
UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, DC 20549

FORM 10-Q

☒ **QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the Quarterly period ended March 31, 2003

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from _____ to _____

Commission file numbers 001-14141 and 333-46983

**L-3 COMMUNICATIONS HOLDINGS, INC.
L-3 COMMUNICATIONS CORPORATION**

(Exact names of registrants as specified in their charters)

Delaware

(State or other jurisdiction of
incorporation or organization)

600 Third Avenue, New York NY

(Address of principal executive offices)

13-3937434 and 13-3937436

(I.R.S. Employer Identification Nos.)

10016

(Zip Code)

(212) 697-1111

(Telephone number)

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. X Yes No

Indicate by check mark whether the registrant is an accelerated filer (as defined in Rule 12b-2 of the Exchange Act). X Yes No

There were 95,525,623 shares of L-3 Communications Holdings, Inc. common stock with a par value of \$0.01 outstanding as of the close of business on April 30, 2003.

**L-3 COMMUNICATIONS HOLDINGS, INC.
L-3 COMMUNICATIONS CORPORATION**

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For quarterly period ended March 31, 2003**

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**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	<u>1,553,621</u>	<u>1,639,374</u>
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	<u><u>\$5,320,783</u></u>	<u><u>\$5,242,308</u></u>
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	<u>699,758</u>	<u>696,639</u>
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	<u>2,977,221</u>	<u>2,966,865</u>
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	<u>2,270,037</u>	<u>2,202,202</u>
Total liabilities and shareholders' equity	<u><u>\$5,320,783</u></u>	<u><u>\$5,242,308</u></u>

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	<u>1,089,047</u>	<u>696,840</u>
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	<u>980,210</u>	<u>625,533</u>
Operating income	108,837	71,307
Interest and other income	1,377	1,027
Interest expense	32,216	26,093
Minority interest	<u>284</u>	<u>988</u>
Income before income taxes and cumulative effect of a change in accounting principle	77,714	45,253
Provision for income taxes	<u>27,977</u>	<u>15,974</u>
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	<u>—</u>	<u>(24,370)</u>
Net income	<u><u>\$ 49,737</u></u>	<u><u>\$ 4,909</u></u>

L-3 Holdings' earnings per common share:

Basic:		
Income before accounting change	\$ 0.52	\$ 0.37
Accounting change	<u>—</u>	<u>(0.31)</u>
Net income	<u><u>\$ 0.52</u></u>	<u><u>\$ 0.06</u></u>

Diluted:		
Income before accounting change	\$ 0.50	\$ 0.36
Accounting change	<u>—</u>	<u>(0.30)</u>
Net income	<u><u>\$ 0.50</u></u>	<u><u>\$ 0.06</u></u>

L-3 Holdings' weighted average common shares outstanding:

Basic	<u>95,137</u>	<u>78,900</u>
Diluted	<u><u>105,026</u></u>	<u><u>82,354</u></u>

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)

	<u>Three Months Ended March 31,</u>	
	<u>2002</u>	<u>2001</u>
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	<u>3,599</u>	<u>(663)</u>
Total adjustments	<u>56,389</u>	<u>36,483</u>
Net cash from operating activities	<u>106,126</u>	<u>41,392</u>
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	<u>—</u>	<u>(387)</u>
Net cash used in investing activities	<u>(213,424)</u>	<u>(1,212,207)</u>
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	<u>\$ 34,392</u>	<u>\$ 46,005</u>

See notes to unaudited condensed consolidated financial statements.

**L-3 COMMUNICATIONS HOLDINGS, INC. AND
L-3 COMMUNICATIONS CORPORATION**

**NOTES TO UNAUDITED CONDENSED CONSOLIDATED FINANCIAL STATEMENTS—
(Dollars in thousands, except per share data)**

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;

**L-3 COMMUNICATIONS HOLDINGS, INC. AND
L-3 COMMUNICATIONS CORPORATION**

**NOTES TO UNAUDITED CONDENSED CONSOLIDATED FINANCIAL STATEMENTS—
CONTINUED**

(Dollars in thousands, except per share data)

- 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;

**L-3 COMMUNICATIONS HOLDINGS, INC. AND
L-3 COMMUNICATIONS CORPORATION**

**NOTES TO UNAUDITED CONDENSED CONSOLIDATED FINANCIAL STATEMENTS—
CONTINUED**

(Dollars in thousands, except per share data)

- 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 5¼% 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 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

L-3 COMMUNICATIONS HOLDINGS, INC. AND L-3 COMMUNICATIONS CORPORATION

NOTES TO UNAUDITED CONDENSED CONSOLIDATED FINANCIAL STATEMENTS— CONTINUED

(Dollars in thousands, except per share data)

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.

