor, jointly and severally with all other Guarantors, unconditionally guarantees to each Holder of a Note authenticated and delivered by the Trustee and to the Trustee its successors and assigns, regardless of the validity and enforceability of this Indenture, the Notes or the Obligations of the Company under this Indenture or the Notes, that:

(i) the principal of, premium, interest and Additional Amounts, if any, on the Notes will be promptly paid in full when due, whether at maturity, by acceleration, redemption or otherwise, and interest on the overdue principal of, premium, interest and Additional Amounts, if any, on the Notes, to the extent lawful, and all other Obligations of the Company to the Holders or the Trustee thereunder or under this Indenture will be promptly paid in full, all in accordance with the terms thereof; and

(ii) in case of any extension of time for payment or renewal of any Notes or any of such other Obligations, that the same will be promptly paid in full when due in accordance with the terms of the extension or renewal, whether at stated maturity, by acceleration or otherwise.

(b) Notwithstanding the foregoing, in the event that this Guarantee would constitute or result in a violation of any applicable fraudulent conveyance or similar law of any relevant jurisdiction, the liability of the Guarantors under this Indenture shall be reduced to the maximum amount permissible under such fraudulent conveyance or similar law.

Section 10.02 Execution and Delivery of Subsidiary Guarantees.

(a) To evidence its Subsidiary Guarantees set forth in this Indenture, each Guarantor hereby agrees that a notation of such Guarantee substantially in the form attached as Exhibit F to this Indenture shall be endorsed by an Officer of such Guarantor on each Note authenticated and delivered by the Trustee on or after the date hereof.

(b) Notwithstanding the foregoing, each Guarantor hereby agrees that its Guarantee set forth herein shall remain in full force and effect notwithstanding any failure to endorse on each Note a notation of such Guarantee.

(c) If an Officer whose signature is on this Indenture no longer holds that office at the time the Trustee authenticates the Note on which a Guarantee is endorsed, the Guarantee shall be valid nevertheless.

(d) The delivery of any Note by the Trustee, after the authentication thereof under this Indenture, shall constitute due delivery of the Guarantee set forth in this Indenture on behalf of each Guarantor.

(e) Each Guarantor hereby agrees that its obligations hereunder shall be unconditional, regardless of the validity, regularity or enforceability of the Notes or this Indenture, the absence of any action to enforce the same, any waiver or consent by any Holder of the Notes with respect to any provisions hereof or thereof, the recovery of any judgment against the Company, any action to enforce the same or any other circumstance which might otherwise constitute a legal or equitable discharge or defense of a guarantor.

(f) Each Guarantor hereby waives diligence, presentment, demand of payment, filing of claims with a court in the event of insolvency or bankruptcy of the Company, any right to require a proceeding first against the Company, protest, notice and all demands whatsoever and covenants that its Guarantee made pursuant to this Indenture will not be discharged except by complete performance of the obligations contained in the Notes and this Indenture.

(g) If any Holder or the Trustee is required by any court or otherwise to return to the Company or any Guarantor, or any custodian, Trustee, liquidator or other similar official acting in relation to either the Company or such Guarantor, any amount paid by either to the Trustee or such Holder, the Guarantee made pursuant to this Indenture, to the extent theretofore discharged, shall be reinstated in full force and effect.

(h) Each Guarantor agrees that it shall not be entitled to any right of subrogation in relation to the Holders in respect of any obligations guaranteed hereby until payment in full of all obligations guaranteed hereby. Each Guarantor further agrees that, as between such Guarantor, on the one hand, and the Holders and the Trustee, on the other hand:

(i) the maturity of the Obligations guaranteed hereby may be accelerated as provided in Article 6 of this Indenture for the purposes of the Guarantee made pursuant to this Indenture, notwithstanding any stay, injunction or other prohibition preventing such acceleration in respect of the obligations guaranteed hereby; and

(ii) in the event of any declaration of acceleration of such Obligations as provided in Article 6 of this Indenture, such Obligations (whether or not due and payable) shall forthwith become due and payable by such Guarantor for the purpose of the Guarantee made pursuant to this Indenture.

(i) Each Guarantor shall have the right to seek contribution from any other non-paying Guarantor so long as the exercise of such right does not impair the rights of the Holders or the Trustee under the Guarantee made pursuant to this Indenture.

Section 10.03 Guarantors May Consolidate, Etc. on Certain Terms.

(a) Except as set forth in Articles 4 and 5 of this Indenture, nothing contained in this Indenture or in the Notes shall prevent any consolidation or merger of any Guarantor with or into the Company or any other Guarantor or shall prevent any transfer, sale or conveyance of

the property of any Guarantor as an entirety or substantially as an entirety, to the Company or any other Guarantor.

(b) Except as set forth in Articles 4 and 5 of this Indenture, nothing contained in this Indenture or in the Notes shall prevent any consolidation or merger of any Guarantor with or into a corporation or corporations other than the Company or any other Guarantor (in each case, whether or not affiliated with the Guarantor), or successive consolidations or mergers in which a Guarantor or its successor or successors shall be a party or parties, or shall prevent any sale or conveyance of the property of any Guarantor as an entirety or substantially as an entirety, to a corporation other than the Company or any other Guarantor (in each case, whether or not affiliated with the Guarantor) authorized to acquire and operate the same; provided, however, that each Guarantor hereby covenants and agrees that (i) subject to this Indenture, upon any such consolidation, merger, sale or conveyance, the due and punctual performance and observance of all of the covenants and conditions of this Indenture to be performed by such Guarantor, shall be expressly assumed (in the event that such Guarantor is not the surviving corporation in the merger), by supplemental indenture satisfactory in form to the Trustee, executed and delivered to the Trustee, by the corporation formed by such consolidation, or into which such Guarantor shall have been merged, or by the corporation which shall have acquired such property and (ii) immediately after giving effect to such consolidation, merger, sale or conveyance no Default or Event of Default exists.

(c) In case of any such consolidation, merger, sale or conveyance and upon the assumption by the successor corporation, by supplemental indenture, executed and delivered to the Trustee and satisfactory in form to the Trustee, of the Guarantee made pursuant to this Indenture and the due and punctual performance of all of the covenants and conditions of this Indenture to be performed by such Guarantor, such successor corporation shall succeed to and be substituted for such Guarantor with the same effect as if it had been named herein as one of the Guarantors. Such successor corporation thereupon may cause to be signed any or all of the Guarantees to be endorsed upon the Notes issuable under this Indenture which theretofore shall not have been signed by the Company and delivered to the Trustee. All the Guarantees so issued shall in all respects have the same legal rank and benefit under this Indenture as the Guarantees theretofore and thereafter issued in accordance with the terms of this Indenture as though all of such Guarantees had been issued at the date of the execution hereof.

Section 10.04 Releases.

(a) Concurrently with any sale of assets (including, if applicable, all of the Capital Stock of a Guarantor), all Liens, if any, in favor of the Trustee in the assets sold thereby shall be released; provided that in the event of an Asset Sale, the Net Proceeds from such sale or other disposition are treated in accordance with the provisions of Section 4.10 of this Indenture. If the assets sold in such sale or other disposition include all or substantially all of the assets of a Guarantor or all of the Capital Stock of a Guarantor, then the Guarantor (in the event of a sale or other disposition of all of the Capital Stock of such Guarantor) or the Person acquiring the property (in the event of a sale or other disposition of all or substantially all of the assets of such Guarantor) shall be released from and relieved of its obligations under this Indenture and its Guarantee made pursuant hereto; provided that in the event of an Asset Sale, the Net Proceeds from such sale or other disposition are treated in accordance with the provisions of Section 4.10

of this Indenture. Upon delivery by the Company to the Trustee of an Officers' Certificate to the effect that such sale or other disposition was made by the Company or the Guarantor, as the case may be, in accordance with the provisions of this Indenture, including, without limitation, Section 4.10 of this Indenture, the Trustee shall execute any documents reasonably required in order to evidence the release of the Guarantor from its obligations under this Indenture and its Guarantee made pursuant hereto. If the Guarantor is not released from its obligations under its Guarantee, it shall remain liable for the full amount of principal of and interest and Additional Amounts, if any, on the Notes and for the other obligations of such Guarantor under this Indenture.

(b) Upon the designation of a Guarantors as an Unrestricted Subsidiary in accordance with the terms of this Indenture, such Guarantor shall be released and relieved of its obligations under this Indenture. Upon delivery by the Company to the Trustee of an Officers' Certificate and an Opinion of Counsel to the effect that such designation of such Guarantor as an Unrestricted Subsidiary was made by the Company in accordance with the provisions of this Indenture, including without limitation Section 4.07 hereof, the Trustee shall execute any documents reasonably required in order to evidence the release of such Guarantor from its obligations under its Guarantee. Any Guarantor not released from its obligations under its Guarantee shall remain liable for the full amount of principal of and interest on the Notes and for the other obligations of any Guarantor under this Indenture as provided in this Article 10.

(c) Each Guarantor shall be released and relieved of its obligations under this Indenture in accordance with, and subject to, Section 4.18 hereof.

Section 10.05 No Recourse Against Others.

No past, present or future director, officer, employee, incorporator, stockholder or agent of any Subsidiary of the Company, as such, shall have any liability for any obligations of the Company or any Subsidiary of the Company under the Notes, any Guarantees, this Indenture or for any claim based on, in respect of, or by reason of, such obligations or their creation. Each Holder of the Notes by accepting a Note waives and releases all such liability. The waiver and release are part of the consideration for issuance of the Notes. Such waiver may not be effective to waive liabilities under the federal securities laws and it is the view of the Securities and Exchange Commission that such a waiver is against public policy.

Section 10.06 Subordination of Subsidiary Guarantees

The Guarantee of each Guarantor shall be subordinated to the prior payment in full of all Senior Debt of that Guarantor (in the same manner and to the same extent that the Notes are subordinated to Senior Debt), which shall include all guarantees of Senior Debt.

ARTICLE 11.
SUBORDINATION

Section 11.01 Agreement to Subordinate.

The Company agrees, and each Holder by accepting a Note agrees, that the Indebtedness evidenced by the Notes is subordinated in right of payment, to the extent and in the

manner provided in this Article 11, to the prior payment in full in cash of all Senior Debt (whether outstanding on the date hereof or hereafter created, incurred, assumed or guaranteed), and that the subordination is for the benefit of the holders of Senior Debt.

Section 11.02 Liquidation; Dissolution; Bankruptcy.

Upon any distribution to creditors of the Company in a liquidation or dissolution of the Company, in a bankruptcy, reorganization, insolvency, receivership or similar proceeding relating to the Company or its property, in an assignment for the benefit of creditors or in any marshalling of the Company's assets and liabilities, the holders of Senior Debt shall be entitled to receive payment in full in cash of all Obligations due in respect of such Senior Debt (including interest after the commencement of any such proceeding at the rate specified in the applicable Senior Debt, whether or not an allowable claim in any such proceeding) before the Holders of Notes will be entitled to receive any payment with respect to the Notes, and until all Obligations with respect to Senior Debt are paid in full in cash, any distribution to which the Holders of Notes would be entitled shall be made to the holders of Senior Debt (except, in each case, that Holders of Notes may receive Permitted Junior Securities and payments made from the trust described under Article 8).

Section 11.03 Default on Designated Senior Debt.

The Company may not make any payment or distribution to the Trustee or any Holder in respect of Obligations with respect to the Notes and may not acquire from the Trustee or any Holder any Notes for cash or property (other than (i) securities that are subordinated to at least the same extent as the Notes to (a) Senior Debt and (b) any securities issued in exchange for Senior Debt and (ii) payments and other distributions made from any defeasance trust created pursuant to Section 8.01 hereof) until all principal and other Obligations with respect to the Senior Debt have been paid in full if:

(i) a default in the payment of any principal or other Obligations with respect to Designated Senior Debt occurs and is continuing; or

(ii) a default, other than a payment default, on Designated Senior Debt occurs and is continuing that then permits holders of the Designated Senior Debt as to which such default relates to accelerate its maturity (or that would permit such holders to accelerate with the giving of notice or the passage of time or both) and the Trustee receives a notice of the default (a "Payment Blockage Notice") from the Company or a Representative with respect to such Designated Senior Debt. If the Trustee receives any such Payment Blockage Notice, no subsequent Payment Blockage Notice shall be effective for purposes of this Section unless and until (i) at least 360 days shall have elapsed since the effectiveness of the immediately prior Payment Blockage Notice and (ii) all scheduled payments of principal, premium and Additional Amounts, if any, and interest on the Notes that have come due have been paid in full in cash. No nonpayment default that existed or was continuing on the date of delivery of any Payment Blockage Notice to the Trustee shall be, or be made, the basis for a subsequent Payment Blockage Notice unless such default shall have been waived or cured for a period of not less than 90 days.

The Company may and shall resume payments on and distributions in respect of the Notes and may acquire them upon the earlier of:

(i) the date upon which the default is cured or waived, or

(ii) in the case of a default referred to in Section 11.03(ii) hereof, 179 days pass after the date on which the applicable Payment Blockage Notice is received if the maturity of such Designated Senior Debt has not been accelerated,

if this Article otherwise permits the payment, distribution or acquisition at the time of such payment or acquisition.

Section 11.04 Acceleration of Securities.

If payment of the Securities is accelerated because of an Event of Default, the Company shall promptly notify holders of Senior Debt of the acceleration.

Section 11.05 When Distribution Must Be Paid Over.

In the event that the Trustee or any Holder receives any payment of any Obligations with respect to the Notes at a time when the Trustee or such Holder, as applicable, has actual knowledge that such payment is prohibited by Article 11 hereof, such payment shall be held by the Trustee or such Holder, in trust for the benefit of, and shall be paid forthwith over and delivered, upon written request, to, the holders of Senior Debt as their interests may appear or their Representative under the indenture or other agreement (if any) pursuant to which Senior Debt may have been issued, as their respective interests may appear, for application to the payment of all Obligations with respect to Senior Debt remaining unpaid to the extent necessary to pay such Obligations in full in accordance with their terms, after giving effect to any concurrent payment or distribution to or for the holders of Senior Debt.

With respect to the holders of Senior Debt, the Trustee undertakes to perform only such obligations on the part of the Trustee as are specifically set forth in this Article 11, and no

implied covenants or obligations with respect to the holders of Senior Debt shall be read into this Indenture against the Trustee. The Trustee shall not be deemed to owe any fiduciary duty to the holders of Senior Debt, and shall not be liable to any such holders if the Trustee shall pay over or distribute to or on behalf of Holders or the Company or any other Person money or assets to which any holders of Senior Debt shall be entitled by virtue of this Article 11, except if such payment is made as a result of the willful misconduct or negligence of the Trustee.

Section 11.06 Notice by Company

The Company shall promptly notify the Trustee and the Paying Agent of any facts known to the Company that would cause a payment of any Obligations with respect to the Notes to violate this Article 11, but failure to give such notice shall not affect the subordination of the Notes to the Senior Debt as provided in this Article 11.

The Trustee shall be entitled to rely on the delivery to it of a written notice by a person representing himself to be a holder of Senior Debt (or a trustee or agent on behalf of such holder) to establish that such notice has been given by a holder of Senior Debt (or a trustee or agent on behalf of any such holder). In the event that the Trustee determines in good faith that further evidence is required with respect to the right of any person as holder of Senior Debt to participate in any payment or distribution pursuant to this Article 11, the Trustee may request such person to furnish evidence to the reasonable satisfaction of the Trustee as to the amount of Senior Debt held by such person, the extent to which such person is entitled to participate in such evidence is not furnish, the Trustee may defer any payment which it may be required to make for the benefit of such person pursuant to the terms of this Indenture pending judicial determination as to the rights of such person to receive such payment.

Section 11.07 Subrogation.

After all Senior Debt is paid in full in cash and until the Notes are paid in full, Holders of Notes shall be subrogated (equally and ratably with all other Indebtedness pari passu with the Notes) to the rights of holders of Senior Debt to receive distributions applicable to Senior Debt to the extent that distributions otherwise payable to the Holders of Notes have been applied to the payment of Senior Debt. A distribution made under this Article 11 to holders of Senior Debt that otherwise would have been made to Holders of Notes is not, as between the Company and Holders, a payment by the Company on the Notes.

Section 11.08 Relative Rights.

This Article 11 defines the relative rights of Holders of Notes and holders of Senior Debt. Nothing in this Indenture shall:

(i) impair, as between the Company and Holders of Notes, the obligation of the Company, which is absolute and unconditional, to pay principal of and interest on the Notes in accordance with their terms;

(ii) affect the relative rights of Holders of Notes and creditors of the Company other than their rights in relation to holders of Senior Debt; or

(iii) prevent the Trustee or any Holder of Notes from exercising its available remedies upon a Default or Event of Default, subject to the rights of holders and owners of Senior Debt to receive distributions and payments otherwise payable to Holders of Notes.

If the Company fails because of this Article 11 to pay principal of or interest on a Note on the due date, the failure is still a Default or Event of Default.

Section 11.09 Subordination May Not Be Impaired by Company.

No right of any holder of Senior Debt to enforce the subordination of the Indebtedness evidenced by the Notes shall be impaired by any act or failure to act by the Company or any Holder or by the failure of the Company or any Holder to comply with this Indenture.

Section 11.10 Distribution or Notice to Representative.

Whenever a distribution is to be made or a notice given to holders of Senior Debt, the distribution may be made and the notice given to their Representative.

Upon any payment or distribution of assets of the Company referred to in this Article 11, the Trustee and the Holders of Notes shall be entitled to rely upon any order or decree made by any court of competent jurisdiction or upon any certificate of such Representative or of the liquidating trustee or agent or other Person making any distribution to the Trustee or to the Holders of Notes for the purpose of ascertaining the Persons entitled to participate in such distribution, the holders of the Senior Debt and other Indebtedness of the Company, the amount thereof or payable thereon, the amount or amounts paid or distributed thereon and all other facts pertinent thereto or to this Article 11.

Section 11.11 Rights of Trustee and Paying Agent.

Notwithstanding the provisions of this Article 11 or any other provision of this Indenture, the Trustee shall not be charged with knowledge of the existence of any facts that would prohibit the making of any payment or distribution by the Trustee, and the Trustee and the Paying Agent may continue to make payments on the Notes, unless the Trustee shall have received at its Corporate Trust Office at least three Business Days prior to the date of such payment written notice of facts that would cause the payment of any Obligations with respect to the Notes to violate this Article 11. Only the Company or a Representative may give the notice. Nothing in this Article 11 shall impair the claims of, or payments to, the Trustee under or pursuant to Section 7.07 hereof.

The Trustee in its individual or any other capacity may hold Senior Debt with the same rights it would have if it were not Trustee. Any Agent may do the same with like rights.

Section 11.12 Authorization to Effect Subordination.

Each Holder of Notes, by the Holder's acceptance thereof, authorizes and directs the Trustee on such Holder's behalf to take such action as may be necessary or appropriate to

effectuate the subordination as provided in this Article 11, and appoints the Trustee to act as such Holder's attorney-in-fact for any and all such purposes. If the Trustee does not file a proper proof of claim or proof of debt in the form required in any proceeding referred to in Section 6.09 hereof at least 30 days before the expiration of the time to file such claim, the credit agents are hereby authorized to file an appropriate claim for and on behalf of the Holders of the Notes.

Section 11.13 Amendments.

The provisions of this Article 11 shall not be amended or modified without the written consent of the holders of at least 75% in aggregate principal amount of the Notes then outstanding if such amendment would adversely affect the rights of Holders of Notes.

ARTICLE 12.
MISCELLANEOUS

Section 12.01 Trust Indenture Act Controls.

If any provision of this Indenture limits, qualifies or conflicts with the duties imposed by TIA ss. 318(c), the imposed duties shall control.

Section 12.02 Notices.

Any notice or communication by the Company or the Trustee to the others is duly given if in writing and delivered in Person or mailed by first class mail (registered or certified, return receipt requested), telecopier or overnight air courier guaranteeing next day delivery, to the others' address:

If to the Company or any Guarantor:

L-3 Communications Corporation
600 Third Avenue, 34th Floor,
New York, New York 10016
Attention: Senior Vice President-Finance (Fax: 212-805-5440)

With a copy to:

Simpson Thacher & Bartlett
425 Lexington Avenue
New York, New York 10017
Attention: Vincent Pagano, Jr. (Fax: 212-455-2502)

If to the Trustee:

The Bank of New York
101 Barclay Street
New York, New York 10286
Attention: Corporate Trust Administration (Fax: 212-815-5704)

The Company or the Trustee, by notice to the others may designate additional or different addresses for subsequent notices or communications.

All notices and communications (other than those sent to Holders) shall be deemed to have been duly given, at the time delivered by hand, if personally delivered; five Business Days after being deposited in the mail, postage prepaid, if mailed; when receipt acknowledged, if telecopied; and the next Business Day after timely delivery to the courier, if sent by overnight air courier guaranteeing next day delivery.

Any notice or communication to a Holder shall be mailed by first class mail, certified or registered, return receipt requested, or by overnight air courier guaranteeing next day delivery to its address shown on the register kept by the Registrar. Any notice or communication shall also be so mailed to any Person described in TIA ss. 313(c), to the extent required by the TIA. Failure to mail a notice or communication to a Holder or any defect in it shall not affect its sufficiency with respect to other Holders.

If a notice or communication is mailed in the manner provided above within the time prescribed, it is duly given, whether or not the addressee receives it.

If the Company mails a notice or communication to Holders, it shall mail a copy to the Trustee and each Agent at the same time.

Section 12.03 Communications By Holders of Notes with Other Holders of Notes.

Holders may communicate pursuant to TIA ss. 312(b) with other Holders with respect to their rights under this Indenture or the Notes. The Company, the Trustee, the Registrar and anyone else shall have the protection of TIA ss. 312(c).

Section 12.04 Certificate and Opinion as to Conditions Precedent.

Upon any request or application by the Company to the Trustee to take any action under this Indenture, the Company shall furnish to the Trustee:

(a) an Officers' Certificate in form and substance reasonably satisfactory to the Trustee (which shall include the statements set forth in Section 12.05 hereof) stating that, in the opinion of the signers, all conditions precedent and covenants, if any, provided for in this Indenture relating to the proposed action have been satisfied; and

(b) an Opinion of Counsel in form and substance reasonably satisfactory to the Trustee (which shall include the statements set forth in Section 12.05 hereof) stating that, in the opinion of such counsel, all such conditions precedent and covenants have been satisfied.

Section 12.05 Statements required in Certificate or Opinion.

Each certificate or opinion with respect to compliance with a condition or covenant provided for in this Indenture (other than a certificate provided pursuant to TIA ss. 314(a)(4)) shall comply with the provisions of TIA ss. 314(e) and shall include:

(a) a statement that the Person making such certificate or opinion has read such covenant or condition;

(b) a brief statement as to the nature and scope of the examination or investigation upon which the statements or opinions contained in such certificate or opinion are based;

(c) a statement that, in the opinion of such Person, he or she has made such examination or investigation as is necessary to enable him to express an informed opinion as to whether or not such covenant or condition has been satisfied; and

(d) a statement as to whether or not, in the opinion of such Person, such condition or covenant has been satisfied.

Section 12.06 Rule by Trustee and Agents.

The Trustee may make reasonable rules for action by or at a meeting of Holders. The Registrar or Paying Agent may make reasonable rules and set reasonable requirements for its functions.

Section 12.07 No Personal Liability of Directors, Officers, Employees and Stockholders.

No director, officer, employee, incorporator or stockholder of the Company or any Subsidiary of the Company, as such, shall have any liability for any obligations of the Company or any Subsidiary of the Company under the Notes or the Subsidiary Guarantees and this Indenture or for any claim based on, in respect of, or by reason of, such obligations or their creation. Each Holder of Notes by accepting a Note waives and releases all such liability. The waiver and release are part of the consideration for issuance of the Notes. Such waiver may not be effective to waive liabilities under the federal securities laws and it is the view of the SEC that such a waiver is against public policy.

Section 12.08 Governing Law.

THIS INDENTURE, THE NOTES AND THE SUBSIDIARY GUARANTEES SHALL BE GOVERNED BY, AND CONSTRUED IN ACCORDANCE WITH, THE LAWS OF THE STATE OF NEW YORK.

Section 12.09 No Adverse Interpretation of other Agreements.

This Indenture may not be used to interpret any other indenture, loan or debt agreement of the Company or its Subsidiaries or of any other Person. Any such indenture, loan or debt agreement may not be used to interpret this Indenture.

Section 12.10 Successors.

All agreements of the Company in this Indenture and the Notes shall bind its successors. All agreements of the Trustee in this Indenture shall bind its successors.

Section 12.11 Severability.

In case any provision in this Indenture or in the Notes shall be invalid, illegal or unenforceable, the validity, legality and enforceability of the remaining provisions shall not in any way be affected or impaired thereby.

Section 12.12 Counterpart Originals.

The parties may sign any number of copies of this Indenture. Each signed copy shall be an original, but all of them together represent the same agreement.

Section 12.13 Table of Contents, Headings, Etc.

The Table of Contents, Cross-Reference Table and Headings of the Articles and Sections of this Indenture have been inserted for convenience of reference only, are not to be considered a part of this Indenture and shall in no way modify or restrict any of the terms or provisions hereof.

[Signatures on following pages]

SIGNATURES

Dated as of May 21, 2003

L-3 COMMUNICATIONS CORPORATION

By:

Name:
Title:

GUARANTORS:

AMI INSTRUMENTS, INC.
APCOM, INC.
BROADCAST SPORTS INC.
CELERITY SYSTEMS INCORPORATED
EER SYSTEMS, INC.
ELECTRODYNAMICS, INC.
GOODRICH AEROSPACE COMPONENT OVERHAUL & REPAIR, INC.
GOODRICH AVIONICS SYSTEMS, INC.
GOODRICH FLIGHTSYSTEMS, INC.
HENSCHEL, INC.
HYGIENETICS ENVIRONMENTAL SERVICES, INC.
INTERSTATE ELECTRONICS CORPORATION
KDI PRECISION PRODUCTS, INC.
L-3 COMMUNICATIONS AIS GP CORPORATION
L-3 COMMUNICATIONS ANALYTICS CORPORATION
L-3 COMMUNICATIONS ATLANTIC SCIENCE & TECHNOLOGY CORPORATION
L-3 COMMUNICATIONS AYDIN CORPORATION
L-3 COMMUNICATIONS ESSCO, INC.
L-3 COMMUNICATIONS ILEX SYSTEMS, INC.
L-3 COMMUNICATIONS IMC CORPORATION
L-3 COMMUNICATIONS INTEGRATED SYSTEMS L.P.
L-3 COMMUNICATIONS INVESTMENTS, INC.
L-3 COMMUNICATIONS SECURITY AND DETECTION SYSTEMS
CORPORATION DELAWARE
L-3 COMMUNICATIONS SECURITY AND DETECTION SYSTEMS
CORPORATION CALIFORNIA
L-3 COMMUNICATIONS SPD TECHNOLOGIES, INC.
L-3 COMMUNICATIONS STORM CONTROL SYSTEMS, INC.
L-3 COMMUNICATIONS TMA CORPORATION
L-3 COMMUNICATIONS WESTWOOD CORPORATION
MCTI ACQUISITION CORPORATION
MICRODYNE COMMUNICATIONS TECHNOLOGY INCORPORATED
MICRODYNE CORPORATION
MICRODYNE OUTSOURCING INCORPORATED
MPRI, INC.
PAC ORD, INC.

POWER PARAGON, INC.
SHIP ANALYTICS, INC.
SHIP ANALYTICS INTERNATIONAL, INC.
SHIP ANALYTICS USA, INC.
SOUTHERN CALIFORNIA MICROWAVE, INC.
SPD ELECTRICAL SYSTEMS, INC.
SPD HOLDINGS, INC.
SPD SWITCHGEAR, INC.
SYCOLEMAN CORPORATION
TELOS CORPORATION
TROLL TECHNOLOGY CORPORATION
WESCAM AIR OPS INC.
WESCAM AIR OPS LLC
WESCAM HOLDINGS (US) INC.
WESCAM INCORPORATED
WESCAM LLC
WESCAM SONOMA INC.
WOLF COACH, INC.
as Guarantors

By: _____
Name: Christopher C. Cambria
Title: Vice President and Secretary

L-3 COMMUNICATIONS INTEGRATED SYSTEMS L.P.
as Guarantor

By: L-3 COMMUNICATIONS AIS GP CORPORATION,
as General Partner

By: _____
Name:
Title: Authorized Person

THE BANK OF NEW YORK,
as Trustee

By: _____
Name:
Title:

EXHIBIT A
(Face of Note)

CUSIP _____

6-1/8% Senior Subordinated Notes due 2013

No. ___ $_____

L-3 COMMUNICATIONS CORPORATION

promises to pay to _____

or registered assigns,

the principal sum of _____

Dollars on July 15, 2013.