	<u>Three Months Ended March 31,</u>	
	<u>2003</u>	<u>2002</u>
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

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L-3 COMMUNICATIONS HOLDINGS, INC. AND L-3 COMMUNICATIONS CORPORATION

NOTES TO UNAUDITED CONDENSED CONSOLIDATED FINANCIAL STATEMENTS— CONTINUED

(Dollars in thousands, except per share data)

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. Following the acquisition, the business was renamed L-3 Communications Avionics Systems. 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 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.

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L-3 COMMUNICATIONS HOLDINGS, INC. AND L-3 COMMUNICATIONS CORPORATION

NOTES TO UNAUDITED CONDENSED CONSOLIDATED FINANCIAL STATEMENTS— CONTINUED

(Dollars in thousands, except per share data)

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	<u>\$ 568,701</u>	<u>\$ 568,382</u>
Unbilled contract receivables	502,215	490,678
Less: unliquidated progress payments	<u>(207,018)</u>	<u>(171,457)</u>
Unbilled contract receivables, net	<u>295,197</u>	<u>319,221</u>
Inventoried contract costs, gross	338,682	320,043
Less: unliquidated progress payments	<u>(9,093)</u>	<u>(13,507)</u>
Inventoried contract costs, net	<u>329,589</u>	<u>306,536</u>
Inventories at lower of cost or market	<u>147,378</u>	<u>123,854</u>
Total contracts in process	<u><u>\$1,340,865</u></u>	<u><u>\$1,317,993</u></u>

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
Incurring costs ⁽¹⁾	117,103	86,404
Less: Costs and expenses	<u>(116,423)</u>	<u>(84,127)</u>
Balance at end of period	<u><u>\$ 52,933</u></u>	<u><u>\$ 37,738</u></u>

(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.

L-3 COMMUNICATIONS HOLDINGS, INC. AND L-3 COMMUNICATIONS CORPORATION

NOTES TO UNAUDITED CONDENSED CONSOLIDATED FINANCIAL STATEMENTS— CONTINUED (Dollars in thousands, except per share data)

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	<u><u>\$722,128</u></u>	<u><u>\$446,976</u></u>	<u><u>\$776,550</u></u>	<u><u>\$1,014,664</u></u>	<u><u>\$2,960,318</u></u>

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	<u>\$92,651</u>	<u>\$3,972</u>	<u>\$88,679</u>

	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	<u>\$92,651</u>	<u>\$2,504</u>	<u>\$90,147</u>

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.

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**L-3 COMMUNICATIONS HOLDINGS, INC. AND
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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	<u>\$ 155,770</u>	<u>\$ 158,893</u>

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	<u>\$ 60,461</u>

The components of other liabilities are presented in the table below.

	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	<u>\$ 78,136</u>	<u>\$ 78,947</u>

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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	\$ —	\$ —
8½% 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
	<u>1,130,000</u>	<u>1,130,000</u>
L-3 Holdings:		
5¼% 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	<u>\$1,850,000</u>	<u>\$1,850,000</u>
Less: unamortized discount on CODES	(2,184)	(2,248)
Fair value of interest rate swap agreements	(4,074)	—
Carrying amount of long-term debt	<u>\$1,843,742</u>	<u>\$1,847,752</u>

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 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.

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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	<u>\$ 50,355</u>	<u>\$ 4,725</u>

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.