Interest Payment Dates: January 15 and July 15.

Record Dates: January 1 and July 1.

Dated: May 21, 2003

L-3 COMMUNICATIONS CORPORATION

By: _____
Name:
Title:

By: _____
Name:
Title:

This is one of the [Global]
Notes referred to in the
within-mentioned Indenture:

Dated: May 21, 2003

THE BANK OF NEW YORK,
as Trustee

By: _____
Name:
Title:

(Back of Note)

6-1/8% Senior Subordinated Notes due 2013

THIS GLOBAL NOTE IS HELD BY THE DEPOSITARY (AS DEFINED IN THE INDENTURE GOVERNING THIS NOTE) OR ITS NOMINEE IN CUSTODY FOR THE BENEFIT OF THE BENEFICIAL OWNERS HEREOF, AND IS NOT TRANSFERABLE TO ANY PERSON UNDER ANY CIRCUMSTANCES EXCEPT THAT (I) THE TRUSTEE MAY MAKE SUCH NOTATIONS HEREON AS MAY BE REQUIRED PURSUANT TO SECTION 2.07 OF THE INDENTURE, (II) THIS GLOBAL NOTE MAY BE EXCHANGED IN WHOLE BUT NOT IN PART PURSUANT TO SECTION 2.06(a) OF THE INDENTURE, (III) THIS GLOBAL NOTE MAY BE DELIVERED TO THE TRUSTEE FOR CANCELLATION PURSUANT TO SECTION 2.11 OF THE INDENTURE AND (IV) THIS GLOBAL NOTE MAY BE TRANSFERRED TO A SUCCESSOR DEPOSITARY WITH THE PRIOR WRITTEN CONSENT OF L-3 COMMUNICATION CORPORATION. (1)

THE SECURITY (OR ITS PREDECESSOR) EVIDENCED HEREBY WAS ORIGINALLY ISSUED IN A TRANSACTION EXEMPT FROM REGISTRATION UNDER SECTION 5 OF THE UNITED STATES SECURITIES ACT OF 1933, AS AMENDED (THE "SECURITIES ACT"), AND THE SECURITY EVIDENCED HEREBY MAY NOT BE OFFERED, SOLD OR OTHERWISE TRANSFERRED IN THE ABSENCE OF SUCH REGISTRATION OR AN APPLICABLE EXEMPTION THEREFROM. EACH PURCHASER OF THE SECURITY EVIDENCED HEREBY IS HEREBY NOTIFIED THAT THE SELLER MAY BE RELYING ON THE EXEMPTION FROM THE PROVISION OF SECTION 5 OF THE SECURITIES ACT PROVIDED BY RULE 144A THEREUNDER. THE HOLDER OF THE SECURITY EVIDENCED HEREBY AGREES FOR THE BENEFIT OF L-3 COMMUNICATIONS CORPORATION THAT (A) SUCH SECURITY MAY BE RESOLD, PLEDGED OR OTHERWISE TRANSFERRED, ONLY (1) (a) TO A PERSON WHOM THE SELLER REASONABLY BELIEVES IS A QUALIFIED INSTITUTIONAL BUYER (AS DEFINED IN RULE 144A UNDER THE SECURITIES ACT) IN A TRANSACTION MEETING THE REQUIREMENTS OF RULE 144A, (b) IN A TRANSACTION MEETING THE REQUIREMENTS OF RULE 144 UNDER THE SECURITIES ACT, (c) OUTSIDE THE UNITED STATES TO A FOREIGN PERSON IN A TRANSACTION MEETING THE REQUIREMENTS OF RULE 904 UNDER THE SECURITIES ACT OR (d) IN ACCORDANCE WITH ANOTHER EXEMPTION FROM THE REGISTRATION REQUIREMENTS OF THE SECURITIES ACT (AND BASED UPON AN OPINION OF COUNSEL IF THE COMPANY SO REQUESTS), (2) TO THE COMPANY OR (3) PURSUANT TO AN EFFECTIVE REGISTRATION STATEMENT, IN EACH CASE, IN ACCORDANCE WITH ANY APPLICABLE SECURITIES LAWS OF ANY STATE OF THE UNITED STATES OR ANY OTHER APPLICABLE JURISDICTION AND (B) THE HOLDER WILL, AND EACH SUBSEQUENT HOLDER IS REQUIRED TO, NOTIFY ANY PURCHASER FROM IT OF THE SECURITY EVIDENCED HEREBY OF THE RESALE RESTRICTIONS SET FORTH IN (A) ABOVE.

- ------------------
(1) This paragraph should be included only if the Note is issued in global form.

Capitalized terms used herein shall have the meanings assigned to them in the Indenture referred to below unless otherwise indicated.

1. INTEREST. L-3 Communications Corporation, a Delaware corporation (the "Company"), promises to pay interest on the principal amount of this Note at 6-1/8% per annum from May 21, 2003 until maturity and shall pay the Additional Amounts payable pursuant to Section 5 of the Registration Rights Agreement referred to below. The Company will pay interest and Additional Amounts, if any, semi-annually on January 15 and July 15 of each year, or if any such day is not a Business Day, on the next succeeding Business Day (each an "Interest Payment Date"), with the same force and effect as if made on the date for such payment. Interest on the Notes will accrue from the most recent date to which interest has been paid or, if no interest has been paid, from 1:00 p.m. May 21, 2003; provided that if there is no existing Default in the payment of interest, and if this Note is authenticated between a record date referred to on the face hereof and the next succeeding Interest Payment Date, interest shall accrue from such next succeeding Interest Payment Date; provided, further, that the first Interest Payment Date shall be July 15, 2003. The Company shall pay interest (including post-petition interest in any proceeding under any Bankruptcy Law) on overdue principal and premium, if any, from time to time on demand at a rate that is 1% per annum in excess of the rate then in effect; it shall pay interest (including post-petition interest in any proceeding under any Bankruptcy Law) on overdue installments of interest and Additional Amounts (without regard to any applicable grace periods) from time to time on demand at the same rate to the extent lawful. Interest will be computed on the basis of a 360-day year of twelve 30-day months.

2. METHOD OF PAYMENT. The Company will pay interest on the Notes (except defaulted interest) and Additional Amounts, if any, to the Persons who are registered Holders of Notes at the close of business on the January 1 or July 1 next (whether or not a Business Day) preceding the Interest Payment Date, even if such Notes are canceled after such record date and on or before such Interest Payment Date, except as provided in Section 2.12 of the Indenture with respect to defaulted interest. The Notes will be payable as to principal, premium and Additional Amounts, if any, and interest at the office or agency of the Company maintained for such purpose within The City and State of New York, or, at the option of the Company, payment of interest and Additional Amounts may be made by check mailed to the Holders at their addresses set forth in the register of Holders; provided that payment by wire transfer of immediately available funds will be required with respect to principal of and interest, premium and Additional Amounts on, all Global Notes and all other Notes the Holders of which shall have provided wire transfer instructions to the Company or the Paying Agent if such Holders shall be registered Holders of at least $250,000 in principal amount of the Notes. Such payment shall be in such coin or currency of the United States of America as at the time of payment is legal tender for payment of public and private debts.

3. PAYING AGENT AND REGISTRAR. Initially, The Bank of New York, the Trustee under the Indenture, will act as Paying Agent and Registrar. The Company may change any Paying Agent or Registrar without notice to any Holder. The Company or any of its Subsidiaries may act in any such capacity.

4. INDENTURE. The Company issued the Notes under an Indenture dated as of May 21, 2003 ("Indenture") among the Company, the Guarantors named therein and the Trustee. The

terms of the Notes include those stated in the Indenture and those made part of the Indenture by reference to the Trust Indenture Act of 1939, as amended (15 U.S. Code ss.ss. 77aaa-77bbbb). The Notes are subject to all such terms, and Holders are referred to the Indenture and such Act for a statement of such terms. To the extent any provision of this Note conflicts with the express provisions of the Indenture, the provisions of the Indenture shall govern and be controlling.

5. OPTIONAL REDEMPTION.

(a) Except as set forth in clause (b) of this paragraph 5, the Notes shall not be redeemable at the Company's option prior to July 15, 2008. Thereafter, the Notes shall be subject to redemption at any time at the option of the Company, in whole or in part, upon not less than 30 nor more than 60 days' notice, at the redemption prices (expressed as percentages of principal amount) set forth below plus accrued and unpaid interest and Additional Amounts thereon, if any, to the applicable redemption date, if redeemed during the twelve-month period beginning on July 15 of the years indicated below:

YEAR	PERCENTAGE
2008	103.063%
2009	102.042%
2010	101.021%
2011 and thereafter	100.000%

(b) Notwithstanding the foregoing, before July 15, 2006, the Company may on any one or more occasions redeem up to an aggregate of 35% of the Notes originally issued at a redemption price of 106.125% of the principal amount thereof, plus accrued and unpaid interest and Additional Amounts thereon, if any, to the redemption date, with the net cash proceeds of one or more Equity Offerings by the Company or the net cash proceeds of one or more Equity Offerings by Holdings that are contributed to the Company as common equity capital; provided that at least 65% of the Notes originally issued remain outstanding immediately after the occurrence of each such redemption; and provided, further, that any such redemption must occur within 120 days of the date of the closing of such Equity Offering.

6. MANDATORY REDEMPTION.

Except as set forth in paragraph 7 below, the Company shall not be required to make mandatory redemption payments with respect to the Notes.

7. REPURCHASE AT OPTION OF HOLDER.

(a) If there is a Change of Control, the Company shall be required to make an offer (a "Change of Control Offer") to repurchase all or any part (equal to $1,000 or an integral multiple thereof) of each Holder's Notes at a purchase price equal to 101% of aggregate principal amount thereof plus accrued and unpaid interest, if any, to the date of purchase (the "Change of Control Payment"). Within 10 days following any Change of Control, the Company shall mail a notice to each Holder setting forth the procedures governing the Change of Control Offer as required by the Indenture.

(b) If the Company or a Subsidiary consummates any Asset Sales, within five Business Days of each date on which the aggregate amount of Excess Proceeds exceeds $10.0 million, the Company will be required to make an offer to all Holders of the Notes (an "Asset Sale Offer") and any other Indebtedness that ranks pari passu with the Notes (including the May 1998 Notes, the December 1998 Notes and the 2002 Notes) that, by its terms, requires the Company to offer to repurchase such Indebtedness with such Excess Proceeds to purchase the maximum principal amount of Notes and pari passu Indebtedness that may be purchased out of such Excess Proceeds at an offer price in cash in an amount equal to 100% of the principal amount thereof plus accrued and unpaid interest thereon, if any, to the date of purchase, in accordance with the procedures set forth in the Indenture. To the extent that the aggregate amount of Notes or pari passu Indebtedness tendered pursuant to an Asset Sale Offer is less than the Excess Proceeds, the Company may use any Excess Proceeds for general corporate purposes. If the aggregate principal amount of Notes or pari passu Indebtedness surrendered by Holders thereof exceeds the amount of Excess Proceeds in an Asset Sale Offer, the Company shall repurchase such Indebtedness on a pro rata basis and the Trustee shall select the Notes to be purchased on a pro rata basis. Holders of Notes that are the subject of an offer to purchase will receive an Asset Sale Offer from the Company prior to any related purchase date and may elect to have such Notes purchased by completing the form entitled "Option of Holder to Elect Purchase" on the reverse of the Notes.

8. NOTICE OF REDEMPTION. Notice of redemption will be mailed at least 30 days but not more than 60 days before the redemption date to each Holder whose Notes are to be redeemed at its registered address. Notes in denominations larger than $1,000 may be redeemed in part but only in whole multiples of $1,000, unless all of the Notes held by a Holder are to be redeemed. On and after the redemption date interest ceases to accrue on Notes or portions thereof called for redemption.

9. DENOMINATIONS, TRANSFER, EXCHANGE. The Notes are in registered form without coupons in denominations of $1,000 and integral multiples of $1,000. The transfer of Notes may be registered and Notes may be exchanged as provided in the Indenture. The Registrar and the Trustee may require a Holder, among other things, to furnish appropriate endorsements and transfer documents and the Company may require a Holder to pay any taxes and fees required by law or permitted by the Indenture. The Company need not exchange or register the transfer of any Note or portion of a Note selected for redemption, except for the unredeemed portion of any Note being redeemed in part. Also, it need not exchange or register the transfer of any Notes for a period of 15 days before a selection of Notes to be redeemed or during the period between a record date and the corresponding Interest Payment Date.

10. PERSONS DEEMED OWNERS. The registered Holder of a Note may be treated as its owner for all purposes.

11. AMENDMENT, SUPPLEMENT AND WAIVER. Subject to certain exceptions, the Indenture or the Notes may be amended or supplemented with the consent of the Holders of at least a majority in principal amount of the then outstanding Notes, and any existing default or compliance with any provision of the Indenture or the Notes may be waived with the consent of the Holders of a majority in principal amount of the then outstanding Notes. Without the consent of any Holder of a Note, the Indenture or the Notes may be amended or supplemented to cure

any ambiguity, defect or inconsistency, to provide for uncertificated Notes in addition to or in place of certificated Notes, to provide for the assumption of the Company's obligations to Holders of the Notes in case of a merger or consolidation, to make any change that would provide any additional rights or benefits to the Holders of the Notes or that does not adversely affect the legal rights under the Indenture of any such Holder, or to comply with the requirements of the SEC in order to effect or maintain the qualification of the Indenture under the Trust Indenture Act.

12. DEFAULTS AND REMEDIES. An "Event of Default" occurs if: (i) default for 30 days in the payment when due of interest on, or Additional Amounts with respect to, the Notes (whether or not prohibited by the subordination provisions of the Indenture); (ii) default in payment when due of the principal of or premium, if any, on the Notes (whether or not prohibited by the subordination provisions of the Indenture); (iii) failure by the Company to comply with the covenants contained in sections 4.10, 4.15 or 5.01 of the Indenture; (iv) failure by the Company for 60 days after notice to comply with any of its other agreements in the Indenture or the Notes; (v) default under any mortgage, indenture or instrument under which there may be issued or by which there may be secured or evidenced any Indebtedness for money borrowed by the Company or any of its Restricted Subsidiaries (or the payment of which is guaranteed by the Company or any of its Restricted Subsidiaries) whether such Indebtedness or guarantee now exists, or is created after the date of the Indenture, which default results in the acceleration of such Indebtedness prior to its express maturity and, in each case, the principal amount of any such Indebtedness, together with the principal amount of any other such Indebtedness the maturity of which has been so accelerated, aggregates $25.0 million or more; (vi) failure by the Company or any of its Restricted Subsidiaries to pay final judgments aggregating in excess of $25.0 million, which judgments are not paid, discharged or stayed for a period of 60 days; (vii) certain events of bankruptcy or insolvency with respect to the Company or any of its Significant Subsidiaries or any group of Subsidiaries that, taken as a whole, would constitute a Significant Subsidiary; and (viii) except as permitted by the Indenture, any Subsidiary Guarantee shall be held in any judicial proceeding to be unenforceable or invalid.

If any Event of Default occurs and is continuing, the Trustee or the Holders of at least 25% in principal amount of the then outstanding Notes may declare all the Notes to be due and payable immediately; provided, however, that so long as any Designated Senior Debt is outstanding, such declaration shall not become effective until the earlier of (i) the day which is five Business Days after receipt by the Representatives of Designated Senior Debt of such notice of acceleration or (ii) the date of acceleration of any Designated Senior Debt. Notwithstanding the foregoing, in the case of an Event of Default arising from certain events of bankruptcy or insolvency, with respect to the Company or any Significant Subsidiary or any group of Subsidiaries that, taken as a whole, would constitute a Significant Subsidiary, all outstanding Notes will become due and payable without further action or notice. Holders of the Notes may not enforce the Indenture or the Notes except as provided in the Indenture. Subject to certain limitations, Holders of a majority in principal amount of the then outstanding Notes may direct the Trustee in its exercise of any trust or power. The Trustee may withhold from Holders of the Notes notice of any continuing Default or Event of Default (except a Default or Event of Default relating to the payment of principal or interest) if it determines that withholding notice is in their interest.

In the case of any Event of Default occurring by reason of any willful action (or inaction) taken (or not taken) by or on behalf of the Company with the intention of avoiding payment of the premium that the Company would have had to pay if the Company then had elected to redeem the Notes pursuant to the optional redemption provisions of the Indenture, an equivalent premium shall also become and be immediately due and payable to the extent permitted by law upon the acceleration of the Notes. If an Event of Default occurs prior to July 15, 2008 by reason of any willful action (or inaction) taken (or not taken) by or on behalf of the Company with the intention of avoiding the prohibition on redemption of the Notes prior to July 15, 2008, then the premium specified in the Indenture shall also become immediately due and payable to the extent permitted by law upon the acceleration of the Notes.

The Holders of a majority in aggregate principal amount of the Notes then outstanding by notice to the Trustee may on behalf of the Holders of all of the Notes waive any existing Default or Event of Default and its consequences under the Indenture except a continuing Default or Event of Default in the payment of interest on, or the principal of, the Notes.

13. SUBORDINATION. Payment of the principal of, premium and Additional Amounts, if any, or interest on the Notes is subordinated to the prior payment of Senior Debt on the terms provided in the Indenture.

14. TRUSTEE DEALINGS WITH COMPANY. The Trustee, in its individual or any other capacity, may make loans to, accept deposits from, and perform services for the Company or its Affiliates, and may otherwise deal with the Company or its Affiliates, as if it were not the Trustee.

15. NO RECOURSE AGAINST OTHERS. A director, officer, employee, incorporator or stockholder, of the Company or any Subsidiary of the Company, as such, shall not have any liability for any obligations of the Company or any Subsidiary of the Company under the Notes, the Indenture or the Subsidiary Guarantees or for any claim based on, in respect of, or by reason of, such obligations or their creation. Each Holder by accepting a Note waives and releases all such liability. The waiver and release are part of the consideration for the issuance of the Notes.

16. AUTHENTICATION. This Note shall not be valid until authenticated by the manual signature of the Trustee or an authenticating agent.

17. ABBREVIATIONS. Customary abbreviations may be used in the name of a Holder or an assignee, such as: TEN COM (= tenants in common), TEN ENT (= tenants by the entireties), JT TEN (= joint tenants with right of survivorship and not as tenants in common), CUST (= custodian), and U/G/M/A (= Uniform Gifts to Minors Act).

18. ADDITIONAL RIGHTS OF HOLDERS OF TRANSFER RESTRICTED SECURITIES. In addition to the rights provided to Holders of Notes under the Indenture, Holders of Transferred Restricted Securities shall have all the rights set forth in the Registration Rights Agreement dated as of May 21, 2003, between the Company and the parties named on the signature pages thereof, or, with respect to any Additional Notes, Holders of Transfer Restricted Securities shall have all the rights set forth in one or more registration rights agreements between the Company and the

other parties thereto, relating to rights given by the Company to the purchasers of Additional Notes (collectively, the "Registration Rights Agreement").

19. CUSIP NUMBERS. Pursuant to a recommendation promulgated by the Committee on Uniform Security Identification Procedures, the Company has caused CUSIP numbers to be printed on the Notes and the Trustee may use CUSIP numbers in notices of redemption as a convenience to Holders. No representation is made as to the accuracy of such numbers either as printed on the Notes or as contained in any notice of redemption and reliance may be placed only on the other identification numbers placed thereon.

20. GOVERNING LAW. This Note shall be governed by, and construed in accordance with, the laws of the State of New York.

The Company will furnish to any Holder upon written request and without charge a copy of the Indenture and/or the Registration Rights Agreement. Requests may be made to:

L-3 Communications Corporation
600 Third Avenue, 34th Floor,
New York, New York 10016
Attention: Senior Vice President-Finance (Fax: 212-805-5440)

ASSIGNMENT FORM

To assign this Note, fill in the form below: (I) or (we) assign and transfer this Note to

- ---

(Insert assignee's soc. sec. or tax I.D. no.)

- ---

- ---

- ---

- ---

(Print or type assignee's name, address and zip code)

and irrevocably appoint

---

to transfer this Note on the books of the Company. The agent may substitute another to act for him.

- ---

Date:

Your Signature:

(Sign exactly as your name appears on the face of this Note)

Signature Guarantee.

Option of Holder to Elect Purchase

If you want to elect to have this Note purchased by the Company pursuant to Section 4.10 or 4.15 of the Indenture, check the box below:

[ ] Section 4.10 [ ] Section 4.15

If you want to elect to have only part of the Note purchased by the Company pursuant to Section 4.10 or Section 4.15 of the Indenture, state the amount you elect to have purchased: $_____

Date: _____

Your Signature: _____
(Sign exactly as your name appears on the Note)

Tax Identification No.: _____

Signature Guarantee.

Schedule of Exchanges of Interests in the Global Note

The following exchanges of a part of this Global Note for an interest in another Global Note or for a Definitive Note, or exchanges of a part of another Global Note or Definitive Note for an interest in this Global Note, have been made:

Date of Exchange	Amount of decrease in Principal Amount of this Global Note	Amount of increase in Principal Amount of this Global Note	Principal Amount of this Global Note following such decrease (or increase)	Signature of authorized officer of Trustee or Note Custodian

EXHIBIT B
FORM OF CERTIFICATE OF TRANSFER

L-3 Communications Corporation
600 Third Avenue, 34th Floor,
New York, New York 10016

[Registrar address block]

Re: 6-1/8% Senior Subordinated Notes due 2013.

Reference is hereby made to the Indenture, dated as of May 21, 2003 (the "Indenture"), among L-3 Communications Corporation, as issuer (the "Company"), the Guarantors party thereto and The Bank of New York, as trustee. Capitalized terms used but not defined herein shall have the meanings given to them in the Indenture.

_____, (the "Transferor") owns and proposes to transfer the Note[s] or interest in such Note[s] specified in Annex A hereto, in the principal amount of $_____ in such Note[s] or interests (the "Transfer"), to _____ (the "Transferee"), as further specified in Annex A hereto. In connection with the Transfer, the Transferor hereby certifies that:

[CHECK ALL THAT APPLY]

1. [ ] CHECK IF TRANSFEREE WILL TAKE DELIVERY OF BOOK-ENTRY INTERESTS IN THE 144A GLOBAL NOTE OR DEFINITIVE NOTES PURSUANT TO RULE 144A. The Transfer is being effected pursuant to and in accordance with Rule 144A under the United States Securities Act of 1933, as amended (the "Securities Act"), and, accordingly, the Transferor hereby further certifies that the Book-Entry Interests or Definitive Notes are being transferred to a Person that the Transferor reasonably believes is purchasing the Book-Entry Interests or Definitive Notes for its own account, or for one or more accounts with respect to which such Person exercises sole investment discretion, and such Person and each such account is a "qualified institutional buyer" within the meaning of Rule 144A in a transaction meeting the requirements of Rule 144A and such Transfer is in compliance with any applicable blue sky securities laws of any state of the United States. Upon consummation of the proposed Transfer in accordance with the terms of the Indenture, the transferred Book-Entry Interest or Definitive Note will be subject to the restrictions on transfer enumerated in the Private Placement Legend printed on the 144A Global Note and/or the Definitive Note and in the Indenture and the Securities Act.

2. [ ] CHECK IF TRANSFEREE WILL TAKE DELIVERY OF BOOK-ENTRY INTERESTS IN THE TEMPORARY REGULATION S GLOBAL NOTE, THE REGULATION S GLOBAL NOTE OR DEFINITIVE NOTES PURSUANT TO REGULATION S. The Transfer is being effected pursuant to and in accordance with Rule 903 or Rule 904 under the Securities Act and, accordingly, the Transferor hereby further certifies that (i) the Transfer is not being made to a person in the United States and (x) at the time the buy order was originated, the Transferee was outside the United States or such Transferor and any Person acting on its behalf reasonably believed and believes that the Transferee was outside the United States or (y) the transaction was executed in, on or through the facilities of a designated offshore securities market and neither such Transferor nor any Person acting on its behalf knows that the

transaction was prearranged with a buyer in the United States, (ii) no directed selling efforts have been made in contravention of the requirements of Rule 903(b) or Rule 904(b) of Regulation S under the Securities Act and (iii) the transaction is not part of a plan or scheme to evade the registration requirements of the Securities Act and (iv) if the proposed transfer is being made prior to the expiration of the Restricted Period, the transfer is not being made to a U.S. Person or for the account or benefit of a U.S. Person (other than an Initial Purchaser). Upon consummation of the proposed transfer in accordance with the terms of the Indenture, the transferred Book-Entry Interest or Definitive Note will be subject to the restrictions on Transfer enumerated in the Private Placement Legend printed on the Regulation S Global Note and/or the Definitive Note and in the Indenture and the Securities Act.

3. [ ] CHECK AND COMPLETE IF TRANSFEREE WILL TAKE DELIVERY OF BOOK-ENTRY INTERESTS IN THE IAI GLOBAL NOTE OR DEFINITIVE NOTES PURSUANT TO ANY PROVISION OF THE SECURITIES ACT OTHER THAN RULE 144A OR REGULATION S. The Transfer is being effected in compliance with the transfer restrictions applicable to Book-Entry Interests in Restricted Global Notes and Definitive Notes bearing the Private Placement Legend and pursuant to and in accordance with the Securities Act and any applicable blue sky securities laws of any State of the United States, and accordingly the Transferor hereby further certifies that (check one):

(a) [ ] such Transfer is being effected pursuant to and in accordance with Rule 144 under the Securities Act;

OR

(b) [ ] such Transfer is being effected to the Company or a subsidiary thereof,

OR

(c) [ ] such Transfer is being effected pursuant to an effective registration statement under the Securities Act;

OR

(d) [ ] such Transfer is being effected to an Institutional Accredited Investor and pursuant to an exemption from the registration requirements of the Securities Act other than Rule 144A, Rule 144 or Rule 904, and the Transferor hereby further certifies that the Transfer complies with the transfer restrictions applicable to Book-Entry Interests in a Restricted Global Note or Definitive Notes bearing the Private Placement Legend and the requirements of the exemption claimed, which certification is supported by (x) if such Transfer is in respect of a principal amount of Notes at the time of Transfer of $250,000 or more, a certificate executed by the Transferee in the form of Exhibit D to the Indenture, or (y) if such Transfer is in respect of a principal amount of Notes at the time of transfer of less than $250,000, (1) a certificate executed by the Transferee in the form of Exhibit D to the Indenture and (2) an Opinion of Counsel provided by the Transferor or the Transferee (a copy of which the Transferor has attached to this certification), to the effect that (1) such Transfer is in compliance with the Securities Act and (2) such Transfer complies with any applicable blue sky securities laws of any state of the United States. Upon consummation of the proposed transfer in accordance with the terms of the Indenture, the transferred Book-Entry Interest or Definitive Note will be subject to the restrictions on transfer enumerated in the Private Placement Legend printed on the IAI Global Note and/or the Definitive Notes and in the Indenture and the Securities Act.

4. [ ] CHECK IF TRANSFEREE WILL TAKE DELIVERY OF BOOK-ENTRY INTERESTS IN THE UNRESTRICTED GLOBAL NOTE OR IN DEFINITIVE NOTES THAT DO NOT BEAR THE PRIVATE PLACEMENT LEGEND.

(a) [ ] CHECK IF TRANSFER IS PURSUANT TO RULE 144. (i) The Transfer is being effected pursuant to and in accordance with Rule 144 under the Securities Act and in compliance with the transfer restrictions contained in the Indenture and any applicable blue sky securities laws of any state of the United States and (ii) the restrictions on transfer contained in the Indenture and the Private Placement Legend are not required in order to maintain compliance with the Securities Act. Upon consummation of the proposed Transfer in accordance with the terms of the Indenture, the transferred Book-Entry Interests or Definitive Notes will no longer be subject to the restrictions on transfer enumerated in the Private Placement Legend printed on the Restricted Global Notes, on Definitive Notes bearing the Private Placement Legend and in the Indenture.

(b) [ ] CHECK IF TRANSFER IS PURSUANT TO REGULATION S. (i) The Transfer is being effected pursuant to and in accordance with Rule 903 or Rule 904 under the Securities Act and in compliance with the transfer restrictions contained in the Indenture and any applicable blue sky securities laws of any state of the United States and (ii) the restrictions on transfer contained in the Indenture and the Private Placement Legend are not required in order to maintain compliance with the Securities Act. Upon consummation of the proposed Transfer in accordance with the terms of the Indenture, the transferred Book-Entry Interests or Definitive Notes will no longer be subject to the restrictions on transfer enumerated in the Private Placement Legend printed on the Restricted Global Notes, on Definitive Notes bearing the Private Placement Legend and in the Indenture.

(c) [ ] CHECK IF TRANSFER IS PURSUANT TO OTHER EXEMPTION. (i) The Transfer is being effected pursuant to and in compliance with an exemption from the registration requirements of the Securities Act other than Rule 144, Rule 903 or Rule 904 and in compliance with the transfer restrictions contained in the Indenture and any applicable blue sky securities laws of any State of the United States and (ii) the restrictions on transfer contained in the Indenture and the Private Placement Legend are not required in order to maintain compliance with the Securities Act. Upon consummation of the proposed Transfer in accordance with the terms of the Indenture, the transferred Book-Entry Interests or Definitive Notes will not be subject to the restrictions on transfer enumerated in the Private Placement Legend printed on the Restricted Global Notes or Definitive Notes bearing the Private Placement Legend and in the Indenture.

This certificate and the statements contained herein are made for your benefit and the benefit of the Company.

[Insert Name of Transferor]

By:

Name:
Title:

Dated: _____, ____

ANNEX A TO CERTIFICATE OF TRANSFER

1. The Transferor owns and proposes to transfer the following:

[CHECK ONE OF (A) OR (B)]

(a) [ ] Book-Entry Interests in the:

(i) [ ] 144A Global Note (CUSIP _____), or

(ii) [ ] Regulation S Global Note (CUSIP _____), or

(iii) [ ] IAI Global Note (CUSIP _____); or

(b) [ ] Restricted Definitive Notes.

2. After the Transfer the Transferee will hold:

[CHECK ONE]

(a) [ ] Book-Entry Interests in the:

(i) [ ] 144A Global Note (CUSIP _____), or

(ii) [ ] Regulation S Global Note (CUSIP _____), or

(iii) [ ] IAI Global Note (CUSIP _____); or

(iv) [ ] Unrestricted Global Note (CUSIP _____); or

(b) [ ] Restricted Definitive Notes; or

(c) [ ] Definitive Notes that do not bear the Private Placement Legend, in accordance with the terms of the Indenture.

EXHIBIT C

FORM OF CERTIFICATE OF EXCHANGE

L-3 Communications Corporation
600 Third Avenue, 34th Floor,
New York, New York 10016
Attention: Senior Vice President-Finance (Fax: 212-805-5440)

Re: 6-1/8% Senior Subordinated Notes due 2013

(CUSIP _____)

Reference is hereby made to the Indenture, dated as of May 21, 2003 (the "Indenture"), among L-3 Communications Corporation, as issuer (the "Company"), the Guarantors party thereto and The Bank of New York, as trustee. Capitalized terms used but not defined herein shall have the meanings given to them in the Indenture.

_____, (the "Holder") owns and proposes to exchange the Note[s] or interest in such Note[s] specified herein, in the principal amount of $_____ in such Note[s] or interests (the "Exchange"). In connection with the Exchange, the Holder hereby certifies that:

1. EXCHANGE OF RESTRICTED DEFINITIVE NOTES OR RESTRICTED BOOK-ENTRY INTERESTS FOR DEFINITIVE NOTES THAT DO NOT BEAR THE PRIVATE PLACEMENT LEGEND OR UNRESTRICTED BOOK-ENTRY INTERESTS

(a) [ ] CHECK IF EXCHANGE IS FROM RESTRICTED BOOK-ENTRY INTEREST TO UNRESTRICTED BOOK-ENTRY INTEREST. In connection with the Exchange of the Holder's Restricted Book-Entry Interest for Unrestricted Book-Entry Interests in an equal principal amount, the Holder hereby certifies (i) the Unrestricted Book-Entry Interests are being acquired for the Holder's own account without transfer, (ii) such Exchange has been effected in compliance with the transfer restrictions applicable to the Global Notes and pursuant to and in accordance with the United States Securities Act of 1933, as amended (the "Securities Act"), (iii) the restrictions on transfer contained in the Indenture and the Private Placement Legend are not required in order to maintain compliance with the Securities Act and (iv) the Unrestricted Book-Entry Interests are being acquired in compliance with any applicable blue sky securities laws of any state of the United States.

(b) [ ] CHECK IF EXCHANGE IS FROM RESTRICTED BOOK-ENTRY INTEREST TO DEFINITIVE NOTES THAT DO NOT BEAR THE PRIVATE PLACEMENT LEGEND. In connection with the Exchange of the Holder's Restricted Book-Entry Interests for Definitive Notes that do not bear the Private Placement Legend, the Holder hereby certifies (i) the Definitive Notes are being acquired for the Holder's own account without transfer, (ii) such Exchange has been effected in compliance with the transfer restrictions applicable to the Restricted Global Notes and pursuant to and in accordance with the Securities Act, (iii) the restrictions on transfer contained in the Indenture and the Private Placement Legend are not required in order to maintain compliance with the

Securities Act and (iv) the Definitive Notes are being acquired in compliance with any applicable blue sky securities laws of any state of the United States.

(c) [ ] CHECK IF EXCHANGE IS FROM RESTRICTED DEFINITIVE NOTES TO UNRESTRICTED BOOK-ENTRY INTERESTS. In connection with the Holder's Exchange of Restricted Definitive Notes for Unrestricted Book-Entry Interests, (i) the Unrestricted Book-Entry Interests are being acquired for the Holder's own account without transfer, (ii) such Exchange has been effected in compliance with the transfer restrictions applicable to Restricted Definitive Notes and pursuant to and in accordance with the Securities Act, (iii) the restrictions on transfer contained in the Indenture and the Private Placement Legend are not required in order to maintain compliance with the Securities Act and (iv) the Unrestricted Book-Entry Interests are being acquired in compliance with any applicable blue sky securities laws of any state of the United States.

(d) [ ] CHECK IF EXCHANGE IS FROM RESTRICTED DEFINITIVE NOTES TO DEFINITIVE NOTES THAT DO NOT BEAR THE PRIVATE PLACEMENT LEGEND. In connection with the Holder's Exchange of a Restricted Definitive Note for Definitive Notes that do not bear the Private Placement Legend, the Holder hereby certifies (i) the Definitive Notes that do not bear the Private Placement Legend are being acquired for the Holder's own account without transfer, (ii) such Exchange has been effected in compliance with the transfer restrictions applicable to Restricted Definitive Notes and pursuant to and in accordance with the Securities Act , (iii) the restrictions on transfer contained in the Indenture and the Private Placement Legend are not required in order to maintain compliance with the Securities Act and (iv) the Notes are being acquired in compliance with any applicable blue sky securities laws of any state of the United States.

2. EXCHANGE OF RESTRICTED DEFINITIVE NOTES OR RESTRICTED BOOK-ENTRY INTERESTS FOR RESTRICTED DEFINITIVE NOTES OR RESTRICTED BOOK-ENTRY INTERESTS

(a)[ ] CHECK IF EXCHANGE IS FROM RESTRICTED BOOK-ENTRY INTERESTS TO RESTRICTED DEFINITIVE NOTE. In connection with the Exchange of the Holder's Restricted Book-Entry Interest for Restricted Definitive Notes with an equal principal amount, (i) the Restricted Definitive Notes are being acquired for the Holder's own account without transfer and (ii) such Exchange has been effected in compliance with the transfer restrictions applicable to the Restricted Global Notes and pursuant to and in accordance with the Securities Act, and in compliance with any applicable blue sky securities laws of any state of the United States. Upon consummation of the proposed Exchange in accordance with the terms of the Indenture, the Restricted Definitive Notes issued will be subject to the restrictions on transfer enumerated in the Private Placement Legend printed on the Restricted Definitive Notes and in the Indenture and the Securities Act.

(b) [ ] CHECK IF EXCHANGE IS FROM RESTRICTED DEFINITIVE NOTES TO RESTRICTED BOOK-ENTRY INTERESTS. In connection with the Exchange of the Holder's Restricted Definitive Note for Restricted Book-Entry Interests in the [CHECK ONE] [ ] 144A Global Note, [ ] Regulation S Global Note, [ ] IAI Global Note with an equal principal amount, (i) the Definitive Notes are being acquired for the Holder's own account without transfer and (ii) such Exchange has been effected in compliance with the transfer restrictions applicable to the Restricted Definitive Note and pursuant to and in accordance with the Securities Act, and in compliance with any applicable blue sky securities laws of any state of the United States. Upon

consummation of the proposed Exchange in accordance with the terms of the Indenture, the Book-Entry Interests issued will be subject to the restrictions on transfer enumerated in the Private Placement Legend printed on the relevant Restricted Global Note and in the Indenture and the Securities Act.

This certificate and the statements contained herein are made for your benefit and the benefit of the Company.

[Insert Name of Transferor]

By:

Name:
Title:

Dated: _____, ____

EXHIBIT D

FORM OF CERTIFICATE FROM
ACQUIRING INSTITUTIONAL ACCREDITED INVESTOR

L-3 Communications Corporation
600 Third Avenue, 34th Floor,
New York, New York 10016
Attention: Senior Vice President-Finance (Fax: 212-805-5440)

Re: 6-1/8% Senior Subordinated Notes due 2013

Reference is hereby made to the Indenture, dated as of May 21, 2003 (the "Indenture"), among L-3 Communications Corporation, as issuer (the "Company"), the Guarantors party thereto and The Bank of New York, as trustee. Capitalized terms used but not defined herein shall have the meanings given to them in the Indenture.

In connection with our proposed purchase of $_____ aggregate principal amount at maturity of:

(a) [ ] Book-Entry Interests, or

(b) [ ] Definitive Notes,

we confirm that:

1. We understand that any subsequent transfer of the Notes or any interest therein is subject to certain restrictions and conditions set forth in the Indenture and the undersigned agrees to be bound by, and not to resell, pledge or otherwise transfer the Notes or any interest therein except in compliance with, such restrictions and conditions and the United States Securities Act of 1933, as amended (the "Securities Act").

2. We understand that the offer and sale of the Notes have not been registered under the Securities Act, and that the Notes and any interest therein may not be offered or sold except as permitted in the following sentence. We agree, on our own behalf and on behalf of any accounts for which we are acting as hereinafter stated, that if we should sell the Notes or any interest therein, we will do so only (A) to the Company or any subsidiary thereof, (B) in accordance with Rule 144A under the Securities Act to a "qualified institutional buyer" (as defined therein), (C) to an institutional "accredited investor" (as defined below) that, prior to such transfer, furnishes (or has furnished on its behalf by a U.S. broker-dealer) to you and to the Company a signed letter substantially in the form of this letter and, if such transfer is in respect of a principal amount of Notes, at the time of transfer of less than $250,000, an Opinion of Counsel in form reasonably acceptable to the Company to the effect that such transfer is in compliance with the Securities Act, (D) outside the United States in accordance with Rule 904 of Regulation S under the Securities Act, (E) pursuant to the provisions of Rule 144 under the Securities Act or (F) pursuant to an effective registration statement under the Securities Act, and we further agree to provide to any person purchasing the Definitive Notes or Book-Entry

Interests from us in a transaction meeting the requirements of clauses (A) through (E) of this paragraph a notice advising such purchaser that resales thereof are restricted as stated herein.

3. We understand that, on any proposed resale of the Notes or Book-Entry Interests, we will be required to furnish to you and the Company such certifications, legal opinions and other information as you and the Company may reasonably require to confirm that the proposed sale complies with the foregoing restrictions. We further understand that the Notes purchased by us will bear a legend to the foregoing effect. We further understand that any subsequent transfer by us of the Notes or Book-Entry Interests therein acquired by us must be effected through one of the Placement Agents.

4. We are an institutional "accredited investor" (as defined in Rule 501(a)(1), (2), (3) or (7) of Regulation D under the Securities Act) and have such knowledge and experience in financial and business matters as to be capable of evaluating the merits and risks of our investment in the Notes, and we and any accounts for which we are acting are each able to bear the economic risk of our or its investment.

5. We are acquiring the Notes or Book-Entry Interests purchased by us for our own account or for one or more accounts (each of which is an institutional "accredited investor") as to each of which we exercise sole investment discretion.

You and the Company are entitled to rely upon this letter and are irrevocably authorized to produce this letter or a copy hereof to any interested party in any administrative or legal proceedings or official inquiry with respect to the matters covered hereby.

[Insert Name of Accredited Investor]

By:

Name:
Title:

Dated: _____, ____

EXHIBIT E

FORM OF SUPPLEMENTAL INDENTURE TO BE DELIVERED
BY GUARANTEEING SUBSIDIARY

SUPPLEMENTAL INDENTURE (this "Supplemental Indenture"), dated as of _____, among _____ (the "Guaranteeing Subsidiaries"), each a direct or indirect subsidiary of L-3 Communications Corporation (or its permitted successor), a Delaware corporation (the "Company"), the Company and The Bank of New York, as trustee under the indenture referred to below (the "Trustee").

WITNESSETH

WHEREAS, the Company has heretofore executed and delivered to the Trustee an indenture (the "Indenture"), dated as of May 21, 2003 providing for the issuance of an unlimited amount of 6-1/8% Senior Subordinated Notes due 2013 (the "Notes");

WHEREAS, the Indenture provides that under certain circumstances the Guaranteeing Subsidiaries shall execute and deliver to the Trustee a supplemental indenture pursuant to which the Guaranteeing Subsidiaries shall unconditionally guarantee all of the Company's Obligations (as defined in the Indenture) under the Notes and the Indenture on the terms and conditions set forth herein (the "Subsidiary Guarantee"); and

WHEREAS, pursuant to Section 9.01 of the Indenture, the Trustee is authorized to execute and deliver this Supplemental Indenture.

NOW THEREFORE, in consideration of the foregoing and for other good and valuable consideration, the receipt of which is hereby acknowledged, the Guaranteeing Subsidiaries and the Trustee mutually covenant and agree for the equal and ratable benefit of the Holders of the Notes as follows:

1. CAPITALIZED TERMS. Capitalized terms used herein without definition shall have the meanings assigned to them in the Indenture.

2. AGREEMENT TO GUARANTEE. Each Guaranteeing Subsidiary hereby agrees as follows:

(a) Such Guaranteeing Subsidiary, jointly and severally with all other current and future guarantors of the Notes (collectively, the "Guarantors" and each, a "Guarantor"), unconditionally guarantees to each Holder of a Note authenticated and delivered by the Trustee and to the Trustee and its successors and assigns, regardless of the validity and enforceability of the Indenture, the Notes or the Obligations of the Company under the Indenture or the Notes, that:

(i) the principal of, premium, interest and Additional Amounts, if any, on the Notes will be promptly paid in full when due, whether at maturity, by acceleration, redemption or otherwise, and interest on

the overdue principal of, premium, interest and Additional Amounts, if any, on the Notes, to the extent lawful, and all other Obligations of the Company to the Holders or the Trustee thereunder or under the Indenture will be promptly paid in full, all in accordance with the terms thereof; and

(ii) in case of any extension of time for payment or renewal of any Notes or any of such other Obligations, that the same will be promptly paid in full when due in accordance with the terms of the extension or renewal, whether at stated maturity, by acceleration or otherwise.

(b) Notwithstanding the foregoing, in the event that this Subsidiary Guarantee would constitute or result in a violation of any applicable fraudulent conveyance or similar law of any relevant jurisdiction, the liability of such Guaranteeing Subsidiary under this Supplemental Indenture and its Subsidiary Guarantee shall be reduced to the maximum amount permissible under such fraudulent conveyance or similar law.

3. EXECUTION AND DELIVERY OF SUBSIDIARY GUARANTEES.

(a) To evidence its Subsidiary Guarantee set forth in this Supplemental Indenture, such Guaranteeing Subsidiary hereby agrees that a notation of such Subsidiary Guarantee substantially in the form of Exhibit F to the Indenture shall be endorsed by an officer of such Guaranteeing Subsidiary on each Note authenticated and delivered by the Trustee after the date hereof.

(b) Notwithstanding the foregoing, such Guaranteeing Subsidiary hereby agrees that its Subsidiary Guarantee set forth herein shall remain in full force and effect notwithstanding any failure to endorse on each Note a notation of such Subsidiary Guarantee.

(c) If an Officer whose signature is on this Supplemental Indenture or on the Subsidiary Guarantee no longer holds that office at the time the Trustee authenticates the Note on which a Subsidiary Guarantee is endorsed, the Subsidiary Guarantee shall be valid nevertheless.

(d) The delivery of any Note by the Trustee, after the authentication thereof under the Indenture, shall constitute due delivery of the Subsidiary Guarantee set forth in this Supplemental Indenture on behalf of each Guaranteeing Subsidiary.

(e) Each Guaranteeing Subsidiary hereby agrees that its Obligations hereunder shall be unconditional, regardless of the validity, regularity or enforceability of the Notes or the Indenture, the absence of any action to enforce the same, any waiver or consent by any Holder of the Notes with respect to any provisions hereof or thereof, the recovery of any judgment

against the Company, any action to enforce the same or any other circumstance which might otherwise constitute a legal or equitable discharge or defense of a guarantor.

(f) Each Guaranteeing Subsidiary hereby waives diligence, presentment, demand of payment, filing of claims with a court in the event of insolvency or bankruptcy of the Company, any right to require a proceeding first against the Company, protest, notice and all demands whatsoever and covenants that its Subsidiary Guarantee made pursuant to this Supplemental Indenture will not be discharged except by complete performance of the Obligations contained in the Notes and the Indenture.

(g) If any Holder or the Trustee is required by any court or otherwise to return to the Company or any Guaranteeing Subsidiary, or any custodian, Trustee, liquidator or other similar official acting in relation to either the Company or such Guaranteeing Subsidiary, any amount paid by either to the Trustee or such Holder, the Subsidiary Guarantee made pursuant to this Supplemental Indenture, to the extent theretofore discharged, shall be reinstated in full force and effect.

(h) Each Guaranteeing Subsidiary agrees that it shall not be entitled to any right of subrogation in relation to the Holders in respect of any Obligations guaranteed hereby until payment in full of all Obligations guaranteed hereby. Each Guaranteeing Subsidiary further agrees that, as between such Guaranteeing Subsidiary, on the one hand, and the Holders and the Trustee, on the other hand:

(i) the maturity of the Obligations guaranteed hereby may be accelerated as provided in Article 6 of the Indenture for the purposes of the Subsidiary Guarantee made pursuant to this Supplemental Indenture, notwithstanding any stay, injunction or other prohibition preventing such acceleration in respect of the Obligations guaranteed hereby; and

(ii) in the event of any declaration of acceleration of such Obligations as provided in Article 6 of the Indenture, such Obligations (whether or not due and payable) shall forthwith become due and payable by such Guaranteeing Subsidiary for the purpose of the Subsidiary Guarantee made pursuant to this Supplemental Indenture.

(i) Each Guaranteeing Subsidiary shall have the right to seek contribution from any other non-paying Guaranteeing Subsidiary so long as the exercise of such right does not impair the rights of the Holders or the Trustee under the Subsidiary Guarantee made pursuant to this Supplemental Indenture.

4. GUARANTEEING SUBSIDIARY MAY CONSOLIDATE, ETC. ON CERTAIN TERMS.

(a) Except as set forth in Articles 4 and 5 of the Indenture, nothing contained in the Indenture, this Supplemental Indenture or in the Notes shall prevent any consolidation or merger of any Guaranteeing Subsidiary with or into the Company or any other Guarantor or shall prevent any transfer, sale or conveyance of the property of any Guaranteeing Subsidiary as an entirety or substantially as an entirety, to the Company or any other Guarantor.

(b) Except as set forth in Articles 4 and 5 of the Indenture, nothing contained in the Indenture, this Supplemental Indenture or in the Notes shall prevent any consolidation or merger of any Guaranteeing Subsidiary with or into a corporation or corporations other than the Company or any other Guarantor (in each case, whether or not affiliated with the Guaranteeing Subsidiary), or successive consolidations or mergers in which a Guaranteeing Subsidiary or its successor or successors shall be a party or parties, or shall prevent any sale or conveyance of the property of any Guaranteeing Subsidiary as an entirety or substantially as an entirety, to a corporation other than the Company or any other Guarantor (in each case, whether or not affiliated with the Guaranteeing Subsidiary) authorized to acquire and operate the same; provided, however, that each Guaranteeing Subsidiary hereby covenants and agrees that (i) subject to the Indenture, upon any such consolidation, merger, sale or conveyance, the due and punctual performance and observance of all of the covenants and conditions of the Indenture and this Supplemental Indenture to be performed by such Guaranteeing Subsidiaries, shall be expressly assumed (in the event that such Guaranteeing Subsidiary is not the surviving corporation in the merger), by supplemental indenture satisfactory in form to the Trustee, executed and delivered to the Trustee, by the corporation formed by such consolidation, or into which such Guaranteeing Subsidiary shall have been merged, or by the corporation which shall have acquired such property and (ii) immediately after giving effect to such consolidation, merger, sale or conveyance no Default or Event of Default exists.

(c) In case of any such consolidation, merger, sale or conveyance and upon the assumption by the successor corporation, by supplemental indenture, executed and delivered to the Trustee and satisfactory in form to the Trustee, of the Subsidiary Guarantee made pursuant to this Supplemental Indenture and the due and punctual performance of all of the covenants and conditions of the Indenture and this Supplemental Indenture to be performed by such Guaranteeing Subsidiary, such successor corporation shall succeed to and be substituted for such Guaranteeing Subsidiary with the same effect as if it had been named herein as the Guaranteeing Subsidiary. Such successor corporation thereupon may cause to be signed any or all of the Subsidiary Guarantees to be endorsed upon the Notes issuable under the Indenture which theretofore shall not have been signed

by the Company and delivered to the Trustee. All the Subsidiary Guarantees so issued shall in all respects have the same legal rank and benefit under the Indenture and this Supplemental Indenture as the Subsidiary Guarantees theretofore and thereafter issued in accordance with the terms of the Indenture and this Supplemental Indenture as though all of such Subsidiary Guarantees had been issued at the date of the execution hereof.

5. RELEASES.

(a) Concurrently with any sale of assets (including, if applicable, all of the Capital Stock of a Guaranteeing Subsidiary), all Liens, if any, in favor of the Trustee in the assets sold thereby shall be released; provided that in the event of an Asset Sale, the Net Proceeds from such sale or other disposition are treated in accordance with the provisions of Section 4.10 of the Indenture. If the assets sold in such sale or other disposition include all or substantially all of the assets of a Guaranteeing Subsidiary or all of the Capital Stock of a Guaranteeing Subsidiary, then the Guaranteeing Subsidiary (in the event of a sale or other disposition of all of the Capital Stock of such Guaranteeing Subsidiary) or the Person acquiring the property (in the event of a sale or other disposition of all or substantially all of the assets of such Guaranteeing Subsidiary) shall be released from and relieved of its Obligations under this Supplemental Indenture and its Subsidiary Guarantee made pursuant hereto; provided that in the event of an Asset Sale, the Net Proceeds from such sale or other disposition are treated in accordance with the provisions of Section 4.10 of the Indenture. Upon delivery by the Company to the Trustee of an Officers' Certificate to the effect that such sale or other disposition was made by the Company or the Guaranteeing Subsidiary, as the case may be, in accordance with the provisions of the Indenture and this Supplemental Indenture, including without limitation, Section 4.10 of the Indenture, the Trustee shall execute any documents reasonably required in order to evidence the release of the Guaranteeing Subsidiary from its Obligations under this Supplemental Indenture and its Subsidiary Guarantee made pursuant hereto. If the Guaranteeing Subsidiary is not released from its Obligations under its Subsidiary Guarantee, it shall remain liable for the full amount of principal of and interest on the Notes and for the other Obligations of such Guaranteeing Subsidiary under the Indenture as provided in this Supplemental Indenture.

(b) Upon the designation of a Guaranteeing Subsidiary as an Unrestricted Subsidiary in accordance with the terms of the Indenture, such Guaranteeing Subsidiary shall be released and relieved of its Obligations under its Subsidiary Guarantee and this Supplemental Indenture. Upon delivery by the Company to the Trustee of an Officers' Certificate and an Opinion of Counsel to the effect that such designation of such Guaranteeing Subsidiary as an Unrestricted Subsidiary was made by the

Company in accordance with the provisions of the Indenture, including without limitation Section 4.07 of the Indenture, the Trustee shall execute any documents reasonably required in order to evidence the release of such Guaranteeing Subsidiary from its Obligations under its Subsidiary Guarantee. Any Guaranteeing Subsidiary not released from its Obligations under its Subsidiary Guarantee shall remain liable for the full amount of principal of and interest on the Notes and for the other Obligations of any Guaranteeing Subsidiary under the Indenture as provided herein.

(c) Each Guaranteeing Subsidiary shall be released and relieved of its obligations under this Supplemental Indenture in accordance with, and subject to, Section 4.18 of the Indenture.

6. NO RECOURSE AGAINST OTHERS. No past, present or future director, officer, employee, incorporator, stockholder or agent of any Subsidiary of the Company, as such, shall have any liability for any Obligations of the Company or any Subsidiary of the Company under the Notes, any Subsidiary Guarantees, the Indenture or this Supplemental Indenture or for any claim based on, in respect of, or by reason of, such Obligations or their creation. Each Holder of the Notes by accepting a Note waives and releases all such liability. The waiver and release are part of the consideration for issuance of the Notes. Such waiver may not be effective to waive liabilities under the federal securities laws and it is the view of the SEC that such a waiver is against public policy.

7. ANTI-LAYERING; SUBORDINATION OF SUBSIDIARY GUARANTEES. No Guaranteeing Subsidiary shall incur, create, issue, assume, guarantee or otherwise become liable for any Indebtedness that is subordinate or junior in right of payment to any Senior Debt of a Guaranteeing Subsidiary and senior in any respect in right of payment to any of the Subsidiary Guarantees. Notwithstanding the foregoing sentence, the Subsidiary Guarantee of each Guaranteeing Subsidiary shall be subordinated to the prior payment in full of all Senior Debt of that Guaranteeing Subsidiary (in the same manner and to the same extent that the Notes are subordinated to Senior Debt), which shall include all guarantees of Senior Debt.

8. NEW YORK LAW TO GOVERN. THIS SUPPLEMENTAL INDENTURE SHALL BE GOVERNED BY, AND CONSTRUED IN ACCORDANCE WITH, THE LAWS OF THE STATE OF NEW YORK.

9. COUNTERPARTS. The parties may sign any number of copies of this Supplemental Indenture. Each signed copy shall be an original, but all of them together represent the same agreement.

10. EFFECT OF HEADINGS. The Section headings herein are for convenience only and shall not affect the construction hereof.

11. THE TRUSTEE. The Trustee shall not be responsible in any manner whatsoever for or in respect of the validity or sufficiency of this Supplemental Indenture or for or in respect of the recitals contained herein, all of which recitals are made solely by the Guaranteeing Subsidiaries and the Company.

IN WITNESS WHEREOF, the parties hereto have caused this Supplemental Indenture to be duly executed and attested, all as of the date first above written.

Dated: _____, _____

L-3 COMMUNICATIONS CORPORATION

By:

Name:
Title:

GUARANTEEING SUBSIDIARIES:

[EXISTING GUARANTORS]
[ADDITIONAL GUARANTORS]

Dated: _____, _____

THE BANK OF NEW YORK,
as Trustee

By:

Name:
Title:

EXHIBIT F

FORM OF NOTATION ON SENIOR SUBORDINATED NOTE RELATING TO SUBSIDIARY GUARANTEE

Pursuant to the Indenture (the "Indenture"), dated as of May 21, 2003, among L-3 Communications Corporation, the Guarantors party thereto (each a "Guarantor" and collectively the "Guarantors") and The Bank of New York, as trustee (the "Trustee"), each Guarantor (i) has jointly and severally unconditionally guaranteed (a) the due and punctual payment of the principal of, and premium, interest and Additional Amounts on the Notes, whether at maturity or an interest payment date, by acceleration, call for redemption or otherwise, (b) the due and punctual payment of interest on the overdue principal and premium of, and interest and Additional Amounts on the Notes, and (c) in case of any extension of time of payment or renewal of any Notes or any of such other Obligations, the same will be promptly paid in full when due in accordance with the terms of the extension or renewal, whether at stated maturity, by acceleration or otherwise and (ii) has agreed to pay any and all costs and expenses (including reasonable attorneys' fees) incurred by the Trustee or any Holder in enforcing any rights under the Subsidiary Guarantee (as defined in the Supplemental Indenture). Notwithstanding the foregoing, the Subsidiary Guarantee of each Guarantor shall be subordinated to the prior payment in full of all Senior Debt (as defined in the Indenture) of that Guarantor (in the same manner and to the same extent that the Notes are subordinated to Senior Debt), which shall include all guarantees of Senior Debt.

Notwithstanding the foregoing, in the event that the Subsidiary Guarantee of any Guarantor would constitute or result in a violation of any applicable fraudulent conveyance or similar law of any relevant jurisdiction, the liability of such Guarantor under its Subsidiary Guarantee shall be reduced to the maximum amount permissible under such fraudulent conveyance or similar law.

No past, present or future director, officer, employee, agent, incorporator, stockholder or agent of any Subsidiary of the Company, as such, shall have any liability for any Obligations of the Company or any Subsidiary of the Company under the Notes, any Subsidiary Guarantee, the Indenture, any supplemental indenture delivered pursuant to the Indenture by such Guarantor, or for any claim based on, in respect of or by reason of such Obligations or their creation. Each Holder by accepting a Note waives and releases all such liability.

The Subsidiary Guarantee shall be binding upon each Guarantor and its successors and assigns and shall inure to the benefit of the successors and assigns of the Trustee and the Holders and, in the event of any transfer or assignment of rights by any Holder or the Trustee, the rights and privileges herein conferred upon that party shall automatically extend to and be vested in such transferee or assignee, all subject to the terms and conditions hereof.

The Subsidiary Guarantee shall not be valid or obligatory for any purpose until the certificate of authentication on the Note upon which the Subsidiary Guarantee is noted has been executed by the Trustee under the Indenture by the manual signature of one of its

authorized officers. Capitalized terms used herein have the meaning assigned to them in the Indenture.

IN WITNESS WHEREOF, the Guarantors hereto have caused this Notation on Senior Subordinated Note to be duly executed, all as of the date first above written.

Dated: _____, _____

GUARANTEEING SUBSIDIARIES:

[EXISTING GUARANTORS]
[ADDITIONAL GUARANTORS]

Dated: _____, _____

EXHIBIT 4.4
EXECUTION COPY

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A/B EXCHANGE
REGISTRATION RIGHTS AGREEMENT

Dated as of May 21, 2003

by and among

L-3 COMMUNICATIONS CORPORATION

THE GUARANTORS LISTED ON THE SIGNATURE PAGES HERETO

AND

LEHMAN BROTHERS INC.

MORGAN STANLEY & CO. INCORPORATED

BANC OF AMERICA SECURITIES LLC

and

CREDIT SUISSE FIRST BOSTON LLC

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A/B EXCHANGE REGISTRATION RIGHTS AGREEMENT

This Registration Rights Agreement (this "Agreement") is made and entered into as of May 21, 2003 by and among L-3 Communications Corporation, a Delaware corporation (the "Company") the guarantors listed on the signature pages hereto (collectively, the "Existing Guarantors"), and Lehman Brothers Inc., Morgan Stanley & Co. Incorporated, Banc of America Securities LLC and Credit Suisse First Boston LLC, as representatives of the several initial purchasers (the "Initial Purchasers") named in Schedule 1 to the Purchase Agreement (as defined below), each of whom has agreed to purchase the Company's 6-1/8% Senior Subordinated Notes due 2013 (the "Series A Notes") pursuant to the Purchase Agreement (as defined below).

This Agreement is made pursuant to the Purchase Agreement, dated as of May 14, 2003 (the "Purchase Agreement"), by and among the Company, the Existing Guarantors and the Initial Purchasers. In order to induce the Initial Purchasers to purchase the Series A Notes, the Company and the Existing Guarantors have agreed to provide the registration rights set forth in this Agreement. The execution and delivery of this Agreement is a condition to the obligations of the Initial Purchasers set forth in Section 3 of the Purchase Agreement.

The parties hereby agree as follows:

SECTION 1 DEFINITIONS

As used in this Agreement, the following capitalized terms shall have the following meanings:

Act: The Securities Act of 1933, as amended.

Additional Guarantor: Any subsidiary of the Company that executes a Subsidiary Guarantee under the Indenture after the date of this Agreement.

Broker-Dealer: Any broker or dealer registered under the Exchange Act.

Broker-Dealer Transfer Restricted Securities: Series B Notes (including the Subsidiary Guarantees) that are acquired by a Restricted Broker-Dealer for its own account as a result of market-making activities or other trading activities.

Closing Date: The date of this Agreement.

Commission: The Securities and Exchange Commission.

Consummate: A Registered Exchange Offer shall be deemed "Consummated" for purposes of this Agreement upon the occurrence of (i) the filing and effectiveness under the Act of the Exchange Offer Registration Statement relating to the Series B Notes to be issued in the Exchange Offer, (ii) the maintenance of such Registration Statement continuously effective and the keeping of the Exchange Offer open for a period not less than the minimum period required pursuant to Section 3(b) hereof and (iii) the delivery by the Company to the Registrar under the

Indenture of Series B Notes in the same aggregate principal amount as the aggregate principal amount of Series A Notes that were tendered by Holders thereof pursuant to the Exchange Offer.

Damages Payment Date: With respect to the Series A Notes, each Interest Payment Date.

Effectiveness Target Date: As defined in Section 5.

Exchange Act: The Securities Exchange Act of 1934, as amended.

Exchange Offer: The registration by the Company under the Act of the Series B Notes (including the Subsidiary Guarantees) pursuant to a Registration Statement pursuant to which the Company offers the Holders of all outstanding Transfer Restricted Securities the opportunity to exchange all such outstanding Transfer Restricted Securities held by such Holders for Series B Notes and registered Subsidiary Guarantees in an aggregate principal amount equal to the aggregate principal amount of the Transfer Restricted Securities tendered in such exchange offer by such Holders.

Exchange Offer Registration Statement: The Registration Statement relating to the Exchange Offer, including the related Prospectus.

Exempt Resales: The transactions in which the Initial Purchasers propose to sell the Series A Notes to (i) certain "qualified institutional buyers," as such term is defined in Rule 144A under the Act, (ii) to certain institutional "accredited investors," as such term is defined in Rule 501(a)(1), (2), (3) and (7) under the Act ("Accredited Institutions") and (iii) outside the United States to Persons other than U.S. Persons in offshore transactions meeting the requirements of rule 904 of Regulation S under the Act.

Guarantors: The Additional Guarantors and the Existing Guarantors.

Holders: As defined in Section 2 hereof.

Indenture: The Indenture, dated as of the date hereof, among the Company, the Existing Guarantors and The Bank of New York, as trustee (the "Trustee"), pursuant to which the Notes are to be issued, as such Indenture is amended or supplemented from time to time in accordance with the terms thereof.

Initial Purchasers: As defined in the preamble hereto.

Interest Payment Date: As defined in the Notes.

Market-Maker Prospectus: As defined in Section 4 hereof.

NASD: National Association of Securities Dealers, Inc.

Notes: The Series A Notes and the Series B Notes.

Offering Memorandum: As defined in the Purchase Agreement.

Person: An individual, partnership, corporation, trust or unincorporated organization, or a government or agency or political subdivision thereof.

Prospectus: The prospectus included in a Registration Statement including, without limitation, a Market-Maker Prospectus, as amended or supplemented by any prospectus supplement and by all other amendments thereto, including post-effective amendments, and all material incorporated by reference into such Prospectus.

Record Holder: With respect to any Damages Payment Date relating to Notes, each Person who is a Holder of Notes on the record date with respect to the Interest Payment Date on which such Damages Payment Date shall occur.

Registration Default: As defined in Section 5 hereof.

Registrar: As defined in the Indenture.

Registration Statement: Any registration statement of the Company relating to (a) an offering of Series B Notes pursuant to an Exchange Offer or (b) the registration for resale of Transfer Restricted Securities pursuant to the Shelf Registration Statement, which is filed pursuant to the provisions of this Agreement including the registration for resale of Broker-Dealer Transfer Restricted Securities, in each case including the Prospectus included therein, all amendments and supplements thereto (including post-effective amendments) and all exhibits and material incorporated by reference therein.

Restricted Broker-Dealer: Any Broker-Dealer that is an affiliate of the Company that holds Broker-Dealer Transfer Restricted Securities.

Series B Notes: The Company's 6-1/8% Senior Subordinated Notes due 2013 to be issued pursuant to the Indenture in the Exchange Offer.

Shelf Filing Deadline: As defined in Section 4 hereof.

Shelf Registration Statement: As defined in Section 4 hereof.

Subsidiary Guarantee: The Guarantee by a Guarantor of the Company's obligations under the Notes and Indenture.

TIA: The Trust Indenture Act of 1939 (15 U.S.C. Section 77aaa-77bbbb) as in effect on the date of the Indenture.

Transfer Restricted Securities: Each Note (including the Subsidiary Guarantees), until the earliest to occur of (a) the date on which such Note is exchanged by a person other than a Broker-Dealer for a Series B Note in the Exchange Offer, (b) following the exchange by a Broker-Dealer in the Exchange Offer of a Note for a Series B Note, the date on which such Series B Note is sold to a purchaser who receives from such Broker-Dealer on or prior to the date of such sale a copy of the Prospectus contained in the Exchange Offer Registration Statement, (c) the date on which such Note (including the Subsidiary Guarantees) is effectively registered under the Act and disposed of in accordance with the Shelf Registration Statement or (d) the date on

which such Note (including the Subsidiary Guarantees) is distributed to the public pursuant to Rule 144 under the Act.

Underwritten Registration or Underwritten Offering: A registration in which securities of the Company are sold to an underwriter for reoffering to the public.

SECTION 2 SECURITIES SUBJECT TO THIS AGREEMENT

(a) Transfer Restricted Securities and Broker-Dealer Transfer Restricted Securities. The securities entitled to the benefits of this Agreement are the Transfer Restricted Securities and Broker-Dealer Transfer Restricted Securities.

(b) Holders of Transfer Restricted Securities. A Person is deemed to be a holder of Transfer Restricted Securities (each, a "Holder") whenever such Person owns Transfer Restricted Securities.

(c) Holders of Broker-Dealer Transfer Restricted Securities. A Restricted Broker-Dealer is deemed to be a holder of Broker-Dealer Transfer Restricted Securities (each, a "Holder") whenever such Restricted Broker-Dealer owns Broker-Dealer Transfer Restricted Securities.

SECTION 3 REGISTERED EXCHANGE OFFER

(a) Unless the Exchange Offer shall not be permissible under applicable law or Commission policy (after the procedures set forth in Section 6(a) below have been complied with), the Company and the Guarantors shall (i) cause to be filed with the Commission as promptly as practicable after the Closing Date, but in no event later than 90 days after the Closing Date, a Registration Statement under the Act relating to the Series B Notes (including the Subsidiary Guarantees) and the Exchange Offer, (ii) use all commercially reasonable efforts to cause such Registration Statement to be declared effective by the Commission as promptly as practicable, but in no event later than 180 days after the Closing Date (which 180-day period shall be extended for a number of days equal to the number of business days, if any, the Commission is officially closed during such period), (iii) in connection with the foregoing, file (A) all pre-effective amendments to such Registration Statement as may be necessary in order to cause such Registration Statement to become effective, (B) if applicable, a post-effective amendment to such Registration Statement pursuant to Rule 430A under the Act and (C) cause all necessary filings in connection with the registration and qualification of the Series B Notes (including the Subsidiary Guarantees) to be made under the Blue Sky laws of such jurisdictions as are necessary to permit Consummation of the Exchange Offer and (iv) upon the effectiveness of such Registration Statement, commence the Exchange Offer. The Exchange Offer shall be on the appropriate form permitting registration of the Series B Notes (including the Subsidiary Guarantees) to be offered in exchange for the Transfer Restricted Securities and to permit resales of Notes held by Broker-Dealers as contemplated by Section 3(c) below.

(b) The Company and the Guarantors shall cause the Exchange Offer Registration Statement to be effective continuously and shall keep the Exchange Offer open for a period of not less than the minimum period required under applicable federal and state securities laws to Consummate the Exchange Offer; provided, however, that in no event shall such period be less than 20 business days. The Company and the Guarantors shall cause the Exchange Offer to

comply with all applicable federal and state securities laws. No securities other than the Notes (including the Subsidiary Guarantees) shall be included in the Exchange Offer Registration Statement. The Company and the Guarantors shall use all commercially reasonable efforts to cause the Exchange Offer to be Consummated on the earliest practicable date after the Exchange Offer Registration Statement has become effective, but in no event later than 30 business days thereafter.

(c) The Company and the Guarantors shall indicate in a "Plan of Distribution" section contained in the Prospectus contained in the Exchange Offer Registration Statement that any Broker-Dealer who owns Series A Notes that are Transfer Restricted Securities and that were acquired for its own account as a result of market-making activities or other trading activities (other than Transfer Restricted Securities acquired directly from the Company), may exchange such Series A Notes pursuant to the Exchange Offer; however, such Broker-Dealer may be deemed to be an "underwriter" within the meaning of the Act and must, therefore, deliver a Prospectus meeting the requirements of the Act in connection with any resales of the Series B Notes received by such Broker-Dealer in the Exchange Offer, which Prospectus delivery requirement may be satisfied by the delivery by such Broker-Dealer of the Prospectus contained in the Exchange Offer Registration Statement. Such "Plan of Distribution" section shall also contain all other information with respect to such resales by Broker-Dealers that the Commission may require in order to permit such resales pursuant thereto, but such "Plan of Distribution" shall not name any such Broker-Dealer or disclose the amount of Notes held by any such Broker-Dealer except to the extent required by the Commission.

The Company and the Guarantors shall use all commercially reasonable efforts to keep the Exchange Offer Registration Statement continuously effective, supplemented and amended as required by the provisions of Section 6(d) below to the extent necessary to ensure that it is available for resales of Notes acquired by Broker-Dealers for their own accounts as a result of market-making activities or other trading activities, and to ensure that it conforms with the requirements of this Agreement, the Act and the policies, rules and regulations of the Commission as announced from time to time, for a period of 180 days from the date on which the Exchange Offer Registration Statement is declared effective or such shorter period that will terminate when all Notes covered by the Exchange Offer Registration Statement have been exchanged in the Exchange Offer.

The Company and the Guarantors shall provide sufficient copies of the latest version of such Prospectus to Broker-Dealers promptly upon request at any time during such 180 day period in order to facilitate such resales.

SECTION 4 SHELF REGISTRATION; MARKET-MAKER PROSPECTUS

(a) Shelf Registration. If (i) the Company and the Guarantors are not required to file the Exchange Offer Registration Statement or permitted to Consummate the Exchange Offer because the Exchange Offer is not permitted by applicable law or Commission policy (after the procedures set forth in Section 6(a) below have been complied with) or (ii) any Holder of Transfer Restricted Securities that is a "qualified institutional buyer," as such term is defined in Rule 144A under the Act or an institutional "accredited investor," as such term is defined in Rule 501(a)(1), (2), (3) and (7) under the Act shall notify the Company prior to the 20th day following

the Consummation of the Exchange Offer that such Holder alone or together with holders who hold in the aggregate at least $1.0 million in principal amount of Series A Notes (A) is prohibited by applicable law or Commission policy from participating in the Exchange Offer, or (B) may not resell the Series B Notes acquired by it in the Exchange Offer to the public without delivering a prospectus and that the Prospectus contained in the Exchange Offer Registration Statement is not appropriate or available for such resales by such Holder, or (C) is a Broker-Dealer and holds Series A Notes acquired directly from the Company or an affiliate of the Company, the Company and the Guarantors shall:

(i) cause to be filed with the Commission a shelf Registration Statement pursuant to Rule 415 under the Act, which may be an amendment to the Exchange Offer Registration Statement (in either event, the "Shelf Registration Statement") on or prior to the earliest to occur of (A) the 30th day after the date on which the Company determines that it is not required to file the Exchange Offer Registration Statement, or permitted to Consummate the Exchange Offer and (B) the 30th day after the date on which the Company receives notice from a Holder of Transfer Restricted Securities as contemplated by clause (ii) of paragraph (a) above (such earliest date being the "Shelf Filing Deadline"), which Shelf Registration Statement shall provide for resales of all Transfer Restricted Securities the Holders of which shall have provided the information required pursuant to Section 4(b) hereof; and

(ii) use all commercially reasonable efforts to cause such Shelf Registration Statement to be declared effective by the Commission on or before the 90th day after the Shelf Filing Deadline.

The Company and the Guarantors shall use all commercially reasonable efforts to keep such Shelf Registration Statement continuously effective, supplemented and amended as required by the provisions of Sections 6(b) and (d) hereof to the extent necessary to ensure that it is available for resales of Notes by the Holders of Transfer Restricted Securities entitled to the benefit of this Section 4(a), and to ensure that it conforms with the requirements of this Agreement, the Act and the policies, rules and regulations of the Commission as announced from time to time, for a period of at least two years following the Closing Date or such shorter period that will terminate when all Notes covered by the Shelf Registration Statement have been sold pursuant to the Shelf Registration Statement or become eligible for resale pursuant to Rule 144 without volume or other restrictions.

(b) Provision by Holders of Certain Information in Connection with the Shelf Registration Statement. No Holder of Transfer Restricted Securities may include any of its Transfer Restricted Securities in any Shelf Registration Statement pursuant to this Agreement unless and until such Holder furnishes to the Company in writing, within 10 business days after receipt of a request therefor, such information as the Company may reasonably request for use in connection with any Shelf Registration Statement or Prospectus or preliminary Prospectus included therein. No Holder of Transfer Restricted Securities shall be entitled to additional amounts pursuant to Section 5 hereof unless and until such Holder shall have used its best efforts to provide all such reasonably requested information. Each Holder as to which any Shelf Registration Statement is being effected agrees to furnish promptly to the Company all

information required to be disclosed in order to make the information previously furnished to the Company by such Holder not materially misleading.

(c) Market-Maker Prospectus. The Company and the Guarantors acknowledge that any Restricted Broker-Dealer holding Broker-Dealer Transfer Restricted Securities may not resell such Broker-Dealer Transfer Restricted Securities without delivering a Prospectus. Consequently, on the date that the Exchange Offer Registration Statement is filed with the Commission, the Company and the Guarantors shall file a Registration Statement (which may be the Exchange Offer Registration Statement or the Shelf Registration Statement if permitted by the rules and regulations of the Commission) and shall use all commercially reasonable efforts to cause such Registration Statement to be declared effective by the Commission on or prior to the Consummation of the Exchange Offer. The Company and the Guarantors shall use all commercially reasonable efforts to keep such Registration Statement continuously effective, supplemented and amended as required by the provisions of Sections 6(c) and (d) hereof to the extent necessary to ensure that it is available for resales of Broker-Dealer Transfer Restricted Securities by Restricted Broker-Dealers, and to ensure that it conforms with the requirements of this Agreement, the Act and the policies, rules and regulations of the Commission as announced from time to time, until such time as all Restricted Broker-Dealers determine in their reasonable judgment that they are no longer required to deliver a Prospectus in connection with sales of Broker-Dealer Transfer Restricted Securities. The Prospectus included in such Registration Statement is referred to in this Agreement as a "Market-Maker Prospectus."

SECTION 5 ADDITIONAL AMOUNTS

If (i) any of the Registration Statements required by this Agreement is not filed with the Commission on or prior to the date specified for such filing in sections 3(a), 4(a), and 4(c), as applicable, (ii) any of such required Registration Statements has not been declared effective by the Commission on or prior to the date specified for such effectiveness in sections 3(a), 4(a), and 4(c), as applicable, (the "Effectiveness Target Date"), (iii) the Exchange Offer has not been Consummated within 30 business days after the Effectiveness Target Date with respect to the Exchange Offer Registration Statement, or (iv) any Registration Statement required by this Agreement is filed and declared effective but shall thereafter cease to be effective or fail to be usable for its intended purpose without being succeeded within five business days by a post-effective amendment to such Registration Statement that cures such failure and that is itself immediately declared effective (each such event referred to in clauses (i) through (iv), a "Registration Default"), the Company and the Guarantors jointly and severally agree to pay additional amounts to each Holder of Transfer Restricted Securities with respect to the first 90-day period immediately following the occurrence of such Registration Default, in an amount equal to $.05 per week per $1,000 principal amount of Transfer Restricted Securities held by such Holder for each week or portion thereof that the Registration Default continues. The amount of the additional amounts shall increase by an additional $.05 per week per $1,000 in principal amount of Transfer Restricted Securities with respect to each subsequent 90-day period until all Registration Defaults have been cured, up to a maximum amount of additional amounts of $.50 per week per $1,000 principal amount of Transfer Restricted Securities. The Company shall in no event be required to pay additional amounts for more than one Registration Default at any given time. All accrued additional amounts shall be paid to Record Holders by the Company and the Guarantors by wire transfer of immediately available funds or by federal funds check on

each Damages Payment Date, as provided in the Indenture. Following the cure of all Registration Defaults relating to any particular Transfer Restricted Securities, the accrual of additional amounts with respect to such Transfer Restricted Securities will cease.

All payment obligations of the Company and the Guarantors set forth in the preceding paragraph that are outstanding with respect to any Transfer Restricted Security at the time such security ceases to be a Transfer Restricted Security shall survive until such time as all such payment obligations with respect to such Security shall have been satisfied in full provided, however, that the additional amounts shall cease to accrue on the day immediately prior to the date such Transfer Restricted Securities cease to be Transfer Restricted Securities.

SECTION 6 REGISTRATION PROCEDURES

(a) Exchange Offer Registration Statement. In connection with the Exchange Offer, the Company and the Guarantors shall comply with all of the provisions of Section 6(d) below, shall use all commercially reasonable efforts to effect such exchange to permit the sale of Transfer Restricted Securities being sold in accordance with the intended method or methods of distribution thereof, and shall comply with all of the following provisions:

(i) If in the reasonable opinion of counsel to the Company and the Guarantors there is a question as to whether the Exchange Offer is permitted by applicable law, the Company and the Guarantors hereby agree to seek a no-action letter or other favorable decision from the Commission allowing the Company and the Guarantors to Consummate an Exchange Offer for such Series A Notes. The Company and the Guarantors hereby agree to pursue the issuance of such a decision to the Commission staff level but shall not be required to take commercially unreasonable action to effect a change of Commission policy. The Company and the Guarantors hereby agree however, to (A) participate in telephonic conferences with the Commission, (B) deliver to the Commission staff an analysis prepared by counsel to the Company and the Guarantors setting forth the legal bases, if any, upon which such counsel has concluded that such an Exchange Offer should be permitted and (C) diligently pursue a resolution (which need not be favorable) by the Commission staff of such submission.

(ii) As a condition to its participation in the Exchange Offer pursuant to the terms of this Agreement, each Holder of Transfer Restricted Securities shall furnish, upon the request of the Company, prior to the Consummation thereof, a written representation to the Company and the Guarantors (which may be contained in the letter of transmittal contemplated by the Exchange Offer Registration Statement) to the effect that (A) it is not an affiliate of the Company, (B) it is not engaged in, and does not intend to engage in, and has no arrangement or understanding with any person to participate in, a distribution of the Series B Notes to be issued in the Exchange Offer and (C) it is acquiring the Series B Notes in its ordinary course of business. In addition, all such Holders of Transfer Restricted Securities shall otherwise cooperate in the Company's and the Guarantors' preparations for the Exchange Offer. Each Holder hereby acknowledges and agrees that any Broker-Dealer and any such Holder using the Exchange Offer to participate in a distribution of the securities to be acquired in the Exchange Offer (A) could not under Commission policy as in effect on the date of this Agreement rely on the position of the

Commission enunciated in Morgan Stanley and Co., Inc. (available June 5, 1991) and Exxon Capital Holdings Corporation (available May 13, 1988), as interpreted in the Commission's letter to Shearman & Sterling dated July 2, 1993, and similar no-action letters (including any no-action letter obtained pursuant to clause (i) above), and (B) must comply with the registration and prospectus delivery requirements of the Act in connection with a secondary resale transaction and that such a secondary resale transaction should be covered by an effective Registration Statement containing the selling security holder information required by Item 507 or 508, as applicable, of Regulation S-K if the resales are of Series B Notes obtained by such Holder in exchange for Series A Notes acquired by such Holder directly from the Company.

(iii) Prior to effectiveness of the Exchange Offer Registration Statement, the Company and the Guarantors shall provide a supplemental letter to the Commission (A) stating that the Company and the Guarantors are registering the Exchange Offer in reliance on the position of the Commission enunciated in Exxon Capital Holdings Corporation (available May 13, 1988), Morgan Stanley and Co., Inc. (available June 5, 1991) and, if applicable, any no-action letter obtained pursuant to clause (i) above and (B) including a representation that neither the Company nor any Guarantor has entered into any arrangement or understanding with any Person to distribute the Series B Notes to be received in the Exchange Offer and that, to the best of the Company's and each Guarantor's information and belief, each Holder participating in the Exchange Offer is acquiring the Series B Notes in its ordinary course of business and has no arrangement or understanding with any Person to participate in the distribution of the Series B Notes received in the Exchange Offer.

(b) Shelf Registration Statement. In connection with the Shelf Registration Statement, the Company and the Guarantors shall comply with all the provisions of Section 6(d) below and shall use all commercially reasonable efforts to effect such registration to permit the sale of the Transfer Restricted Securities being sold in accordance with the intended method or methods of distribution thereof, and pursuant thereto the Company and the Guarantors will as expeditiously as possible prepare and file with the Commission a Registration Statement relating to the registration on any appropriate form under the Act, which form shall be available for the sale of the Transfer Restricted Securities in accordance with the intended method or methods of distribution thereof.

(c) Market-Maker Prospectus. In connection with any Registration Statement filed pursuant to Section 4(c) of this Agreement, the Company and the Guarantors will comply with all of the provisions of Section 6(d) below (other than sub-sections (xiii), (xiv), (xv), (xvii) and (xx)) until such time as all Restricted Broker-Dealers determine in their reasonable judgment that they are no longer required to deliver Market-Maker Prospectuses in connection with sales of Broker-Dealer Transfer Restricted Securities. The Company and the Guarantors shall use all commercially reasonable efforts to deliver Market-Maker Prospectuses to all Restricted Broker-Dealers immediately upon the effectiveness of the Registration Statement and from time to time thereafter upon request, in such quantities as such Restricted Broker-Dealer shall reasonably require.

(d) General Provisions. In connection with any Registration Statement and any Prospectus required by this Agreement to permit the sale or resale of Transfer Restricted Securities (including, without limitation, any Registration Statement and the related Prospectus required to permit resales of Notes by Broker-Dealers) and Broker-Dealer Transfer Restricted Securities, the Company and the Guarantors shall:

(i) use all commercially reasonable efforts to keep such Registration Statement continuously effective and provide all requisite financial statements (including, if required by the Act or any regulation thereunder, financial statements of any Guarantors) for the period specified in Section 3 or 4 of this Agreement, as applicable; upon the occurrence of any event that would cause any such Registration Statement or the Prospectus contained therein (A) to contain a material misstatement or omission or (B) not to be effective and usable for resale of Transfer Restricted Securities or Broker-Dealer Transfer Restricted Securities during the period required by this Agreement, the Company and the Guarantors shall file promptly an appropriate amendment to such Registration Statement, in the case of clause (A), correcting any such misstatement or omission, and, in the case of either clause (A) or (B), use all commercially reasonable efforts to cause such amendment to be declared effective and such Registration Statement and the related Prospectus to become usable for their intended purpose(s) as soon as practicable thereafter. Notwithstanding the foregoing, at any time after Consummation of the Exchange Offer, the Company and the Guarantors may allow the Shelf Registration Statement or Market-Maker Prospectus and the related Registration Statement to cease to become effective and usable if (A) the board of directors of the Company determines in good faith that it is in the best interests of the Company not to disclose the existence of or facts surrounding any proposed or pending material corporate transaction involving the Company and the Guarantors, and the Company notifies the Holders within two business days after the Board of Directors makes such determination, or (B) the Prospectus contained in the Shelf Registration Statement or the Market-Maker Prospectus, as the case may be, contains an untrue statement of the material fact or omits to state a material fact necessary in order to make the statements therein, in light of the circumstances under which they were made, not misleading; provided that the two-year period referred to in Section 4(a) hereof during which the Shelf Registration Statement is required to be effective and usable shall be extended by the number of days during which such Registration Statement was not effective or usable pursuant to the foregoing provisions;

(ii) subject to Section 6(d)(i), prepare and file with the Commission such amendments and post-effective amendments to the Registration Statement as may be necessary to keep the Registration Statement effective for the applicable period set forth in Section 3 or 4 hereof, as applicable, or such shorter period as will terminate when all Transfer Restricted Securities covered by such Registration Statement have been sold; cause the Prospectus to be supplemented by any required Prospectus supplement, and as so supplemented to be filed pursuant to Rule 424 under the Act, and to comply fully with the applicable provisions of Rules 424 and 430A under the Act in a timely manner; and comply with the provisions of the Act with respect to the disposition of all securities covered by such Registration Statement during the applicable period in accordance with the intended method or methods of distribution by the sellers thereof set forth in such Registration Statement or supplement to the Prospectus;

(iii) advise the underwriter(s), if any, and selling Holders of Transfer Restricted Securities and, following the Consummation of the Exchange Offer, Holders of Broker Dealer Transfer Restricted Securities, promptly and, if requested by such Persons, to confirm such advice in writing, (A) when the Prospectus or any Prospectus supplement or post-effective amendment has been filed, and, with respect to any Registration Statement or any post-effective amendment thereto, when the same has become effective, (B) of any request by the Commission for amendments to the Registration Statement or amendments or supplements to the Prospectus or for additional information relating thereto, (C) of the issuance by the Commission of any stop order suspending the effectiveness of the Registration Statement under the Act or of the suspension by any state securities commission of the qualification of the Transfer Restricted Securities or Broker-Dealer Transfer Restricted Securities, as applicable, for offering or sale in any jurisdiction, or the initiation of any proceeding for any of the preceding purposes and (D) of the existence of any fact or the happening of any event that makes any statement of a material fact made in the Registration Statement, the Prospectus, any amendment or supplement thereto, or any document incorporated by reference therein untrue, or that requires the making of any additions to or changes in the Registration Statement or the Prospectus in order to make the statements therein not misleading. If at any time the Commission shall issue any stop order suspending the effectiveness of the Registration Statement, or any state securities commission or other regulatory authority shall issue an order suspending the qualification or exemption from qualification of the Transfer Restricted Securities or Broker-Dealer Transfer Restricted Securities, as applicable, under state securities or Blue Sky laws, the Company and the Guarantors shall use all commercially reasonable efforts to obtain the withdrawal or lifting of such order at the earliest possible time;

(iv) upon written request, furnish to each of the selling Holders of Transfer Restricted Securities or Holders of Broker-Dealer Transfer-Restricted Securities and each of the underwriter(s), if any, before filing with the Commission, copies of any Registration Statement or any Prospectus included therein or any amendments or supplements to any such Registration Statement or Prospectus (including all documents incorporated by reference after the initial filing of such Registration Statement), which documents will be subject to the review of such Holders and underwriter(s), if any, for a period of at least five business days, and the Company and the Guarantors will not file any such Registration Statement or Prospectus or any amendment or supplement to any such Registration Statement or Prospectus (including all such documents incorporated by reference) if a selling Holder of Transfer Restricted Securities or a Holder of Broker-Dealer Transfer Restricted Securities, as applicable, covered by such Registration Statement or the underwriter(s), if any, shall reasonably object within 5 business days after receipt thereof;

(v) upon written request, promptly prior to the filing of any document that is to be incorporated by reference into a Registration Statement or Prospectus, provide copies of such document to the selling Holders or the Holders of Broker-Dealer Transfer Restricted Securities, as applicable, and to the underwriter(s), if any, make the Company's and the Guarantors' representatives available for discussion of such document and other customary due diligence matters, and include such information in such document prior to the filing thereof as such selling Holders or the Holders of

Broker-Dealer Transfer Restricted Securities, as applicable, or underwriter(s), if any, reasonably may request;

(vi) in the case of a Shelf Registration Statement, make available at reasonable times at the Company's principal place of business for inspection by the selling Holders of Transfer Restricted Securities, any underwriter participating in any disposition pursuant to such Registration Statement, and any attorney or accountant retained by such selling Holders or any of the underwriter(s) who shall certify to the Company and the Guarantors that they have a current intention to sell Transfer Restricted Securities or Broker-Dealer Transfer Restricted Securities pursuant to a Shelf Registration Statement or Market-Maker Prospectus, and, following the Consummation of the Exchange Offer, the Holders of Broker-Dealer Transfer Restricted Securities, such financial and other information of the Company and the Guarantors as reasonably requested and cause the Company's and the Guarantors' officers, directors and employees to respond to such inquiries as shall be reasonably necessary, in the reasonable judgment of counsel to such Holders, to conduct a reasonable investigation; provided, however, that each such party shall be required to maintain in confidence and not to disclose to any other person any information or records reasonably designated by the Company in writing as being confidential, until such time as (A) such information becomes a matter of public record (whether by virtue of its inclusion in such Registration Statement or otherwise), or (B) such person shall be required so to disclose such information pursuant to the subpoena or order of any court or other governmental agency or body having jurisdiction over the matter (subject to the requirements of such order, and only after such person shall have given the Company prompt prior written notice of such requirement), or (C) such information is required to be set forth in such Registration Statement or the Prospectus included therein or in an amendment to such Registration Statement or an amendment or supplement to such Prospectus in order that such Registration Statement, Prospectus, amendment or supplement, as the case may be, does not contain an untrue statement of a material fact or omit to state therein a material fact required to be stated therein or necessary to make the statements therein not misleading;

(vii) if requested by any selling Holders of Transfer Restricted Securities or Holders of Broker-Dealer Transfer Restricted Securities, as applicable, or the underwriter(s), if any, promptly incorporate in any Registration Statement or Prospectus, pursuant to a supplement or post-effective amendment if necessary, such information as such selling Holders and underwriter(s), if any, may reasonably request to have included therein, including, without limitation, information relating to the "Plan of Distribution" of the Transfer Restricted Securities or Broker-Dealer Transfer Restricted Securities, as applicable, information with respect to the principal amount of Transfer Restricted Securities or Broker-Dealer Transfer Restricted Securities, as applicable, being sold to such underwriter(s), the purchase price being paid therefor and any other terms of the offering of the Transfer Restricted Securities or Broker-Dealer Transfer-Restricted Securities, as applicable, to be sold in such offering; and make all required filings of such Prospectus supplement or post-effective amendment as soon as practicable after the Company is notified of the matters to be incorporated in such Prospectus supplement or post-effective amendment;

(viii) upon request, furnish to each selling Holder of Transfer Restricted Securities or Holders of Broker-Dealer Transfer Restricted Securities, as applicable, and each of the underwriter(s), if any, without charge, at least one copy of the Registration Statement, as first filed with the Commission, and of each amendment thereto, including all documents incorporated by reference therein and all exhibits (including exhibits incorporated therein by reference);

(ix) deliver to each selling Holder of Transfer Restricted Securities and each of the underwriter(s), if any, and each Holder of Broker-Dealer Transfer Restricted Securities, without charge, as many copies of the Prospectus (including each preliminary prospectus) and any amendment or supplement thereto as such Persons reasonably may request; the Company and the Guarantors hereby consent to the use of the Prospectus and any amendment or supplement thereto by each of the selling Holders and each of the underwriter(s), if any, and each Holder of Broker-Dealer Transfer Restricted Securities, in connection with the offering and the sale of the Transfer Restricted Securities and Broker-Dealer Transfer Restricted Securities, as applicable, covered by the Prospectus or any amendment or supplement thereto;

(x) enter into such agreements (including an underwriting agreement), and make such representations and warranties, and take all such other actions in connection therewith in order to expedite or facilitate the disposition of the Transfer Restricted Securities and Broker-Dealer Transfer Restricted Securities, as applicable, pursuant to any Registration Statement contemplated by this Agreement, all to such extent as may be requested by the Initial Purchaser or, in the case of registration for resale of Transfer Restricted Securities pursuant to the Shelf Registration Statement, by any Holder or Holders of Transfer Restricted Securities who hold at least 25% in aggregate principal amount of such class of Transfer Restricted Securities or, in the case of Broker-Dealer Transfer Restricted Securities, by any Holder of Broker-Dealer Transfer Restricted Securities; provided, that, the Company and the Guarantors shall not be required to enter into any such agreement more than once with respect to all of the Transfer Restricted Securities and, in the case of a Shelf Registration Statement, may delay entering into such agreement if the Board of Directors of the Company determines in good faith that it is in the best interests of the Company and the Guarantors not to disclose the existence of or facts surrounding any proposed or pending material corporate transaction involving the Company and the Guarantors; and whether or not an underwriting agreement is entered into and whether or not the registration is an Underwritten Registration, the Company and the Guarantors shall:

(A) furnish to the Initial Purchasers, the Holders of Transfer Restricted Securities who hold at least 25% in aggregate principal amount of such class of Transfer Restricted Securities (in the case of a Shelf Registration Statement), each Holder of Broker-Dealer Transfer Restricted Securities and each underwriter, if any, in such substance and scope as they may request and as are customarily made in connection with an offering of debt securities pursuant to a Registration Statement (i) upon the effective date of any Registration Statement (and if such Registration Statement contemplates an Underwritten Offering of Transfer Restricted Securities or Broker-Dealer Transfer Restricted Securities, as applicable, upon the date of the

closing under the underwriting agreement related thereto) and (ii) upon the filing of any amendment or supplement to any Registration Statement or any other document that is incorporated in any Registration Statement by reference and includes financial data with respect to a fiscal quarter or year:

(1) a certificate, dated the date of effectiveness of the Shelf Registration Statement signed by (y) the respective Chairman of the Board, the respective President or any Vice President and (z) the respective Chief Financial Officer of the Company and each of the Guarantors confirming, as of the date thereof, the matters set forth in paragraph (i) of Section 7 of the Purchase Agreement and such other matters as such parties may reasonably request;

(2) an opinion, dated the date of effectiveness of the Shelf Registration Statement, as the case may be, of counsel for the Company covering the matters set forth in paragraphs (c), (d) and (e) of Section 7 of the Purchase Agreement and such other matter as such parties may reasonably request, and in any event including a statement to the effect that such counsel has participated in conferences with officers and other representatives of the Company, representatives of the independent public accountants for the Company, the Initial Purchasers' representatives and the Initial Purchasers' counsel in connection with the preparation of such Registration Statement and the related Prospectus and have considered the matters required to be stated therein and the statements contained therein, although such counsel has not independently verified the accuracy, completeness or fairness of such statements; and that such counsel advises that, on the basis of the foregoing (relying as to materiality to a large extent upon facts provided to such counsel by officers and other representatives of the Company and without independent check or verification), no facts came to such counsel's attention that caused such counsel to believe that the applicable Registration Statement, at the time such Registration Statement or any post-effective amendment thereto became effective, and, in the case of the Exchange Offer Registration Statement, as of the date of Consummation, contained an untrue statement of a material fact or omitted to state a material fact required to be stated therein or necessary to make the statements therein not misleading, or that the Prospectus contained in such Registration Statement as of its date and, in the case of the opinion dated the date of Consummation of the Exchange Offer, as of the date of Consummation, contained an untrue statement of a material fact or omitted to state a material fact necessary in order to make the statements therein, in light of the circumstances under which they were made, not misleading. Such counsel may state further that such counsel assumes no responsibility for, and has not independently verified, the accuracy, completeness or fairness of the financial statements, notes and schedules and other financial data included in any Registration Statement contemplated by this Agreement or the related Prospectus; and

(3) a customary comfort letter, dated as of the date of Consummation of the Exchange Offer or the date of effectiveness of the Shelf Registration Statement, as the case may be, from the Company's independent accountants, in

the customary form and covering matters of the type customarily covered in comfort letters by underwriters in connection with primary underwritten offerings, and affirming the matters set forth in the comfort letters delivered pursuant to Section 7 of the Purchase Agreement, without exception;

(B) set forth in full or incorporated by reference in the underwriting agreement, if any, the indemnification provisions and procedures of Section 8 hereof with respect to all parties to be indemnified pursuant to said Section; and

(C) deliver such other documents and certificates as may be reasonably requested by such parties to evidence compliance with clause (A) above and with any customary conditions contained in the underwriting agreement or other agreement entered into by the Company and the Guarantors pursuant to this clause (x), if any.

(xi) prior to any public offering of Transfer Restricted Securities, or Broker-Dealer Transfer Restricted Securities, as applicable, cooperate with the selling Holders of Transfer Restricted Securities, the Holders of Broker-Dealer Transfer Restricted Securities, the underwriter(s), if any, and their respective counsel in connection with the registration and qualification of the Transfer Restricted Securities or Broker-Dealer Transfer Restricted Securities, as applicable, under the securities or Blue Sky laws of such jurisdictions as the selling Holders of Transfer Restricted Securities or Holders of Broker-Dealer Transfer Restricted Securities or underwriter(s) may reasonably request and do any and all other acts or things necessary or advisable to enable the disposition in such jurisdictions of the Transfer Restricted Securities or Broker-Dealer Transfer Restricted Securities, as applicable, covered by the Shelf Registration Statement filed pursuant to Section 4 hereof; provided, however, that the Company and the Guarantors shall not be required to register or qualify as a foreign corporation where it is not now so qualified or to take any action that would subject it to the service of process in suits or to taxation, other than as to matters and transactions relating to the Registration Statement, in any jurisdiction where it is not now so subject;

(xii) shall issue, upon the request of any Holder of Series A Notes covered by the Shelf Registration Statement, Series B Notes, having an aggregate principal amount equal to the aggregate principal amount of Series A Notes surrendered to the Company by such Holder in exchange therefor or being sold by such Holder; such Series B Notes to be registered in the name of such Holder or in the name of the purchaser(s) of such Notes, as the case may be; in return, the Series A Notes held by such Holder shall be surrendered to the Company for cancellation;

(xiii) cooperate with the selling Holders of Transfer Restricted Securities and the underwriter(s), if any, to facilitate the timely preparation and delivery of certificates representing Transfer Restricted Securities to be sold and not bearing any restrictive legends; and enable such Transfer Restricted Securities to be in such denominations and registered in such names as the Holders or the underwriter(s), if any, may request at least two business days prior to any sale of Transfer Restricted Securities made by such underwriter(s);

(xiv) use all commercially reasonable efforts to cause the Transfer Restricted Securities or Broker-Dealer Transfer Restricted Securities, as applicable, covered by the Registration Statement to be registered with or approved by such other governmental agencies or authorities as may be necessary to enable the seller or sellers thereof or the underwriter(s), if any, to consummate the disposition of such Transfer Restricted Securities, subject to the proviso contained in clause (xi) above;

(xv) subject to clause (d)(i) above, if any fact or event contemplated by clause (d)(iii)(D) above shall exist or have occurred, prepare a supplement or post-effective amendment to the Registration Statement or related Prospectus or any document incorporated therein by reference or file any other required document so that, as thereafter delivered to the purchasers of Transfer Restricted Securities, or Broker-Dealer Transfer Restricted Securities, as applicable, the Prospectus will not contain an untrue statement of a material fact or omit to state any material fact required to be stated therein or necessary to make the statements therein not misleading;

(xvi) provide a CUSIP number for all Transfer Restricted Securities not later than the effective date of the Registration Statement and provide the Trustee under the Indenture with printed certificates for the Transfer Restricted Securities which are in a form eligible for deposit with The Depository Trust Company;

(xvii) cooperate and assist in any filings required to be made with the NASD and in the performance of any due diligence investigation by any underwriter (including any "qualified independent underwriter") that is required to be retained in accordance with the rules and regulations of the NASD;

(xviii) otherwise use all commercially reasonable efforts to comply with all applicable rules and regulations of the Commission, and make generally available to its security holders, as soon as practicable, a consolidated earnings statement meeting the requirements of Rule 158 (which need not be audited) for the twelve-month period (A) commencing at the end of any fiscal quarter in which Transfer Restricted Securities are sold to underwriters in a firm or best efforts Underwritten Offering or (B) if not sold to underwriters in such an offering, beginning with the first month of the Company's first fiscal quarter commencing after the effective date of the Registration Statement;

(xix) cause the Indenture to be qualified under the TIA not later than the effective date of the first Registration Statement required by this Agreement, and, in connection therewith, cooperate with the Trustee and the Holders of Notes to effect such changes to the Indenture as may be required for such Indenture to be so qualified in accordance with the terms of the TIA; and execute, and use all commercially reasonable efforts to cause the Trustee to execute, all documents that may be required to effect such changes and all other forms and documents required to be filed with the Commission to enable such Indenture to be so qualified in a timely manner;

(xx) provide promptly to each Holder upon request each document filed with the Commission pursuant to the requirements of Section 13 and Section 15 of the Exchange Act; and

(xxi) so long as any Transfer Restricted Securities remain outstanding, cause each Additional Guarantor upon the creation or acquisition by the Company of such Additional Guarantor, to execute a counterpart to this Agreement in the form attached hereto as Annex A and to deliver such counterpart, together with an opinion of counsel as to the enforceability thereof against such entity, to the Initial Purchasers no later than five business days following the execution thereof.

Each Holder agrees by acquisition of a Transfer Restricted Security or Broker-Dealer Transfer Restricted Securities, as applicable, that, upon receipt of any notice from the Company of the existence of any fact of the kind described in Section 6(d)(iii)(D) hereof, such Holder will forthwith discontinue disposition and will use its reasonable best efforts to cause any underwriter to forthwith discontinue disposition of Transfer Restricted Securities or Broker-Dealer Transfer Restricted Security pursuant to the applicable Registration Statement until such Holder's receipt of the copies of the supplemented or amended Prospectus contemplated by Section 6(d)(xv) hereof, or until it is advised in writing (the "Advice") by the Company that the use of the Prospectus may be resumed, and has received copies of any additional or supplemental filings that are incorporated by reference in the Prospectus. If so directed by the Company, each Holder will deliver to the Company (at the Company's expense) all copies, other than permanent file copies then in such Holder's possession, of the Prospectus covering such Transfer Restricted Securities or Broker-Dealer Transfer Restricted Security, as applicable, that was current at the time of receipt of such notice. In the event the Company shall give any such notice, the time period regarding the effectiveness of such Registration Statement set forth in Section 3 or 4 hereof, as applicable, shall be extended by the number of days during the period from and including the date of the giving of such notice pursuant to Section 6(d)(iii)(D) hereof to and including the date when each selling Holder covered by such Registration Statement shall have received the copies of the supplemented or amended Prospectus contemplated by Section 6(d)(xv) hereof or shall have received the Advice.

The Company and the Guarantors may require each Holder of Transfer Restricted Securities or Broker-Dealer Transfer Restricted Securities as to which any registration is being effected to furnish to the Company such information regarding such Holder and such Holder's intended method of distribution of the applicable Transfer Restricted Securities or Broker-Dealer Transfer Restricted Securities as the Company may from time to time reasonably request in writing, but only to the extent that such information is required in order to comply with the Act. Each such Holder agrees to notify the Company as promptly as practicable of (i) any inaccuracy or change in information previously furnished by such Holder to the Company or (ii) the occurrence of any event, in either case, as a result of which any Prospectus relating to such registration contains or would contain an untrue statement of a material fact regarding such Holder or such Holder's intended method of distribution of the applicable Transfer Restricted Securities or Broker-Dealer Transfer Restricted Securities or omits to state any material fact regarding such Holder or such Holder's intended method of distribution of the applicable Transfer Restricted Securities or Broker-Dealer Transfer Restricted Securities required to be stated therein or necessary to make the statements therein not misleading and promptly to furnish to the Company any additional information required to correct and update any previously furnish to the Company any additional information required to correct and update any previously furnished information or required so that such Prospectus shall not contain, with respect to such Holder or the distribution of the applicable Transfer Restricted Securities or Broker-Dealer

Transfer Restricted Securities an untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein not misleading.

Notwithstanding anything herein to the contrary, any party to this Agreement (and any employee, representative, or other agent of any party to this Agreement) may disclose to any and all persons, without limitation of any kind, the U.S. federal income tax treatment and tax structure of the transactions contemplated by this Agreement (the "Transactions") and all materials of any kind (including opinions or other tax analyses) that are provided to it relating to such tax treatment and tax structure; provided, however, that neither party (nor any employee, representative or other agent thereof) shall disclose any information (a) that is not relevant to an understanding of the U.S. federal income tax treatment or tax structure of the Transactions or (b) to the extent such disclosure could result in a violation of any federal or state securities laws.

SECTION 7 REGISTRATION EXPENSES

All expenses incident to the Company's and the Guarantors' performance of or compliance with this Agreement will be borne by the Company regardless of whether a Registration Statement becomes effective, including without limitation: (i) all registration and filing fees and expenses (including filings made by any Initial Purchaser or Holder with the NASD (and, if applicable, the fees and expenses of any "qualified independent underwriter" and its counsel that may be required by the rules and regulations of the NASD)); (ii) all fees and expenses of compliance with federal securities and state Blue Sky or securities laws; (iii) all expenses of printing (including printing certificates for the Series B Notes to be issued in the Exchange Offer and printing of Prospectuses), messenger and delivery services; (iv) all fees and disbursements of counsel for the Company and the Guarantors and the Holders of Transfer Restricted Securities; and (v) all fees and disbursements of independent certified public accountants of the Company (including the expenses of any special audit and comfort letters required by or incident to such performance).

The Company will, in any event, bear its and the Guarantors' internal expenses (including, without limitation, all salaries and expenses of its officers and employees performing legal or accounting duties), the expenses of any annual audit and the fees and expenses of any Person, including special experts, retained by the Company or the Guarantors.

SECTION 8 INDEMNIFICATION

(a) The Company and the Guarantors shall, jointly and severally, indemnify and hold harmless each Holder of Transfer Restricted Securities or Broker Dealer Transfer Restricted Securities, its officers and employees and each person, if any, who controls any such Holders, within the meaning of the Securities Act, from and against any loss, claim, damage or liability, joint or several, or any action in respect thereof (including, but not limited to, any loss, claim, damage, liability or action relating to purchases, sales and registration of Notes), to which that Holder, officer, employee or controlling person may become subject, under the Securities Act or otherwise, insofar as such loss, claim, damage, liability or action arises out of, or is based upon, (i) any untrue statement or alleged untrue statement of a material fact contained (A) in any Registration Statement or Prospectus or in any amendment or supplement thereto or (B) in any blue sky application or other document prepared or executed by the Company or any Guarantor

(or based upon any written information furnished by the Company or any Guarantor) specifically for the purpose of qualifying any or all of the Notes under the securities laws of any state or other jurisdiction (any such application, document or information being hereinafter called a "Blue Sky Application"), (ii) the omission or alleged omission to state in any Registration Statement or Prospectus, or in any amendment or supplement thereto, or in any Blue Sky Application any material fact required to be stated therein or necessary to make the statements therein not misleading or (iii) any act or failure to act or any alleged act or failure to act by any Holder in connection with, or relating in any manner to, the Notes or the offering contemplated hereby, and which is included as part of or referred to in any loss, claim, damage, liability or action arising out of or based upon matters covered by clause (i) or (ii) above (provided that the Company and the Guarantors shall not be liable under this clause (iii) to the extent that it is determined in a final judgment by a court of competent jurisdiction that such loss, claim, damage, liability or action resulted directly from any such acts or failures to act undertaken or omitted to be taken by such Holder through its gross negligence or willful misconduct), and shall reimburse each Holder and each such officer, employee or controlling person promptly upon demand for any legal or other expenses reasonably incurred by that Holder, officer, employee or controlling person in connection with investigating or defending or preparing to defend against any such loss, claim, damage, liability or action as such expenses are incurred; provided, however, that the Company and the Guarantors shall not be liable in any such case to the extent that any such loss, claim, damage, liability or action arises out of, or is based upon, any untrue statement or alleged untrue statement or omission or alleged omission made in any Registration Statement or Prospectus, or in any such amendment or supplement, or in any Blue Sky Application, in reliance upon and in conformity with written information concerning such Holder furnished to the Company by or on behalf of any Holder specifically for inclusion therein. The foregoing indemnity agreement is in addition to any liability which the Company and the Guarantors may otherwise have to any Holder or to any officer, employee or controlling person of that Holder.

(b) Each Holder, severally and not jointly, shall indemnify and hold harmless the Company and the Guarantors, their respective officers and employees, each of their respective directors, and each person, if any, who controls the Company or the Guarantors within the meaning of the Securities Act, from and against any loss, claim, damage or liability, joint or several, or any action in respect thereof, to which the Company, the Guarantors or any such director, officer or controlling person may become subject, under the Securities Act or otherwise, insofar as such loss, claim, damage, liability or action arises out of, or is based upon, (i) any untrue statement or alleged untrue statement of a material fact contained (A) in any Registration Statement or Prospectus, or in any amendment or supplement thereto, or (B) in any Blue Sky Application or (ii) the omission or alleged omission to state in any Registration Statement or Prospectus, or in any amendment or supplement thereto, or in any Blue Sky Application any material fact required to be stated therein or necessary to make the statements therein not misleading, but in each case only to the extent that the untrue statement or alleged untrue statement or omission or alleged omission was made in reliance upon and in conformity with written information concerning such Holders furnished to the Company by or on behalf of that Holder specifically for inclusion therein, and shall reimburse the Company, the Guarantors and any such director, officer or controlling person for any legal or other expenses reasonably incurred by the Company, the Guarantors or any such director, officer or controlling person in connection with investigating or defending or preparing to defend against any such loss, claim,

damage, liability or action as such expenses are incurred. The foregoing indemnity agreement is in addition to any liability which any Holder may otherwise have to the Company, the Guarantors or any such director, officer, employee or controlling person. The Company and the Guarantors shall be entitled to receive indemnities from underwriters, selling brokers, dealer managers and similar securities industry professionals participating in the distribution of such Registrable Securities to the same extent as provided above with respect to information or affidavit furnished in writing by such Persons as provided specifically for in any Prospectus or Registration Statement.

(c) Promptly after receipt by an indemnified party under this Section 8 of notice of any claim or the commencement of any action, the indemnified party shall, if a claim in respect thereof is to be made against the indemnifying party under this Section 8, notify the indemnifying party in writing of the claim or the commencement of that action; provided, however, that the failure to notify the indemnifying party shall not relieve it from any liability which it may have under this Section 8 except to the extent it has been materially prejudiced by such failure and, provided further, that the failure to notify the indemnifying party shall not relieve it from any liability which it may have to an indemnified party otherwise than under this Section 8. If any such claim or action shall be brought against an indemnified party, and it shall notify the indemnifying party thereof, the indemnifying party shall be entitled to participate therein and, to the extent that it wishes, jointly with any other similarly notified indemnifying party, to assume the defense thereof with counsel reasonably satisfactory to the indemnified party. After notice from the indemnifying party to the indemnified party of its election to assume the defense of such claim or action, the indemnifying party shall not be liable to the indemnified party under this Section 8 for any legal or other expenses subsequently incurred by the indemnified party in connection with the defense thereof other than reasonable costs of investigation; provided, however, any indemnified party shall have the right to employ separate counsel in any such action and to participate in the defense thereof but the fees and expenses of such counsel shall be at the expense of the indemnified party unless (i) the employment thereof has been specifically authorized by the indemnifying party in writing, (ii) such indemnified party shall have been advised by such counsel that there may be one or more legal defenses available to it which are different from or additional to those available to the indemnifying party and in the reasonable judgment of such counsel it is advisable for such indemnified party to employ separate counsel or (iii) the indemnifying party has failed to assume the defense of such action and employ counsel reasonably satisfactory to the indemnified party, in which case, if such indemnified party notifies the indemnifying party in writing that it elects to employ separate counsel at the expense of the indemnifying party, the indemnifying party shall not have the right to assume the defense of such action on behalf of such indemnified party, it being understood, however, that the indemnifying party shall not, in connection with any one such action or separate but substantially similar or related actions in the same jurisdiction arising out of the same general allegations or circumstances, be liable for the reasonable fees and expenses of more than one separate firm of attorneys (in addition to one local counsel) at any time for all such indemnified parties, which firm shall be designated in writing by Lehman Brothers Inc., if the indemnified parties under this Section 8 consist of any Initial Purchaser or any of their respective officers, employees or controlling persons, or by the Company, if the indemnified parties under this Section consist of the Company, the Guarantors or any of their respective directors, officers, employees or controlling persons. No indemnifying party shall (i) without the prior written consent of the indemnified parties (which consent shall not be unreasonably withheld), settle or

compromise or consent to the entry of any judgment with respect to any pending or threatened claim, action, suit or proceeding in respect of which indemnification or contribution may be sought hereunder (whether or not the indemnified parties are actual or potential parties to such claim or action) unless such settlement, compromise or consent includes an unconditional release of each indemnified party from all liability arising out of such claim, action, suit or proceeding, or (ii) be liable for any settlement of any such action effected without its written consent (which consent shall not be unreasonably withheld), but if settled with the consent of the indemnifying party or if there be a final judgment of the plaintiff in any such action, the indemnifying party agrees to indemnify and hold harmless any indemnified party from and against any loss or liability by reason of such settlement or judgment.

(d) If the indemnification provided for in this Section 8 shall for any reason be unavailable to or insufficient to hold harmless an indemnified party under Section 8(a) or 8(b) in respect of any loss, claim, damage or liability, or any action in respect thereof, referred to therein, then each indemnifying party shall, in lieu of indemnifying such indemnified party, contribute to the amount paid or payable by such indemnified party as a result of such loss, claim, damage or liability, or action in respect thereof, (i) in such proportion as shall be appropriate to reflect the relative benefits received by the Company and the Guarantors, on the one hand, and the Holders on the other, from the offering of the Notes or (ii) if the allocation provided by clause (i) above is not permitted by applicable law, in such proportion as is appropriate to reflect not only the relative benefits referred to in clause (i) above but also the relative fault of the Company and the Guarantors, on the one hand and the Holders on the other with respect to the statements or omissions which resulted in such loss, claim, damage or liability, or action in respect thereof, as well as any other relevant equitable considerations. The relative benefits received by the Company and the Guarantors, on the one hand and the Holders on the other with respect to such offering shall be deemed to be in the same proportion as the total net proceeds from the offering of the Series A Notes purchased under the Purchase Agreement (before deducting expenses) received by the Company and the Guarantors, on the one hand, and the total discounts and commissions received by the Holders with respect to the Series A Notes purchased under this Agreement, on the other hand, bear to the total gross proceeds from the offering of the Series A Notes under the Purchase Agreement. The relative fault shall be determined by reference to whether the untrue or alleged untrue statement of a material fact or omission or alleged omission to state a material fact relates to information supplied by the Company, the Guarantors or the Holders, the intent of the parties and their relative knowledge, access to information and opportunity to correct or prevent such statement or omission. The Company, the Guarantors and the Holders agree that it would not be just and equitable if contributions pursuant to this Section 8(d) were to be determined by pro rata allocation (even if the Holders were treated as one entity for such purpose) or by any other method of allocation which does not take into account the equitable considerations referred to herein. The amount paid or payable by an indemnified party as a result of the loss, claim, damage or liability, or action in respect thereof, referred to above in this Section shall be deemed to include, for purposes of this Section 8(d), any legal or other expenses reasonably incurred by such indemnified party in connection with investigating or defending any such action or claim. Notwithstanding the provisions of this Section 8(d), no Holder shall be required to contribute any amount in excess of the amount by which the net proceeds received by it in connection with its sale of Notes exceeds the amount of any damages which such Holder has otherwise paid or become liable to pay by reason of any untrue or alleged untrue statement or omission or alleged

omission. No person guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the Securities Act) shall be entitled to contribution from any person who was not guilty of such fraudulent misrepresentation. The Holders' obligations to contribute as provided in this Section 8(d) are several and not joint.

SECTION 9 RULE 144A

The Company and each Guarantor hereby agrees with each Holder of Transfer Restricted Securities, during any period in which the Company or such Guarantor is not subject to Section 13 or 15(d) of the Exchange Act within the two-year period following the Closing Date, and each Holder of Broker-Dealer Transfer Restricted Securities, for so long as any Broker-Dealer Transfer Restricted Securities remain outstanding, to make available to any Holder or beneficial owner of Transfer Restricted Securities or any Holder or Broker-Dealer Transfer Restricted Securities, in connection with any sale thereof and any prospective purchaser of such Transfer Restricted Securities from such Holder or beneficial owner, the information required by Rule 144A(d)(4) under the Act in order to permit resales of such Transfer Restricted Securities pursuant to Rule 144A.

SECTION 10 PARTICIPATION IN UNDERWRITTEN REGISTRATIONS

No Holder may participate in any Underwritten Registration hereunder unless such Holder (a) agrees to sell such Holder's Transfer Restricted Securities or Broker-Dealer Transfer Restricted Securities, as applicable, on the basis provided in any underwriting arrangements approved by the Persons entitled hereunder to approve such arrangements and (b) completes and executes all reasonable questionnaires, powers of attorney, indemnities, underwriting agreements, lock-up letters and other documents required under the terms of such underwriting arrangements.

SECTION 11 SELECTION OF UNDERWRITERS

The Holders of Transfer Restricted Securities covered by the Shelf Registration Statement who desire to do so may sell such Transfer Restricted Securities in an Underwritten Offering at such Holders' expense. In any such Underwritten Offering, the investment banker or investment bankers and manager or managers that will administer the offering will be selected by the Holders of a majority in aggregate principal amount of the Transfer Restricted Securities included in such offering; provided, that such investment bankers and managers must be reasonably satisfactory to the Company.

SECTION 12 MISCELLANEOUS

(a) Remedies. The Company and the Guarantors agree that monetary damages (including the additional amounts contemplated hereby) would not be adequate compensation for any loss incurred by reason of a breach by it of the provisions of this Agreement and hereby agree to waive the defense in any action for specific performance that a remedy at law would be adequate.

(b) No Inconsistent Agreements. Neither the Company nor any Guarantor will, on or after the date of this Agreement, enter into any agreement with respect to its securities that is

inconsistent with the rights granted to the Holders in this Agreement or otherwise conflicts with the provisions hereof. Except as disclosed in the Offering Memorandum or in the documents incorporated therein by reference, neither the Company nor any Guarantor has previously entered into any agreement granting any registration rights with respect to its securities to any Person that is inconsistent with the terms of this Agreement. The rights granted to the Holders hereunder do not in any way conflict with and are not inconsistent with the rights granted to the holders of the Company's or any Guarantor's securities under any agreement in effect on the date hereof.

(c) Adjustments Affecting the Notes. The Company and the Guarantors will not take any action, or permit any change to occur, with respect to the Notes that would materially and adversely affect the ability of the Holders to Consummate any Exchange Offer.

(d) Amendments and Waivers. The provisions of this Agreement may not be amended, modified or supplemented, and waivers or consents to or departures from the provisions hereof may not be given unless the Company has obtained the written consent of Holders of a majority of the outstanding principal amount of Transfer Restricted Securities. Notwithstanding the foregoing, a waiver or consent to departure from the provisions hereof that relates exclusively to the rights of Holders whose securities are being tendered pursuant to the Exchange Offer and that does not affect directly or indirectly the rights of other Holders whose securities are not being tendered pursuant to such Exchange Offer may be given by the Holders of a majority of the outstanding principal amount of Transfer Restricted Securities being tendered or registered.

(e) Notices. All notices and other communications provided for or permitted hereunder shall be made in writing by hand-delivery, first-class mail (registered or certified, return receipt requested), telex, telecopier, or air courier guaranteeing overnight delivery:

(i) if to a Holder, at the address set forth on the records of the Registrar under the Indenture, with a copy to the Registrar under the Indenture; and

(ii) if to the Company or the Guarantors:

L-3 Communications Corporation
600 Third Avenue, 34th Floor,
New York, New York 10016,
Attention: Christopher C. Cambria (Fax: 212-805-5494),

With a copy to:

Simpson Thacher & Bartlett
425 Lexington Avenue
New York, NY, 10017
Attention: Vincent Pagano Jr. (Fax: 212-455-2502)

All such notices and communications shall be deemed to have been duly given: at the time delivered by hand, if personally delivered; five business days after being deposited in the mail, postage prepaid, if mailed; when answered back, if telexed; when receipt acknowledged, if telecopied; and on the next business day, if timely delivered to an air courier guaranteeing overnight delivery.

Copies of all such notices, demands or other communications shall be concurrently delivered by the Person giving the same to the Trustee at the address specified in the Indenture.

(f) Successors and Assigns. This Agreement shall inure to the benefit of and be binding upon the successors and assigns of each of the parties, including without limitation and without the need for an express assignment, subsequent Holders or Restricted Broker Dealers; provided, however, that this Agreement shall not inure to the benefit of or be binding upon a successor or assign of a Holder unless and to the extent such successor or assign acquired Transfer Restricted Securities or Broker Dealer Transfer Restricted Securities from such Holder.

(g) Counterparts. This Agreement may be executed in any number of counterparts and by the parties hereto in separate counterparts, each of which when so executed shall be deemed to be an original and all of which taken together shall constitute one and the same agreement.

(h) Headings. The headings in this Agreement are for convenience of reference only and shall not limit or otherwise affect the meaning hereof.

(i) Governing Law. THIS AGREEMENT SHALL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW YORK.

(j) Severability. In the event that any one or more of the provisions contained herein, or the application thereof in any circumstance, is held invalid, illegal or unenforceable, the validity, legality and enforceability of any such provision in every other respect and of the remaining provisions contained herein shall not be affected or impaired thereby.

(k) Entire Agreement. This Agreement together with the other Operative Documents (as defined in the Purchase Agreement) is intended by the parties as a final expression of their agreement and intended to be a complete and exclusive statement of the agreement and understanding of the parties hereto in respect of the subject matter contained herein. There are no restrictions, promises, warranties or undertakings, other than those set forth or referred to herein with respect to the registration rights granted by the Company and the Guarantors with respect to the Transfer Restricted Securities. This Agreement supersedes all prior agreements and understandings between the parties with respect to such subject matter.

[Signature pages follow]

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first written above.

L-3 COMMUNICATIONS CORPORATION

By:

Name: Christopher C. Cambria
Title: Senior Vice President, Secretary and General Counsel

GUARANTORS:

AMI INSTRUMENTS, INC.
APCOM, INC.
BROADCAST SPORTS INC.
CELERITY SYSTEMS INCORPORATED
EER SYSTEMS, INC.
ELECTRODYNAMICS, INC.
GOODRICH AEROSPACE COMPONENT OVERHAUL & REPAIR, INC.
GOODRICH AVIONICS SYSTEMS, INC.
GOODRICH FLIGHTSYSTEMS, INC.
HENSCHEL, INC.
HYGIENETICS ENVIRONMENTAL SERVICES, INC.
INTERSTATE ELECTRONICS CORPORATION
KDI PRECISION PRODUCTS, INC.
L-3 COMMUNICATIONS AIS GP CORPORATION
L-3 COMMUNICATIONS ANALYTICS CORPORATION
L-3 COMMUNICATIONS ATLANTIC SCIENCE & TECHNOLOGY CORPORATION
L-3 COMMUNICATIONS AYDIN CORPORATION
L-3 COMMUNICATIONS ESSCO, INC.
L-3 COMMUNICATIONS ILEX SYSTEMS, INC.
L-3 COMMUNICATIONS IMC CORPORATION
L-3 COMMUNICATIONS INTEGRATED SYSTEMS L.P.
L-3 COMMUNICATIONS INVESTMENTS, INC.
L-3 COMMUNICATIONS SECURITY AND DETECTION SYSTEMS CORPORATION DELAWARE
L-3 COMMUNICATIONS SECURITY AND DETECTION SYSTEMS CORPORATION CALIFORNIA
L-3 COMMUNICATIONS SPD TECHNOLOGIES, INC.

L-3 COMMUNICATIONS STORM CONTROL SYSTEMS, INC.
L-3 COMMUNICATIONS TMA CORPORATION
L-3 COMMUNICATIONS WESTWOOD CORPORATION
MCTI ACQUISITION CORPORATION
MICRODYNE COMMUNICATIONS TECHNOLOGY INCORPORATED
MICRODYNE CORPORATION
MICRODYNE OUTSOURCING INCORPORATED
MPRI, INC.
PAC ORD, INC.
POWER PARAGON, INC.
SHIP ANALYTICS, INC.
SHIP ANALYTICS INTERNATIONAL, INC.
SHIP ANALYTICS USA, INC.
SOUTHERN CALIFORNIA MICROWAVE, INC.
SPD ELECTRICAL SYSTEMS, INC.
SPD HOLDINGS, INC.
SPD SWITCHGEAR, INC.
SYCOLEMAN CORPORATION
TELOS CORPORATION
TROLL TECHNOLOGY CORPORATION
WESCAM AIR OPS INC.
WESCAM AIR OPS LLC
WESCAM HOLDINGS (US) INC.
WESCAM INCORPORATED
WESCAM LLC
WESCAM SONOMA INC.
WOLF COACH, INC.
as Guarantors

By:

Name: Christopher C. Cambria
Title: Vice President and Secretary

L-3 COMMUNICATIONS INTEGRATED SYSTEMS L.P.
as Guarantor

By: L-3 COMMUNICATIONS AIS GP CORPORATION,
as general partner

By:

Name:
Title: Authorized Person

LEHMAN BROTHERS INC.
MORGAN STANLEY & CO. INCORPORATED
BANC OF AMERICA SECURITIES LLC
CREDIT SUISSE FIRST BOSTON LLC
BY LEHMAN BROTHERS INC.

By:

Authorized Representative

ANNEX A

COUNTERPART TO REGISTRATION RIGHTS AGREEMENT

The undersigned hereby absolutely, unconditionally and irrevocably agrees (as a "Guarantor") to use all commercially reasonable efforts to include its Subsidiary Guarantee in any Registration Statement required to be filed by the Company and the Guarantors pursuant to the Registration Rights Agreement, dated as of May 21, 2003, (the "Registration Rights Agreement") by and among L-3 Communications Corporation, a Delaware corporation, the guarantors party thereto, Lehman Brothers Inc., Morgan Stanley & Co. Incorporated, Banc of America Securities LLC and Credit Suisse First Boston LLC; to use all commercially reasonable efforts to cause such Registration Statement to become effective as specified in the Registration Rights Agreement; and to otherwise be bound by the terms and provisions of the Registration Rights Agreement.

IN WITNESS WHEREOF, the undersigned has executed this Counterpart as of _____.

[NAME]

By:

Name:
Title:

EXHIBIT 5

[SIMPSON THACHER & BARTLETT LLP LETTERHEAD]

June 13, 2003

L-3 COMMUNICATIONS CORPORATION
600 Third Avenue, 34th Floor
New York, NY 10016

Ladies and Gentlemen:

We have acted as counsel to L-3 Communications Corporation, a Delaware corporation (the "Company"), and to the Delaware subsidiaries of the Company named on Schedule I attached hereto (each, a "Delaware Guarantor" and collectively, the "Delaware Guarantors") and to the non-Delaware subsidiaries of the Company named on Schedule II attached hereto (each, a "Non-Delaware Guarantor" and collectively, the "Non-Delaware Guarantors," taken together with the Delaware Guarantors, the "Guarantors"), in connection with the Registration Statement on Form S-4 (the "Registration Statement") filed by the Company and the Guarantors with the Securities and Exchange Commission (the "Commission") under the Securities Act of 1933, as amended, relating to the issuance by the Company of $400,000,000 aggregate principal amount of 6 1/8% Series B Senior Subordinated Notes Due 2013 (the "Exchange Notes") and the issuance by the Guarantors of guarantees (the "Guarantees"), with respect to the Exchange Notes. The Exchange Notes and the Guarantees will be issued under an indenture (the "Indenture") among the Company, the Guarantors and the Bank of New York, as Trustee (the "Trustee") and a supplemental indenture among the Company, the Guarantors and the Trustee. The Exchange Notes will be offered by the Company in exchange for $400,000,000 aggregate principal amount of its outstanding 6 1/8% Senior Subordinated Notes due 2013.

We have examined the Registration Statement and the Indenture, which has been filed with the Commission as an exhibit to the Registration Statement. We also have examined the originals, or duplicates or certified or conformed copies, of such records, agreements, instruments and other documents and have made such other and further investigations as we have deemed relevant and necessary in connection with the opinions expressed herein. As to questions of fact material to this opinion, we have relied upon certificates of public officials and of officers and representatives of the Company and the Guarantors.

In rendering the opinions set forth below, we have assumed the genuineness of all signatures, the legal capacity of natural persons, the due incorporation of the Non-Delaware Guarantors, the authenticity of all documents submitted to us as originals, the conformity to original documents of all documents submitted to us as duplicates or certified or conformed copies, and the authenticity of the originals of such latter documents. We also have assumed that the Indenture is the valid and legally binding obligation of the Trustee. We have assumed further that (a) the Non-Delaware Guarantors have duly authorized, executed and delivered the Indenture, (b) execution, delivery and performance by the Non-Delaware Guarantors of the Indenture, the Exchange Notes and the Guarantees do not and will not violate the laws of the states of incorporation of the respective Non-Delaware Guarantors or any other applicable laws (excepting the laws of the State of New York and the Federal laws of the United States) and (c) each of the Non-Delaware Guarantors is validly existing under the laws of their respective jurisdiction of organization.

Based upon the foregoing, and subject to the qualifications and limitations stated herein, we are of the opinion that:

1. When the Exchange Notes have been duly executed, authenticated, issued and delivered in accordance with the provisions of the Indenture upon the exchange, the Exchange Notes will constitute valid and legally binding obligations of the Company enforceable against the Company in accordance with their terms.

2. When (a) the Exchange Notes have been duly executed, authenticated, issued and delivered in accordance with the provisions of the Indenture upon the exchange and (b) the

Guarantees have been duly indorsed on the Exchange Notes, the Guarantees will constitute valid and legally binding obligations of the Guarantors enforceable against the Guarantors in accordance with their terms.

Our opinions set forth above are subject to the effects of (1) bankruptcy, insolvency, fraudulent conveyance, reorganization, moratorium and other similar laws relating to or affecting creditors' rights generally, (2) general equitable principles (whether considered in a proceeding in equity or at law) and (3) an implied covenant of good faith and fair dealing.

We are members of the Bar of the State of New York and we do not express any opinion herein concerning any law other than the law of the State of New York, the Federal law of the United States, the Delaware General Corporation Law, the Delaware Limited Liability Company Act and the Delaware Revised Uniform Limited Partnership Act.

We hereby consent to the filing of this opinion letter as Exhibit 5 to the Registration Statement and to the use of our name under the caption "Legal Matters" in the Prospectus included in the Registration Statement.

Very truly yours,

/s/ SIMPSON THACHER & BARTLETT LLP

SIMPSON THACHER & BARTLETT LLP

SCHEDULE I

DELAWARE GUARANTORS

HYGIENETICS ENVIRONMENTAL SERVICES, INC., a Delaware Corporation
L-3 COMMUNICATIONS ILEX SYSTEMS, INC., a Delaware Corporation
L-3 COMMUNICATIONS SPD TECHNOLOGIES, INC., a Delaware Corporation
L-3 COMMUNICATIONS ESSCO, INC., a Delaware Corporation
SPD ELECTRICAL SYSTEMS, INC., a Delaware Corporation
SPD SWITCHGEAR, INC., a Delaware Corporation
PAC ORD, INC., a Delaware Corporation
HENSCHEL, INC., a Delaware Corporation
SPD HOLDINGS, INC., a Delaware Corporation
POWER PARAGON, INC., a Delaware Corporation
L-3 COMMUNICATIONS AIS GP CORPORATION, a Delaware Corporation
L-3 COMMUNICATIONS AYDIN CORPORATION, a Delaware Corporation
L-3 COMMUNICATIONS INTEGRATED SYSTEMS L.P., a Delaware Limited Partnership
L-3 COMMUNICATIONS INVESTMENTS, INC., a Delaware Corporation
MPRI, INC., a Delaware Corporation
KDI PRECISION PRODUCTS, INC., a Delaware Corporation
BROADCAST SPORTS INC., a Delaware Corporation
GOODRICH AEROSPACE COMPONENT OVERHAUL & REPAIR, INC., a Delaware Corporation
GOODRICH AVIONICS SYSTEMS, INC., a Delaware Corporation
L-3 COMMUNICATIONS SECURITY AND DETECTION SYSTEMS
CORPORATION DELAWARE, a Delaware Corporation
SHIP ANALYTICS INTERNATIONAL, INC., a Delaware Corporation
WESCAM AIR OPS INC., a Delaware Corporation
WESCAM AIR OPS LLC, a Delaware Limited Liability Company
WESCAM HOLDINGS (US) INC., a Delaware Corporation
WESCAM LLC, a Delaware Limited Liability Company

SCHEDULE II

NON-DELAWARE GUARANTORS

SOUTHERN CALIFORNIA MICROWAVE, INC., a California Corporation
L-3 COMMUNICATIONS STORM CONTROL SYSTEMS, INC., a California Corporation
MICRODYNE CORPORATION, a Maryland Corporation
ELECTRODYNAMICS, INC., an Arizona Corporation
INTERSTATE ELECTRONICS CORPORATION, a California Corporation
EER SYSTEMS, INC., a Virginia Corporation
L-3 COMMUNICATIONS ANALYTICS CORPORATION, a California Corporation
AMI INSTRUMENTS, INC., an Oklahoma Corporation
L-3 COMMUNICATIONS ATLANTIC SCIENCE AND TECHNOLOGY
CORPORATION, a New Jersey Corporation
MICRODYNE COMMUNICATIONS TECHNOLOGIES
INCORPORATED, a Maryland Corporation
APCOM, INC., a Maryland Corporation
CELERITY SYSTEMS INCORPORATED, a California Corporation
MICRODYNE OUTSOURCING INCORPORATED, a Maryland Corporation
GOODRICH FLIGHTSYSTEMS, INC., an Ohio Corporation
L-3 COMMUNICATIONS IMC CORPORATION, a Connecticut Corporation
L-3 COMMUNICATIONS SECURITY AND DETECTION SYSTEMS CORPORATION
CALIFORNIA, a California Corporation
L-3 COMMUNICATIONS TMA CORPORATION, a Virginia Corporation
L-3 COMMUNICATIONS WESTWOOD CORPORATION, a Nevada Corporation
MCTI ACQUISITION CORPORATION, a Maryland Corporation
SHIP ANALYTICS, INC., a Connecticut Corporation
SHIP ANALYTICS USA, INC., a Connecticut Corporation
SYCOLEMAN CORPORATION, a Florida Corporation
TELOS CORPORATION, a California Corporation
TROLL TECHNOLOGY CORPORATION, a California Corporation
WESCAM INCORPORATED, a Florida Corporation
WESCAM SONOMA INC., a California Corporation
WOLF COACH, INC., a Massachusetts Corporation

EXHIBIT 21

L-3 COMMUNICATIONS CORPORATION AND SUBSIDIARIES

1179023 Ontario Ltd.
1374474 Ontario Inc.
1415645 Ontario Inc.
3033544 Nova Scotia Company
3052893 Nova Scotia Company
ACSS-NZSC Limited
AMI Instruments, Inc.
Apcom, Inc.
Applied Physics Specialities Limited
Arbeitsmedizinische Betreungsgesellschaft Kieler Bertriebe mbH
Astrid Energy Enterprises S.R.L.
Aviation Communications & Surveillance Systems, LLC
Aydin Foreign Sales Limited
Aydin S.A.
Aydin Yazilim ve Elektronik Sanayi A.S.
Broadcast Sports Inc.
C3-ilex, LLC
Celerity Systems Incorporated
Delsub, Inc.
Digital Technics, L.L.C.
Digital Technics, L.P.
EER Systems, Inc.
ELAC Nautik Unterstutzungskabe GmbH
Electrodynamics, Inc.
Electronic Space Systems International Corp.
EMC S.r.l.
ESSCO Collins Limited
EuroAtlas Gesellschaft fur Leistungselektronik mbH
Film Europe Limited
Goodrich FlightSystems, Inc.
Henschel Inc.
Honeywell TCAS Inc.
Hygienetics Environmental Services, Inc.
International Aerospace Management Company Scrl
Interstate Electronics Corporation
ITel Solutions, LLC
JovyAtlas Elektrische Umformtechnik GmbH
KDI Precision Products, Inc.
Goodrich Aerospace Component Overhaul and Repair, Inc.
Goodrich Avionics Systems, Inc.
L-3 Canada Acquisition Inc.
L-3 Communications AIS GP Corporation
L-3 Communications Analytics Corporation

L-3 Communications Atlantic Science & Technology Corporation
L-3 Communications Australia Proprietary Limited
L-3 Communications Australia Pty Ltd
L-3 Communications Aydin Corporation
L-3 Communications Cananda Inc.
L-3 Communications Corporation
L-3 Communications ELAC Nautik GmbH
L-3 Communications ESSCO, Inc.
L-3 Communications Global Network Solutions U.K. Ltd
L-3 Communications Holding GmbH
L-3 Communications Hong Kong Limited
L-3 Communications ILEX Systems, Inc.
L-3 Communications IMC Corporation
L-3 Communications Integrated Systems L.P.
L-3 Communications Investments Inc.
L-3 Communications Korea Corporation
L-3 Communications Malaysia Sdn. Bhd.
L-3 Communications Security and Detection Systems Corporation California
L-3 Communications Security and Detection Systems Corporation Delaware
L-3 Communications Security Systems Corporation
L-3 Communications Singapore Pte Ltd
L-3 Communications SPD Technologies, Inc.
L-3 Communications Storm Control Systems, Inc.
L-3 Communications TMA Corporation
L-3 Communications U.K. Ltd.
L-3 Communications Westwood Corporation
L-3 Satellite Networks, LLC
Logimetrics FSC, Inc.
LogiMetrics, Inc.
L-Tres Comunicaciones Costa Rica, S.A.
MCTI Acquisition Corporation
Medical Education Technologies, Inc.
Microdyne Communications Technologies Incorporated
Microdyne Corporation
Microdyne Ltd.
Microdyne Outsourcing Incorporated
mmTECH, INC.
Mosaic Mapping Inc.
MPRI, Inc.
Narda Safety Test Solutions GmbH
New Vision Group Inc.
Pac Ord Inc.

PMM Costruzioni Elettroniche Centro Misure Radioelettriche S.r.l.
Power Paragon (Deutschland) Holding GmbH
Power Paragon, Inc.
Ship Analytics, Inc.
Ship Analytics International, Inc.
Ship Analytics USA, Inc.
Southern California Microwave, Inc.
Sovcan Star Satellite Communications Inc.
Spar Aerospace Limited
SPD Electrical Systems, Inc.
SPD Holdings, Inc.
SPD Switchgear Inc.
Storm Control Systems Limited
SYColeman Corporation
Telos Corporation
Troll Technology Corporation
Wescam Air Ops Inc.
Wescam Air Ops LLC
Wescam Asia PTE Ltd.
Wescam Europe Limited
Wescam Financial (U.S.A.) LLC
Wescam Holdings (US) Inc.
Wescam Inc.
Wescam Incorporated
Wescam LLC
Wescam Sonoma Inc.
Wolf Coach, Inc.

EXHIBIT 23

CONSENT OF INDEPENDENT AUDITORS

We consent to the inclusion in this registration statement on Form S-4 of L-3 Communications Corporation and subsidiaries of our report dated January 27, 2003 (except for the first paragraph of Recently Issued Accounting Standards in Note 2, for which the date is June 10, 2003) on our audits of the consolidated financial statements of L-3 Communications Holdings, Inc. and L-3 Communications Corporation and subsidiaries as of December 31, 2002 and 2001 and for the three years ended December 31, 2002, which report appears in such registration statement.

We also consent to the reference to us under the heading "Experts" in the prospectus, which is part of this registration statement.

/s/ PricewaterhouseCoopers LLP

New York, New York
June 10, 2003

Exhibit 25

FORM T-1

SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

STATEMENT OF ELIGIBILITY
UNDER THE TRUST INDENTURE ACT OF 1939 OF A
CORPORATION DESIGNATED TO ACT AS TRUSTEE

CHECK IF AN APPLICATION TO DETERMINE
ELIGIBILITY OF A TRUSTEE PURSUANT TO
SECTION 305(b)(2) |__|

THE BANK OF NEW YORK
(Exact name of trustee as specified in its charter)

New York (State of incorporation if not a U.S. national bank)	13-5160382 (I.R.S. employer identification no.)
One Wall Street, New York, N.Y. (Address of principal executive offices)	10286 (Zip code)

L-3 COMMUNICATIONS CORPORATION
(Exact name of obligor as specified in its charter)

Delaware (State or other jurisdiction of incorporation or organization)	13-3937436 (I.R.S. employer identification no.)

AMI INSTRUMENTS, INC.
(Exact name of obligor as specified in its charter)

Oklahoma (State or other jurisdiction of incorporation or organization)	73-1122637 (I.R.S. employer identification no.)

APCOM, INC.
(Exact name of obligor as specified in its charter)

Maryland (State or other jurisdiction of incorporation or organization)	52-1291447 (I.R.S. employer identification no.)

BROADCAST SPORTS INC.
(Exact name of obligor as specified in its charter)

Delaware (State or other jurisdiction of incorporation or organization)	52-1977327 (I.R.S. employer identification no.)

CELERITY SYSTEMS INCORPORATED
(Exact name of obligor as specified in its charter)

California (State or other jurisdiction of incorporation or organization)	77-0365380 (I.R.S. employer identification no.)

EER SYSTEMS, INC.
(Exact name of obligor as specified in its charter)

Virginia (State or other jurisdiction of incorporation or organization)	54-1349668 (I.R.S. employer identification no.)

ELETRODYNAMICS, INC.
(Exact name of obligor as specified in its charter)

Arizona (State or other jurisdiction of incorporation or organization)	36-3140903 (I.R.S. employer identification no.)

GOODRICH AEROSPACE COMPONENT OVERHAUL & REPAIR, INC.
(Exact name of obligor as specified in its charter)

Delaware (State or other jurisdiction of incorporation or organization)	31-1174777 (I.R.S. employer identification no.)

GOODRICH AVIONICS SYSTEMS, INC.
(Exact name of obligor as specified in its charter)

Delaware (State or other jurisdiction of incorporation or organization)	38-1865601 (I.R.S. employer identification no.)

GOODRICH FLIGHTSYSTEMS, INC.
(Exact name of obligor as specified in its charter)

Ohio (State or other jurisdiction of incorporation or organization)	31-1287286 (I.R.S. employer identification no.)

HENSCHEL, INC.
(Exact name of obligor as specified in its charter)

Delaware (State or other jurisdiction of incorporation or organization)	23-2554418 (I.R.S. employer identification no.)

HYGIENETICS ENVIRONMENTAL SERVICES, INC.
(Exact name of obligor as specified in its charter)

Delaware (State or other jurisdiction of incorporation or organization)	13-3992505 (I.R.S. employer identification no.)

INTERSTATE ELECTRONICS CORPORATION
(Exact name of obligor as specified in its charter)

California (State or other jurisdiction of incorporation or organization)	95-1912832 (I.R.S. employer identification no.)

KDI PRECISION PRODUCTS, INC.
(Exact name of obligor as specified in its charter)

Delaware (State or other jurisdiction of incorporation or organization)	31-0740721 (I.R.S. employer identification no.)

L-3 COMMUNICATIONS AIS GP CORPORATION
(Exact name of obligor as specified in its charter)

Delaware (State or other jurisdiction of incorporation or organization)	13-4137187 (I.R.S. employer identification no.)

L-3 COMMUNICATIONS ANALYTICS CORPORATION
(Exact name of obligor as specified in its charter)

California (State or other jurisdiction of incorporation or organization)	54-1035921 (I.R.S. employer identification no.)

L-3 COMMUNICATIONS ATLANTIC SCIENCE AND TECHNOLOGY CORPORATION
(Exact name of obligor as specified in its charter)

New Jersey (State or other jurisdiction of incorporation or organization)	22-2547554 (I.R.S. employer identification no.)

L-3 COMMUNICATIONS AYDIN CORPORATION
(Exact name of obligor as specified in its charter)

Delaware (State or other jurisdiction of incorporation or organization)	23-1686808 (I.R.S. employer identification no.)

L-3 COMMUNICATIONS ESSCO, INC.
(Exact name of obligor as specified in its charter)

Delaware (State or other jurisdiction of incorporation or organization)	04-2281486 (I.R.S. employer identification no.)

L-3 COMMUNICATIONS ILEX SYSTEMS, INC.
(Exact name of obligor as specified in its charter)

Delaware (State or other jurisdiction of incorporation or organization)	13-3992952 (I.R.S. employer identification no.)

L-3 COMMUNICATIONS IMC CORPORATION
(Exact name of obligor as specified in its charter)

Connecticut (State or other jurisdiction of incorporation or organization)	06-1284773 (I.R.S. employer identification no.)

L-3 COMMUNICATIONS INTEGRATED SYSTEMS L.P.
(Exact name of obligor as specified in its charter)

Delaware (State or other jurisdiction of incorporation or organization)	03-0391841 (I.R.S. employer identification no.)

L-3 COMMUNICATIONS INVESTMENTS INC.
(Exact name of obligor as specified in its charter)

Delaware (State or other jurisdiction of incorporation or organization)	51-0260723 (I.R.S. employer identification no.)

L-3 COMMUNICATIONS SECURITY AND DETECTION
SYSTEMS CORPORATION DELAWARE
(Exact name of obligor as specified in its charter)

Delaware (State or other jurisdiction of incorporation or organization)	04-3054475 (I.R.S. employer identification no.)

L-3 COMMUNICATIONS SECURITY AND DETECTION
SYSTEMS CORPORATION CALIFORNIA
(Exact name of obligor as specified in its charter)

California (State or other jurisdiction of incorporation or organization)	95-2214952 (I.R.S. employer identification no.)

L-3 COMMUNICATIONS SPD TECHNOLOGIES, INC.
(Exact name of obligor as specified in its charter)

Delaware (State or other jurisdiction of incorporation or organization)	23-2869511 (I.R.S. employer identification no.)

L-3 COMMUNICATIONS STORM CONTROL SYSTEMS, INC.
(Exact name of obligor as specified in its charter)

California (State or other jurisdiction of incorporation or organization)	77-0268547 (I.R.S. employer identification no.)

L-3 COMMUNICATIONS TMA CORPORATION
(Exact name of obligor as specified in its charter)

Virginia (State or other jurisdiction of incorporation or organization)	54-1221290 (I.R.S. employer identification no.)

L-3 COMMUNICATIONS WESTWOOD CORPORATION
(Exact name of obligor as specified in its charter)

Nevada (State or other jurisdiction of incorporation or organization)	87-0430944 (I.R.S. employer identification no.)

MCTI ACQUISITION CORPORATION
(Exact name of obligor as specified in its charter)

Maryland (State or other jurisdiction of incorporation or organization)	13-4109777 (I.R.S. employer identification no.)

MICRODYNE COMMUNICATIONS TECHNOLOGIES INCORPORATED
(Exact name of obligor as specified in its charter)

Maryland (State or other jurisdiction of incorporation or organization)	59-3500774 (I.R.S. employer identification no.)

MICRODYNE CORPORATION
(Exact name of obligor as specified in its charter)

Maryland (State or other jurisdiction of incorporation or organization)	52-0856493 (I.R.S. employer identification no.)

MICRODYNE OUTSOURCING INCORPORATED
(Exact name of obligor as specified in its charter)

Maryland (State or other jurisdiction of incorporation or organization)	33-0797639 (I.R.S. employer identification no.)

MPRI, INC.
(Exact name of obligor as specified in its charter)

Delaware (State or other jurisdiction of incorporation or organization)	54-1439937 (I.R.S. employer identification no.)

PAC ORD, INC.
(Exact name of obligor as specified in its charter)

Delaware (State or other jurisdiction of incorporation or organization)	23-2523436 (I.R.S. employer identification no.)

POWER PARAGON, INC.
(Exact name of obligor as specified in its charter)

Delaware (State or other jurisdiction of incorporation or organization)	33-0638510 (I.R.S. employer identification no.)

SHIP ANALYTICS, INC.
(Exact name of obligor as specified in its charter)

Connecticut (State or other jurisdiction of incorporation or organization)	06-0966471 (I.R.S. employer identification no.)

SHIP ANALYTICS INTERNATIONAL, INC.
(Exact name of obligor as specified in its charter)

Delaware (State or other jurisdiction of incorporation or organization)	06-1336772 (I.R.S. employer identification no.)

SHIP ANALYTICS USA, INC.
(Exact name of obligor as specified in its charter)

Delaware (State or other jurisdiction of incorporation or organization)	06-1364417 (I.R.S. employer identification no.)

SOUTHERN CALIFORNIA MICROWAVE, INC.
(Exact name of obligor as specified in its charter)

California (State or other jurisdiction of incorporation or organization)	13-0478540 (I.R.S. employer identification no.)

SPD ELECTRICAL SYSTEMS, INC.
(Exact name of obligor as specified in its charter)

Delaware (State or other jurisdiction of incorporation or organization)	23-2457758 (I.R.S. employer identification no.)

SPD HOLDINGS, INC.
(Exact name of obligor as specified in its charter)

Delaware (State or other jurisdiction of incorporation or organization)	23-2977238 (I.R.S. employer identification no.)

SPD SWITCHGEAR, INC.
(Exact name of obligor as specified in its charter)

Delaware (State or other jurisdiction of incorporation or organization)	23-2510039 (I.R.S. employer identification no.)

SYCOLEMAN CORPORATION
(Exact name of obligor as specified in its charter)

Florida (State or other jurisdiction of incorporation or organization)	59-2039476 (I.R.S. employer identification no.)

TELOS CORPORATION
(Exact name of obligor as specified in its charter)

California (State or other jurisdiction of incorporation or organization)	95-2596107 (I.R.S. employer identification no.)

TROLL TECHNOLOGY CORPORATION
(Exact name of obligor as specified in its charter)

California (State or other jurisdiction of incorporation or organization)	95-4552257 (I.R.S. employer identification no.)

WESCAM AIR OPS INC.
(Exact name of obligor as specified in its charter)

Delaware (State or other jurisdiction of incorporation or organization)	52-230442 (I.R.S. employer identification no.)

WESCAM AIR OPS LLC
(Exact name of obligor as specified in its charter)

Delaware (State or other jurisdiction of incorporation or organization)	(I.R.S. employer identification no.)

WESCAM INCORPORATED
(Exact name of obligor as specified in its charter)

Florida (State or other jurisdiction of incorporation or organization)	59-3316817 (I.R.S. employer identification no.)

WESCAM LLC
(Exact name of obligor as specified in its charter)

Delaware (State or other jurisdiction of incorporation or organization)	91-2077866 (I.R.S. employer identification no.)

WESCAM SONOMA INC.
(Exact name of obligor as specified in its charter)

California (State or other jurisdiction of incorporation or organization)	95-2942016 (I.R.S. employer identification no.)

WESCAM HOLDINGS (US) INC.
(Exact name of obligor as specified in its charter)

Delaware (State or other jurisdiction of incorporation or organization)	51-0376332 (I.R.S. employer identification no.)

WOLF COACH, INC.
(Exact name of obligor as specified in its charter)

Massachusetts (State or other jurisdiction of incorporation or organization)	04-2482502 (I.R.S. employer identification no.)
600 Third Avenue New York, New York (Address of principal executive offices)	10016 (Zip code)

6-1/8% Series B Senior Subordinated Notes due 2013
(Title of the indenture securities)

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1. GENERAL INFORMATION. FURNISH THE FOLLOWING INFORMATION AS TO THE TRUSTEE:

(A) NAME AND ADDRESS OF EACH EXAMINING OR SUPERVISING AUTHORITY TO WHICH IT IS SUBJECT.

Name	Address
Superintendent of Banks of the State of New York	2 Rector Street, New York, N.Y. 10006, and Albany, N.Y. 12203
Federal Reserve Bank of New York	33 Liberty Plaza, New York, N.Y. 10045
Federal Deposit Insurance Corporation	Washington, D.C. 20429
New York Clearing House Association	New York, New York 10005

(B) WHETHER IT IS AUTHORIZED TO EXERCISE CORPORATE TRUST POWERS.

Yes.

2. AFFILIATIONS WITH OBLIGOR.

IF THE OBLIGOR IS AN AFFILIATE OF THE TRUSTEE, DESCRIBE EACH SUCH AFFILIATION.

None.

16. LIST OF EXHIBITS.

EXHIBITS IDENTIFIED IN PARENTHESES BELOW, ON FILE WITH THE COMMISSION, ARE INCORPORATED HEREIN BY REFERENCE AS AN EXHIBIT HERETO, PURSUANT TO RULE 7A-29 UNDER THE TRUST INDENTURE ACT OF 1939 (THE "ACT") AND 17 C.F.R. 229.10(D).

1. A copy of the Organization Certificate of The Bank of New York (formerly Irving Trust Company) as now in effect, which contains the authority to commence business and a grant of powers to exercise corporate trust powers. (Exhibit 1 to Amendment No. 1 to Form T-1 filed with Registration Statement No. 33-6215, Exhibits 1a and 1b to Form T-1 filed with Registration Statement No. 33-21672 and Exhibit 1 to Form T-1 filed with Registration Statement No. 33-29637.)

4. A copy of the existing By-laws of the Trustee. (Exhibit 4 to Form T-1 filed with Registration Statement No. 33-31019.)

6. The consent of the Trustee required by Section 321(b) of the Act. (Exhibit 6 to Form T-1 filed with Registration Statement No. 33-44051.)

7. A copy of the latest report of condition of the Trustee published pursuant to law or to the requirements of its supervising or examining authority.

SIGNATURE

Pursuant to the requirements of the Act, the Trustee, The Bank of New York, a corporation organized and existing under the laws of the State of New York, has duly caused this statement of eligibility to be signed on its behalf by the undersigned, thereunto duly authorized, all in The City of New York, and State of New York, on the 6th day of June, 2003.

THE BANK OF NEW YORK

By: /s/ ROBERT MASSIMILLO

Name: ROBERT MASSIMILLO
Title: VICE PRESIDENT

Exhibit 7

- ---

Consolidated Report of Condition of
THE BANK OF NEW YORK
of One Wall Street, New York, N.Y. 10286
And Foreign and Domestic Subsidiaries,

a member of the Federal Reserve System, at the close of business March 31, 2003, published in accordance with a call made by the Federal Reserve Bank of this District pursuant to the provisions of the Federal Reserve Act.

ASSETS	Dollar Amounts In Thousands
Cash and balances due from depository institutions:	
Noninterest-bearing balances and currency and coin..	$4,389,492
Interest-bearing balances.....	3,288,212
Securities:	
Held-to-maturity securities.....	654,763
Available-for-sale securities.....	17,626,360
Federal funds sold in domestic offices.....	1,759,600
Securities purchased under agreements to resell.....	911,600
Loans and lease financing receivables:	
Loans and leases held for sale.....	724,074
Loans and leases, net of unearned income.....32,368,718	
LESS: Allowance for loan and lease losses.....826,505	
Loans and leases, net of unearned income and allowance.....31,542,213	
Trading Assets.....	7,527,662
Premises and fixed assets (including capitalized leases).....	825,706
Other real estate owned.....	164
Investments in unconsolidated subsidiaries and associated companies.....	260,940
Customers' liability to this bank on acceptances outstanding.....	225,935
Intangible assets.....	
Goodwill.....	2,027,675
Other intangible assets.....	75,330
Other assets.....	4,843,295
Total assets.....	$76,683,021
LIABILITIES	
Deposits:	
In domestic offices.....	$33,212,852
Noninterest-bearing.....12,997,086	
Interest-bearing.....20,215,766	
In foreign offices, Edge and Agreement subsidiaries, and IBFs.....	24,210,507
Noninterest-bearing.....595,520	
Interest-bearing.....23,614,987	
Federal funds purchased in domestic offices.....	375,322
Securities sold under agreements to repurchase.....	246,755
Trading liabilities.....	2,335,466
Other borrowed money: (includes mortgage indebtedness and obligations under capitalized leases).....	959,997
Bank's liability on acceptances executed and outstanding.....	227,253
Subordinated notes and debentures.....	2,090,000
Other liabilities.....	5,716,796

Total liabilities	$69,374,948
Minority interest in consolidated subsidiaries	540,772
EQUITY CAPITAL	
Perpetual preferred stock and related surplus	0
Common stock	1,135,284
Surplus	1,056,295
Retained earnings	4,463,720
Accumulated other comprehensive income	(112,002)
Other equity capital components	0
Total equity capital	6,767,301
Total liabilities minority interest and equity capital.	$76,683,021

I, Thomas J. Mastro, Senior Vice President and Comptroller of the above-named bank do hereby declare that this Report of Condition is true and correct to the best of my knowledge and belief.

Thomas J. Mastro,
Senior Vice President and Comptroller

We, the undersigned directors, attest to the correctness of this statement of resources and liabilities. We declare that it has been examined by us, and to the best of our knowledge and belief has been prepared in conformance with the instructions and is true and correct.

Thomas A. Renyi
Gerald L. Hassell
Alan R. Griffith

Directors

- ---

FORM OF LETTER OF TRANSMITTAL
FOR
$400,000,000
6 1/8% SENIOR SUBORDINATED NOTES DUE 2013
OF
L-3 COMMUNICATIONS CORPORATION

- ---

THE EXCHANGE OFFER AND WITHDRAWAL RIGHTS WILL EXPIRE AT 5:00 P.M., NEW YORK CITY TIME, ON , , 2003 (THE "EXPIRATION DATE")
UNLESS EXTENDED BY
L-3 COMMUNICATIONS CORPORATION

- ---

The Exchange Agent Is:

THE BANK OF NEW YORK

By Mail:	By Facsimile:	By Hand or Overight Delivery:
The Bank of New York Reorganization Unit 101 Barclay Street-7 East New York, NY 10286 Attention: William Buckley	The Bank of New York Attention: William Buckley (212) 298-1915 Confirm Receipt of New York, NY 10286 Facsimile by telephone (212) 815-5788	The Bank of New York Reorganization Unit 101 Barclay Street Lobby Level-Corp. Trust Window Attention: William Buckley

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DELIVERY OF THIS LETTER OF TRANSMITTAL TO AN ADDRESS OTHER THAN AS SET FORTH ABOVE OR TRANSMISSION VIA FACSIMILE TRANSMISSION TO A NUMBER OTHER THAN AS SET FORTH ABOVE WILL NOT CONSTITUTE A VALID DELIVERY.

The undersigned acknowledges receipt of the Prospectus dated June , 2003 (the "Prospectus") of L-3 Communications Corporation (the "Company"), and this Letter of Transmittal (the "Letter of Transmittal"), which together describe the Company's offer (the "Exchange Offer") to exchange is 6 1/8% Series B Senior Subordinated Notes due 2013, which have been registered under the Securities Act of 1933, as amended (the "Securities Act") (the "Exchange Notes"), for each of its 6 1/8% Senior Subordinated Notes due 2013 (the "Outstanding Notes" and, together with the Exchange Notes, the "Notes") from the holders thereof.

The terms of the Exchange Notes are identical in all material respects (including principal amount, interest rate and maturity) to the terms of the Outstanding Notes for which they may be exchanged pursuant to the Exchange Offer, except that the Exchange Notes are freely transferable by holders thereof (except as provided herein or in the Prospectus) and are not subject to any covenant regarding registration under the Securities Act.

YOUR BANK OR BROKER CAN ASSIST YOU IN COMPLETING THIS FORM. THE INSTRUCTIONS INCLUDED WITH THIS LETTER OF TRANSMITTAL MUST BE FOLLOWED. QUESTIONS AND REQUESTS FOR ASSISTANCE OR FOR ADDITIONAL COPIES OF THE PROSPECTUS AND THIS LETTER OF TRANSMITTAL MAY BE DIRECTED TO THE EXCHANGE AGENT.

The undersigned has checked the appropriate boxes below and signed this Letter of Transmittal to indicate the action the undersigned desires to take with respect to the Exchange Offer.

PLEASE READ THE ENTIRE
LETTER OF TRANSMITTAL AND THE PROSPECTUS
CAREFULLY BEFORE CHECKING ANY BOX BELOW.

List below the Outstanding Notes to which this Letter of Transmittal relates. If the space provided below is inadequate, the certificate numbers and aggregate principal amounts should be listed on a separate signed schedule affixed hereto.

DESCRIPTION OF OUTSTANDING NOTES TENDERED HEREWITH

Name(s) and Address(es) of Registered Holder(s) (Please fill in)	Certificate Number(s)*	Aggregate Principal Amount Represented by Outstanding Notes*	Principal Amount Tendered**
Total			

* Need not be completed by book-entry holders.

** Unless otherwise indicated, the holder will be deemed to have tendered the full aggregate principal amount represented by such Outstanding Notes. See Instruction 2.

Holders of Outstanding Notes whose Outstanding Notes are not immediately available or who cannot deliver all other required documents to the Exchange Agent on or prior to the Expiration Date or who cannot complete the procedures for book-entry transfer on a timely basis, must tender their Outstanding Notes according to the guaranteed delivery procedures set forth in the Prospectus.

Unless the context otherwise requires, the term "holder" for purposes of this Letter of Transmittal means any person in whose name Outstanding Notes are registered or any other person who has obtained a properly completed bond power from the registered holder or any person whose Outstanding Notes are held of record by The Depository Trust Company ("DTC").

[ ] CHECK HERE IF TENDERED OUTSTANDING NOTES ARE BEING DELIVERED PURSUANT TO A NOTICE OF GUARANTEED DELIVERY AND COMPLETE THE FOLLOWING:

Name of Registered Holder(s):

Name of Eligible Institution
that Guaranteed Delivery:

Date of Execution of Notice
of Guaranteed Delivery:

If Delivered by Book-Entry Transfer:

Name of Tendering
Institution:

Account Number:

Transaction Code Number:

[ ] CHECK HERE IF EXCHANGE NOTES ARE TO BE DELIVERED TO A PERSON OTHER THAN THE PERSON SIGNING THIS LETTER OF TRANSMITTAL:

Name:

Address:

[ ] CHECK HERE IF EXCHANGE NOTES ARE TO BE DELIVERED TO AN ADDRESS DIFFERENT FROM THAT LISTED ELSEWHERE IN THIS LETTER OF TRANSMITTAL:

Name:

Address:

[ ] CHECK HERE IF YOU ARE A BROKER-DEALER WHO ACQUIRED OUTSTANDING NOTES FOR YOUR OWN ACCOUNT AS A RESULT OF MARKET MAKING OR OTHER TRADING ACTIVITIES AND WISH TO RECEIVE 10 ADDITIONAL COPIES OF THE PROSPECTUS AND 10 COPIES OF ANY AMENDMENTS OR SUPPLEMENTS THERETO:

Name:

Address:

If the undersigned is not a broker-dealer, the undersigned represents that it is not engaged in, and does not intend to engage in, a distribution of Exchange Notes. If the undersigned is a broker-dealer that will receive Exchange Notes for its own account in exchange for Outstanding Notes that were acquired as a result of market-making activities or other trading activities, it acknowledges that it will deliver a prospectus in connection with any resale of such Exchange Notes; however, by so acknowledging and by delivering a prospectus, the undersigned will not be deemed to admit that it is an "underwriter" within the meaning of the Securities Act. A broker-dealer may not participate in the Exchange Offer with respect to Outstanding Notes acquired other than as a result of market-making activities or other trading activities. Any holder who is an "affiliate" of the Company or who has an arrangement or understanding with respect to the distribution of the Exchange Notes to be acquired pursuant to the Exchange Offer, or any broker-dealer who purchased Outstanding Notes from the Company to resell pursuant to Rule 144A under the Securities Act or any other available exemption under the Securities Act must comply with the registration and prospectus delivery requirements under the Securities Act.

PLEASE READ THE ACCOMPANYING INSTRUCTIONS CAREFULLY

Ladies and Gentlemen:

Upon the terms and subject to the conditions of the Exchange Offer, the undersigned hereby tenders to the Company the principal amount of the Outstanding Notes indicated above. Subject to, and effective upon, the acceptance for exchange of all or any portion of the Outstanding Notes tendered herewith in accordance with the terms and conditions of the Exchange Offer (including, if the Exchange Offer is extended or amended, the terms and conditions of any such extension or amendment), the undersigned hereby exchanges, assigns and transfers to, or upon the order of, the Company all right, title and interest in and to such Outstanding Notes as are being tendered herewith. The undersigned hereby irrevocably constitutes and appoints the Exchange Agent as its true and lawful agent and attorney in-fact of the undersigned (with full knowledge that the Exchange Agent also acts as the agent of the Company, in connection with the Exchange Offer) to cause the Outstanding Notes to be assigned, transferred and exchanged.

The undersigned represents and warrants that it has full power and authority to tender, exchange, assign and transfer the Outstanding Notes and to acquire Exchange Notes issuable upon the exchange of such tendered Outstanding Notes, and that, when the same are accepted for exchange, the Company will acquire good and unencumbered title to the tendered Outstanding Notes, free and clear of all liens, restrictions, charges and encumbrances and not subject to any adverse claim. The undersigned also warrants that it will, upon request, execute and deliver any additional documents deemed by the Exchange Agent or the Company to be necessary or desirable to complete the exchange, assignment and transfer of the tendered Outstanding Notes or transfer ownership of such Outstanding Notes on the account books maintained by the book-entry transfer facility. The undersigned further agrees that acceptance of any and all validly tendered Outstanding Notes by the Company and the issuance of Exchange Notes in exchange therefor shall constitute performance in full by the Company of its obligations under the Registration Rights Agreement, dated as of May 21, 2003 (the "Registration Rights Agreement"), among the Company, the guarantors named therein, Lehman Brothers Inc., Morgan Stanley & Co. Incorporated, Banc of America Securities LLC and Credit Suisse First Boston LLC and that the Company shall have no further obligations or liabilities thereunder except as provided in the first paragraph of Section 4 of such agreement. The undersigned will comply with its obligations under the Registration Rights Agreement. The undersigned has read and agrees to all terms of the Exchange Offer. The Exchange Offer is subject to certain conditions as set forth in the Prospectus under the caption "The Exchange Offer--Certain Conditions to the Exchange Offer." The undersigned recognizes that as a result of these conditions (which may be waived, in whole or in part, by the Company), as more particularly set forth in the Prospectus, the Company may not be required to exchange any of the Outstanding Notes tendered hereby and, in such event, the Outstanding Notes not exchanged will be returned to the undersigned at the address shown below unless indicated otherwise above, promptly following the expiration or termination of the Exchange Offer. In addition, the Company may amend the Exchange Offer at any time prior to the Expiration Date if any of the conditions set under "The Exchange Offer--Certain Conditions to the Exchange Offer" occur.

The undersigned understands that tenders of Outstanding Notes pursuant to any one of the procedures described in the Prospectus and in the instructions attached hereto will, upon the Company's acceptance for exchange of such tendered Outstanding Notes, constitute a binding agreement between the undersigned and the Company upon the terms and subject to the conditions of the Exchange Offer. The undersigned recognizes that, under circumstances set forth in the Prospectus, the Company may not be required to accept for exchange any of the Outstanding Notes.

By tendering Outstanding Notes and executing this Letter of Transmittal, the undersigned represents that Exchange Notes acquired in the exchange will be obtained in the ordinary course of business of the undersigned, that the undersigned has no arrangement or understanding with any person to participate in a distribution (within the meaning of the Securities Act) of such Exchange Notes, that the undersigned is not an "affiliate" of the Company within the meaning of Rule 405 under the Securities Act and that if the undersigned or the person receiving such Exchange Notes, whether or not such person is the undersigned, is not a broker-dealer, the undersigned represents that it is not engaged in, and does not intend to engage in, a distribution of Exchange Notes. If the undersigned or the person receiving such Exchange Notes, whether or not such person is the undersigned, is a broker-dealer that will receive Exchange Notes for its

own account in exchange for Outstanding Notes that were acquired as a result of market-making activities or other trading activities, it acknowledges that it will deliver a prospectus in connection with any resale of such Exchange Notes; however, by so acknowledging and by delivering a prospectus, the undersigned will not be deemed to admit that it is an "underwriter" within the meaning of the Securities Act. If the undersigned is a person in the United Kingdom, the undersigned represents that its ordinary activities involve it in acquiring, holding, managing or disposing of investments (as principal or agent) for the purposes of its business.

Any holder of Outstanding Notes using the Exchange Offer to participate in a distribution of the Exchange Notes (i) cannot rely on the position of the staff of the Securities and Exchange Commission enunciated in its interpretive letter with respect to Exxon Capital Holdings Corporation (available April 13, 1989) or similar interpretive letters and (ii) must comply with the registration and prospectus requirements of the Securities Act in connection with a secondary resale transaction.

All authority herein conferred or agreed to be conferred shall survive the death, bankruptcy or incapacity of the undersigned and every obligation of the undersigned hereunder shall be binding upon the heirs, personal representatives, successors and assigns of the undersigned. Tendered Outstanding Notes may be withdrawn at any time prior to the Expiration Date in accordance with the terms of this Letter of Transmittal. Except as stated in the Prospectus, this tender is irrevocable.

Certificates for all Exchange Notes delivered in exchange for tendered Outstanding Notes and any Outstanding Notes delivered herewith but not exchanged, and registered in the name of the undersigned, shall be delivered to the undersigned at the address shown below the signature of the undersigned.

The undersigned, by completing the box entitled "Description of Outstanding Notes Tendered Herewith" above and signing this letter, will be deemed to have tendered the Outstanding Notes as set forth in such box.

TENDERING HOLDER(S) SIGN HERE
(COMPLETE ACCOMPANYING SUBSTITUTE FORM W-9)

MUST BE SIGNED BY REGISTERED HOLDER(S) EXACTLY AS NAME(S) APPEAR(S) ON CERTIFICATE(S) FOR OUTSTANDING NOTES HEREBY TENDERED OR IN WHOSE NAME OUTSTANDING NOTES ARE REGISTERED ON THE BOOKS OF DTC OR ONE OF ITS PARTICIPANTS, OR BY ANY PERSON(S) AUTHORIZED TO BECOME THE REGISTERED HOLDER(S) BY ENDORSEMENTS AND DOCUMENTS TRANSMITTED HEREWITH. IF SIGNATURE IS BY A TRUSTEE, EXECUTOR, ADMINISTRATOR, GUARDIAN, ATTORNEY-IN-FACT, OFFICER OF A CORPORATION OR OTHER PERSON ACTING IN A FIDUCIARY OR REPRESENTATIVE CAPACITY, PLEASE SET FORTH THE FULL TITLE OF SUCH PERSON. SEE INSTRUCTION 3.

(Signature(s) of Holder(s))

Date:

Name(s):

(Please Print)

Capacity (full title):

Address:

(Including Zip Code)

Daytime Area Code
and Telephone No.:

Taxpayer Identification No.:

GUARANTEE OF SIGNATURE(S)
(IF REQUIRED--SEE INSTRUCTION 3)

Authorized Signature:

Date:

Name(s):

Title:

Name of Firm:

Address:

(Include Zip Code)

Area Code and Telephone No.:

- ---

SPECIAL ISSUANCE INSTRUCTIONS
(SEE INSTRUCTIONS 3 AND 4)

To be completed ONLY if Exchange Notes or Outstanding Notes not tendered are to be issued in the name of someone other than the registered holder of the Outstanding Notes whose name(s) appear(s) above.

Issue: [ ] Outstanding Notes not tendered to:
[ ] Exchange Notes to:

Name(s):

(Please Print)

Address:

- ---
(Include Zip Code)

Daytime Area Code and
Telephone No.:

Tax Identification No.:

- ---

- ---

SPECIAL DELIVERY INSTRUCTIONS
(SEE INSTRUCTIONS 3 AND 4)

To be completed ONLY if Exchange Notes or Outstanding Notes not tendered are to be sent to someone other than the registered holder of the Outstanding Notes whose name(s) appear(s) above, or such registered holder(s) at an address other than that shown above.

Mail: [ ] Outstanding Notes not tendered to:
[ ] Exchange Notes to:

Name(s):

(Please Print)

Address:

- ---
(Include Zip Code)

Area Code and
Telephone No.:

- ---

INSTRUCTIONS

FORMING PART OF THE TERMS AND CONDITIONS OF THE EXCHANGE OFFER

1. DELIVERY OF THIS LETTER OF TRANSMITTAL AND CERTIFICATES; GUARANTEED DELIVERY PROCEDURES. A holder of Outstanding Notes may tender the same by (i) properly completing and signing this Letter of Transmittal or a facsimile hereof (all references in the Prospectus to the Letter of Transmittal shall be deemed to include a facsimile thereof) and delivering the same, together with the certificate or certificates, if applicable, representing the Outstanding Notes being tendered and any required signature guarantees and any other documents required by this Letter of Transmittal, to the Exchange Agent at its address set forth above on or prior to the Expiration Date, or (ii) complying with the procedure for book-entry transfer described below, or (iii) complying with the guaranteed delivery procedures described below.

Holders of Outstanding Notes may tender Outstanding Notes by book-entry transfer by crediting the Outstanding Notes to the Exchange Agent's account at DTC in accordance with DTC's Automated Tender Offer Program ("ATOP") and by complying with applicable ATOP procedures with respect to the Exchange Offer. DTC participants that are accepting the Exchange Offer should transmit their acceptance to DTC, which will edit and verify the acceptance and execute a book-entry delivery to the Exchange Agent's account at DTC. DTC will then send a computer-generated message (an "Agent's Message") to the Exchange Agent for its acceptance in which the holder of the Outstanding Notes acknowledges and agrees to be bound by the terms of, and makes the representations and warranties contained in, this Letter of Transmittal, the DTC participant confirms on behalf of itself and the beneficial owners of such Outstanding Notes all provisions of this Letter of Transmittal (including any representations and warranties) applicable to it and such beneficial owner as fully as if it had completed the information required herein and executed and transmitted this Letter of Transmittal to the Exchange Agent.

DELIVERY OF THE AGENT'S MESSAGE BY DTC WILL SATISFY THE TERMS OF THE EXCHANGE OFFER AS TO EXECUTION AND DELIVERY OF A LETTER OF TRANSMITTAL BY THE PARTICIPANT IDENTIFIED IN THE AGENT'S MESSAGE. DTC PARTICIPANTS MAY ALSO ACCEPT THE EXCHANGE OFFER BY SUBMITTING A NOTICE OF GUARANTEED DELIVERY THROUGH ATOP.

THE METHOD OF DELIVERY OF THIS LETTER OF TRANSMITTAL, THE OUTSTANDING NOTES AND ANY OTHER REQUIRED DOCUMENTS IS AT THE ELECTION AND RISK OF THE HOLDER, AND EXCEPT AS OTHERWISE PROVIDED BELOW, THE DELIVERY WILL BE DEEMED MADE ONLY WHEN ACTUALLY RECEIVED OR CONFIRMED BY THE EXCHANGE AGENT. IF SUCH DELIVERY IS BY MAIL, IT IS SUGGESTED THAT REGISTERED MAIL WITH RETURN RECEIPT REQUESTED, PROPERLY INSURED, BE USED. IN ALL CASES SUFFICIENT TIME SHOULD BE ALLOWED TO PERMIT TIMELY DELIVERY. NO OUTSTANDING NOTES OR LETTERS OF TRANSMITTAL SHOULD BE SENT TO THE COMPANY.

Holders whose Outstanding Notes are not immediately available or who cannot deliver their Outstanding Notes and all other required documents to the Exchange Agent on or prior to the Expiration Date or comply with book-entry transfer procedures on a timely basis must tender their Outstanding Notes pursuant to the guaranteed delivery procedure set forth in the Prospectus. Pursuant to such procedure: (i) such tender must be made by or through an Eligible Institution (as defined below); (ii) on or prior to the Expiration Date, the Exchange Agent must have received from such Eligible Institution a letter, telegram or facsimile transmission (receipt confirmed by telephone and an original delivered by guaranteed overnight courier) setting forth the name and address of the tendering holder, the names in which such Outstanding Notes are registered, and, if applicable, the certificate numbers of the Outstanding Notes to be tendered; and (iii) all tendered Outstanding Notes (or a confirmation of any book-entry transfer of such Outstanding Notes into the Exchange Agent's account at a book-entry transfer facility) as well as this Letter of Transmittal and all other documents required by this Letter of Transmittal, must be received by the Exchange Agent within three New York Stock Exchange trading days after the date of execution of such letter, telegram or facsimile transmission, all as provided in the Prospectus.

No alternative, conditional, irregular or contingent tenders will be accepted. All tendering holders, by execution of this Letter of Transmittal (or facsimile thereof), shall waive any right to receive notice of the acceptance of the Outstanding Notes for exchange.

2. PARTIAL TENDERS; WITHDRAWALS. If less than the entire principal amount of Outstanding Notes evidenced by a submitted certificate is tendered, the tendering holder must fill in the aggregate principal amount of Outstanding Notes tendered in the box entitled "Description of Outstanding Notes Tendered Herewith." A newly issued certificate for the Outstanding Notes submitted but not tendered will be sent to such holder as soon as practicable after the Expiration Date. All Outstanding Notes delivered to the Exchange Agent will be deemed to have been tendered unless otherwise clearly indicated.

If not yet accepted, a tender pursuant to the Exchange Offer may be withdrawn prior to the Expiration Date.

To be effective with respect to the tender of Outstanding Notes, a written notice of withdrawal must: (i) be received by the Exchange Agent at one of the addresses for the Exchange Agent set forth above before the Company notifies the Exchange Agent that it has accepted the tender of Outstanding Notes Pursuant to the Exchange Offer, (ii) specify the name of the person who tendered the Outstanding Notes to be withdrawn; (iii) identify the Outstanding Notes to be withdrawn (including the principal amount of such Outstanding Notes, or, if applicable, the certificate numbers shown on the particular certificates evidencing such Outstanding Notes and the principal amount of Outstanding Notes represented by such certificates); (iv) include a statement that such holder is withdrawing its election to have such Outstanding Notes exchanged; and (v) be signed by the holder in the same manner as the original signature on this Letter of Transmittal (including any required signature guarantee). The Exchange Agent will return the properly withdrawn Outstanding Notes promptly following receipt of a notice of withdrawal. If Outstanding Notes have been tendered pursuant to the procedure for book-entry transfer, any notice of withdrawal must specify the name and number of the account at the book-entry transfer facility to be credited with the withdrawn Outstanding Notes or otherwise comply with the book-entry transfer facility's procedures. All questions as to the validity of notices of withdrawals, including time of receipt, will be determined by the Company, and such determination will be final and binding on all parties.

Any Outstanding Notes so withdrawn will be deemed not to have been validly tendered for exchange for purposes of the Exchange Offer. Any Outstanding Notes which have been tendered for exchange but which are not exchanged for any reason will be returned to the holder thereof without cost to such holder (or, in the case of Outstanding Notes tendered by book-entry transfer into the Exchange Agent's account at the book-entry transfer facility pursuant to the book-entry transfer procedures described above, such Outstanding Notes will be credited to an account with such book-entry transfer facility specified by the holder) as soon as practicable after withdrawal, rejection of tender or termination of the Exchange Offer. Properly withdrawn Outstanding Notes may be retendered by following one of the procedures described under the caption "The Exchange Offer -- Procedures for Tendering" in the Prospectus at any time prior to the Expiration Date.

3. SIGNATURES ON THIS LETTER OF TRANSMITTAL; WRITTEN INSTRUMENTS AND ENDORSEMENTS; GUARANTEES OF SIGNATURES. If this Letter of Transmittal is signed by the registered holder(s) of the Outstanding Notes tendered hereby, the signature must correspond with the name(s) as written on the face of the certificates without alteration, enlargement or any change whatsoever.

If any of the Outstanding Notes tendered hereby are owned of record by two or more joint owners, all such owners must sign this Letter of Transmittal.

If a number of Outstanding Notes registered in different names are tendered, it will be necessary to complete, sign and submit as many separate copies of this Letter of Transmittal as there are different registrations of Outstanding Notes.

When this Letter of Transmittal is signed by the registered holder or holders (which term, for the purposes described herein, shall include the book-entry transfer facility whose name appears on a security listing as the owner of the Outstanding Notes) of Outstanding Notes listed and tendered hereby, no endorsements of certificates or separate written instruments of transfer or exchange are required.

If this Letter of Transmittal is signed by a person other than the registered holder or holders of the Outstanding Notes listed, such Outstanding Notes must be endorsed or accompanied by separate written instruments of transfer or exchange in form satisfactory to the Company and duly executed by the registered holder, in either case signed exactly as the name or names of the registered holder or holders appear(s) on the Outstanding Notes.

If this Letter of Transmittal, any certificates or separate written instruments of transfer or exchange are signed by trustees, executors, administrators, guardians, attorneys-in-fact, officers of corporations or others acting in a fiduciary or representative capacity, such persons should so indicate when, signing, and, unless waived by the Company, proper evidence satisfactory to the Company of their authority so to act must be submitted.

Endorsements on certificates or signatures on separate written instruments of transfer or exchange required by this Instruction 3 must be guaranteed by an Eligible Institution.

Signatures on this Letter of Transmittal must be guaranteed by an Eligible Institution, unless Outstanding Notes are tendered: (i) by a holder who has not completed the box entitled "Special Issuance Instructions" or "Special Delivery Instructions" on this Letter of Transmittal; or (ii) for the account of an Eligible Institution (as defined below). In the event that the signatures in this Letter of Transmittal or a notice of withdrawal, as the case may be, are required to be guaranteed, such guarantees must be by an eligible guarantor institution which is a member of a firm of a registered national securities exchange or of the National Association of Securities Dealers, Inc., a commercial bank or trust company having an office or correspondent in the United States or another "eligible institution" within the meaning of Rule 17Ad-15 under the Securities Exchange Act of 1934, as amended (an "Eligible Institution"). If Outstanding Notes are registered in the name of a person other than the signer of this Letter of Transmittal, the Outstanding Notes surrendered for exchange must be endorsed by, or be accompanied by a written instrument or instruments of transfer or exchange, in satisfactory form as determined by the Company, in its sole discretion, duly executed by the registered holder with the signature thereon guaranteed by an Eligible Institution.

4. SPECIAL ISSUANCE AND DELIVERY INSTRUCTIONS. Tendering holders should indicate, as applicable, the name and address to which the Exchange Notes or certificates for Outstanding Notes not exchanged are to be issued or sent, if different from the name and address of the person signing this Letter of Transmittal. In the case of issuance in a different name, the tax identification number of the person named must also be indicated. Holders tendering Outstanding Notes by book-entry transfer may request that Outstanding Notes not exchanged be credited to such account maintained at the book-entry transfer facility as such holder may designate.

5. TRANSFER TAXES. The Company shall pay all transfer taxes, if any, applicable to the transfer and exchange of Outstanding Notes to it or its order pursuant to the Exchange Offer, except in the case of deliveries of certificates for Outstanding Notes for Exchange Notes that are to be registered or issued in the name of any person other than the holder of Outstanding Notes tendered thereby. If a transfer tax is imposed for any reason other than the transfer and exchange of Outstanding Notes to the Company or its order pursuant to the Exchange Offer, the amount of any such transfer taxes (whether imposed on the registered holder or any other person) will be payable by the tendering holder. If satisfactory evidence of payment of such taxes or exception therefrom is not submitted herewith the amount of such transfer taxes will be billed directly to such tendering holder.

6. WAIVER OF CONDITIONS. The Company reserves the absolute right to waive, in whole or in part, any of the conditions to the Exchange Offer set forth in the Prospectus.

7. MUTILATED, LOST, STOLEN OR DESTROYED SECURITIES. Any holder whose Outstanding Notes have been mutilated, lost, stolen or destroyed, should contact the Exchange Agent at the address indicated below for further instructions.

8. REQUESTS FOR ASSISTANCE OR ADDITIONAL COPIES. Questions relating to the procedure for tendering, as well as requests for additional copies of the Prospectus and this Letter of Transmittal, may be directed to the Exchange Agent at the address and telephone number set forth above. In addition, all questions relating to the Exchange Offer, as well as requests for assistance or additional copies of the Prospectus and this Letter of Transmittal, may be directed to the Exchange Agent at the address and telephone number indicated above.

If backup withholding applies, the Exchange Agent is required to withhold 28% of any payments to be made to the holder of Outstanding Notes. Backup withholding is not an additional tax. Rather, the tax

liability of persons subject to backup withholding will be reduced by the amount of tax withheld. If withholding results in an overpayment of taxes, a refund may be obtained by filing a tax return with the Internal Revenue Service. The Exchange Agent cannot refund amounts withheld by reason of backup withholding.

9. IRREGULARITIES. All questions as to the validity, form, eligibility (including time of receipt), and acceptance of Letters of Transmittal or Outstanding Notes will be resolved by the Company, whose determination will be final and binding. The Company reserves the absolute right to reject any or all Letters of Transmittal or tenders that are not in proper form or the acceptance of which would, in the opinion of the Company's counsel, be unlawful. The Company also reserves the right to waive any irregularities or conditions of tender as to the particular Outstanding Notes covered by any Letter of Transmittal or tendered pursuant to such Letter of Transmittal. Neither the Company, the Exchange Agent nor any other person will be under any duty to give notification of any defects or irregularities in tenders or incur any liability for failure to give any such notification. The Company's interpretation of the terms and conditions of the Exchange Offer shall be final and binding.

IMPORTANT: THIS LETTER OF TRANSMITTAL OR A FACSIMILE OR COPY THEREOF (TOGETHER WITH CERTIFICATES OF OUTSTANDING NOTES OR CONFORMATION OF BOOK-ENTRY TRANSFER AND ALL OTHER REQUIRED DOCUMENTS) OR A NOTICE OF GUARANTEED DELIVERY MUST BE RECEIVED BY THE EXCHANGE AGENT PRIOR TO THE EXPIRATION DATE.

IMPORTANT TAX INFORMATION

Under U.S. federal income tax law, a holder of Outstanding Notes whose Outstanding Notes are accepted for exchange may be subject to backup withholding unless the holder provides The Bank of New York, as Paying Agent (the "Paying Agent"), through the Exchange Agent, with either (i) such holder's correct taxpayer identification number ("TIN") on Substitute Form W-9 attached hereto, certifying (A) that the TIN provided on Substitute Form W-9 is correct (or that such holder of Outstanding Notes is awaiting a TIN), (B) that the holder of Outstanding Notes is not subject to backup withholding because (x) such holder of Outstanding Notes is exempt from backup withholding, (y) such holder of Outstanding Notes has not been notified by the Internal Revenue Service that he or she is subject to backup withholding as a result of a failure to report all interest or dividends or (z) the Internal Revenue Service has notified the holder of Outstanding Notes that he or she is no longer subject to backup withholding and (C) that the holder of Outstanding Notes is a U.S. person (including a U.S. resident alien); or (ii) an adequate basis for exemption from backup withholding. If such holder of Outstanding Notes is an individual, the TIN is such holder's social security number. If the Paying Agent is not provided with the correct TIN, the holder of Outstanding Notes may also be subject to certain penalties imposed by the Internal Revenue Service.

Certain holders of Outstanding Notes (including, among others, all corporations and certain foreign individuals) are not subject to these backup withholding and reporting requirements. However, exempt holders of Outstanding Notes should indicate their exempt status on Substitute Form W-9. For example, a corporation should complete the Substitute Form W-9, providing its TIN and indicating that it is exempt from backup withholding. In order for a foreign individual to qualify as an exempt recipient, the holder must submit a Form W-8BEN, signed under penalties of perjury, attesting to that individual's exempt status. A Form W-8BEN can be obtained from the Paying Agent. See the enclosed "Guidelines for Certification of Taxpayer Identification Number on Substitute Form W-9" for more instructions.

If backup withholding applies, the Paying Agent is required to withhold 28% of any payments made to the holder of Outstanding Notes or other payee. Backup withholding is not an additional tax. Rather, the tax liability of persons subject to backup withholding will be reduced by the amount of tax withheld. If withholding results in an overpayment of taxes, a refund may be obtained from the Internal Revenue Service, provided the required information is furnished.

The box in Part 3 of the Substitute Form W-9 may be checked if the surrendering holder of Outstanding Notes has not been issued a TIN and has applied for a TIN or intends to apply for a TIN in the near future. If the box in Part 3 is checked, the holder of Outstanding Notes or other payee must also complete the Certificate of Awaiting Taxpayer Identification Number below in order to avoid backup withholding. Notwithstanding that the box in Part 3 is checked and the Certificate of Awaiting Taxpayer

Identification Number is completed, the Paying Agent will withhold 28% of all payments made prior to the time a properly certified TIN is provided to the Paying Agent and, if the Paying Agent is not provided with a TIN within 60 days, such amounts will be paid over to the Internal Revenue Service.

The holder of Outstanding Notes is required to give the Paying Agent the TIN (e.g., social security number or employer identification number) of the record owner of the Outstanding Notes. If the Outstanding Notes are in more than one name or are not in the name of the actual owner, consult the enclosed "Guidelines for Certification of Taxpayer Identification Number on Substitute Form W-9" for additional guidance on which number to report.

PAYER'S NAME: THE BANK OF NEW YORK

SUBSTITUTE FORM W-9 DEPARTMENT OF THE TREASURY INTERNAL REVENUE SERVICE PAYER'S REQUEST FOR TAXPAYER IDENTIFICATION NUMBER (TIN)	PART 1 -- PLEASE PROVIDE YOUR TIN IN THE BOX AT RIGHT AND CERTIFY BY SIGNING AND DATING BELOW.	Name Social Security Number OR Employer Identification Number PART 3 -- [ ] Awaiting TIN

PART 2 -- CERTIFICATION -- Under the penalties of perjury, I certify that:

(1) The number shown on this form is my correct Taxpayer Identification Number (or I am waiting for a number to be issued to me), and

(2) I am not subject to backup withholding because (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (the "IRS") that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding, and

(3) I am a U.S. person (including a U.S. resident alien).

CERTIFICATE INSTRUCTIONS -- You must cross out item (2) above if you have been notified by the IRS that you are currently subject to backup withholding because of under-reporting interest or dividends on your tax return. However, if after being notified by the IRS that you were subject to backup withholding you received another notification from the IRS that you are no longer subject to backup withholding, do not cross out such item (2).

The Internal Revenue Service does not require your consent to any provision of this document other than the certifications required to avoid backup withholding.

SIGN HERE --> Signature _____ Date _____, 2003

NOTE: FAILURE TO COMPLETE AND RETURN THIS FORM MAY RESULT IN BACKUP WITHHOLDING OF 28% OF ANY PAYMENTS MADE TO YOU PURSUANT TO THE OFFER. PLEASE REVIEW THE ENCLOSED GUIDELINES FOR CERTIFICATION OF TAXPAYER IDENTIFICATION NUMBER ON SUBSTITUTE FORM W-9 FOR ADDITIONAL DETAILS.

YOU MUST COMPLETE THE FOLLOWING CERTIFICATE IF YOU CHECKED THE BOX IN PART 3 OF THE SUBSTITUTE FORM W-9.

CERTIFICATE OF AWAITING TAXPAYER IDENTIFICATION NUMBER

I certify under penalties of perjury that a taxpayer identification number has not been issued to me, and either (1) I have mailed or delivered an application to receive a taxpayer identification number to the appropriate Internal Revenue Service Center or Social Security Administration Office, or (2) I intend to mail or deliver an application in the near future. I understand that if I do not provide a taxpayer identification number by the time of payment, 28% of all reportable payments made to me will be withheld.

Signature _____ Date _____, 2003

Exhibit 99.2

FORM OF NOTICE OF GUARANTEED DELIVERY
FOR
TENDER OF ALL OUTSTANDING
$400,000,000 6 1/8% SENIOR SUBORDINATED NOTES DUE 2013
IN EXCHANGE FOR
NEW $400,000,000 6 1/8% SERIES B SENIOR SUBORDINATED NOTES DUE 2013
OF
L-3 COMMUNICATIONS CORPORATION

- ---

Registered holders of outstanding 6 1/8% Senior Subordinated Notes due 2013 (the "Outstanding Notes") who wish to tender their Outstanding Notes in exchange for a like principal amount of new 6 1/8% Series B Senior Subordinated Notes due 2013 (the "Exchange Notes") and whose Outstanding Notes are not immediately available or who cannot deliver their Outstanding Notes and Letter of Transmittal (and any other documents required by the Letter of Transmittal) to The Bank of New York (the "Exchange Agent") prior to the Expiration Date, may use this Notice of Guaranteed Delivery or one substantially equivalent hereto. This Notice of Guaranteed Delivery may be delivered by hand or sent by facsimile transmission (receipt confirmed by telephone and an original delivered by guaranteed overnight courier) or mail to the Exchange Agent. See "The Exchange Offer -- Procedures for Tendering" in the Prospectus.

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The Exchange Agent for the Exchange Offer is:

THE BANK OF NEW YORK

By Mail:	By Facsimile:	By Hand or Overnight Delivery:
The Bank of New York Reorganization Unit 101 Barclay Street - 7 East New York, NY 10286 Attention: William Buckley	The Bank of New York Attention: William Buckley (212) 298-1915 Confirm Receipt of New York, NY 10286 Facsimile by telephone (212) 815-5788	The Bank of New York Reorganization Unit 101 Barclay Street Lobby Level - Corp. Trust Window Attention: William Buckley

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DELIVERY OF THIS NOTICE OF GUARANTEED DELIVERY TO AN ADDRESS OTHER THAN AS SET FORTH ABOVE OR TRANSMISSION VIA A FACSIMILE TRANSMISSION TO A NUMBER OTHER THAN AS SET FORTH ABOVE WILL NOT CONSTITUTE A VALID DELIVERY.

This Notice of Guaranteed Delivery is not to be used to guarantee signatures. If a signature on a Letter of Transmittal is required to be guaranteed by an eligible institution (as defined in the Letter of Transmittal), such signature guarantee must appear in the applicable space provided on the Letter of Transmittal for Guarantee of Signatures.

Ladies and Gentlemen:

The undersigned hereby tenders the principal amount of Outstanding Notes indicated below, upon the terms and subject to the conditions contained in the Prospectus dated June , 2003 of L-3 Communications Corporation (the "Prospectus"), receipt of which is hereby acknowledged.

DESCRIPTION OF OUTSTANDING NOTES TENDERED

Name of Tendering Holder	Name and Address of Registered Holder as it Appears on the Outstanding Notes (Please print)	Certificate Number(s) of Outstanding Notes Tendered (or Account Number at Book-Entry Facility)	Principal Amount Outstanding Notes Tendered

SIGN HERE

Name of Registered or Acting Holder:

Signature(s):

Name(s) (Please Print):

Address:

Telephone Number:

Date:

IF OUTSTANDING NOTES WILL BE TENDERED BY BOOK-ENTRY TRANSFER, PROVIDE THE FOLLOWING INFORMATION:

DTC Account Number:

Date:

THE FOLLOWING GUARANTEE MUST BE COMPLETED
GUARANTEE OF DELIVERY
(NOT TO BE USED FOR SIGNATURE GUARANTEE)

The undersigned, a member of a recognized signature guarantee medallion program within the meaning of Rule 17Ad-15 under the Securities Exchange Act of 1934, as amended, hereby guarantees to deliver to the Exchange Agent at one of its addresses set forth on the reverse hereof, the certificates representing the Outstanding Notes (or a confirmation of book-entry transfer of such Outstanding Notes into the Exchange Agent's account at the book-entry transfer facility), together with a properly completed and duly executed Letter of Transmittal (or facsimile thereof), with any required signature guarantees, and any other documents required by the Letter of Transmittal within three New York Stock Exchange trading days after the Expiration date (as defined in the Letter of Transmittal).

Name of Firm: _____

_____
(authorized signature)

Address: _____

Title: _____

Name: _____

_____
(zip code)

_____
(please type or print)

Area Code and
Telephone No.: _____

Date: _____

NOTE: DO NOT SEND OUTSTANDING NOTES WITH THIS NOTICE OF GUARANTEED DELIVERY. OUTSTANDING NOTES SHOULD BE SENT WITH YOUR LETTER OF TRANSMITTAL.