	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	<u>\$(2,078)</u>	<u>\$(246)</u>	<u>\$(368)</u>	<u>\$(65,989)</u>	<u>\$(68,681)</u>
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	<u>\$(2,787)</u>	<u>\$(246)</u>	<u>\$(277)</u>	<u>\$(65,989)</u>	<u>\$(69,299)</u>

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**NOTES TO UNAUDITED CONDENSED CONSOLIDATED FINANCIAL STATEMENTS—
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(Dollars in thousands, except per share data)

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	<u>\$ 49,737</u>	<u>\$ 4,909</u>
Weighted average common shares outstanding	<u>95,137</u>	<u>78,900</u>
Basic earnings per share before cumulative effect of a change in accounting principle	<u>\$ 0.52</u>	<u>\$ 0.37</u>
Basic earnings per share	<u>\$ 0.52</u>	<u>\$ 0.06</u>
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	<u>\$ 52,325</u>	<u>\$ 4,909</u>
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	<u>105,026</u>	<u>82,354</u>
Diluted earnings per share before cumulative effect of a change in accounting principle	<u>\$ 0.50</u>	<u>\$ 0.36</u>
Diluted earnings per share	<u>\$ 0.50</u>	<u>\$ 0.06</u>

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.

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(Dollars in thousands, except per share data)

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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NOTES TO UNAUDITED CONDENSED CONSOLIDATED FINANCIAL STATEMENTS— CONTINUED (Dollars in thousands, except per share data)

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
16	Sales:		
L-3	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	<u>\$1,089,047</u>	<u>\$696,840</u>
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	<u>\$ 108,837</u>	<u>\$ 71,307</u>
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	<u>\$ 22,779</u>	<u>\$ 15,207</u>

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	<u>March 31, 2003</u>	<u>December 31, 2002</u>
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	<u>\$5,320,783</u>	<u>\$5,242,308</u>

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. SFAS No. 145 is not expected to have a material effect on the Company's consolidated results of operations or financial position. However, in accordance with the provisions of SFAS No. 145, beginning on January 1, 2003, the loss on the extinguishment of debt of \$16,187 (\$9,858 after-tax) that the Company recorded in June 2002 will be reported as a component of income from continuing operations instead of an extraordinary item.

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.

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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.

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 COMMUNICATIONS HOLDINGS, INC. AND L-3 COMMUNICATIONS CORPORATION

NOTES TO UNAUDITED CONDENSED CONSOLIDATED FINANCIAL STATEMENTS— CONTINUED (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						
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	\$ 2,919,954	\$ 4,620,937	\$ 3,107,954	\$ 654,228	\$ (6,060,765)	\$ 5,242,308

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	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	<u>\$49,737</u>	<u>\$ 49,737</u>	<u>\$ 32,576</u>	<u>\$ 2,365</u>	<u>\$(84,678)</u>	<u>\$ 49,737</u>
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)	<u>\$ 4,909</u>	<u>\$ 4,909</u>	<u>\$ 13,245</u>	<u>\$ (4,629)</u>	<u>\$(13,525)</u>	<u>\$ 4,909</u>

**L-3 COMMUNICATIONS HOLDINGS, INC. AND
L-3 COMMUNICATIONS CORPORATION**

**NOTES TO UNAUDITED CONDENSED CONSOLIDATED FINANCIAL STATEMENTS—
CONTINUED
(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

ITEM 2.

**MANAGEMENT'S DISCUSSION AND ANALYSIS OF
RESULTS OF OPERATIONS AND FINANCIAL CONDITION**

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 (C³ISR), 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⁾

(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.

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.

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.

Results of Operations

The following information should be read in conjunction with our unaudited condensed consolidated financial statements. 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). 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 of 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. The tables below provide selected statement of operations data for L-3's U.S. Government contractor businesses and L-3's commercial businesses, and for each of L-3's reportable segments for the 2003 and 2002 First Quarter.

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Statement of Operations Data

	Three Months Ended March 31,	
	2003	2002
	<i>(in millions)</i>	
Sales:		
Contracts, primarily U.S. Government	\$ 964.8	\$618.6
Commercial, primarily products	124.2	78.2
Consolidated	<u>\$1,089.0</u>	<u>\$696.8</u>
Operating income:		
Contracts, primarily U.S. Government	\$ 106.2	\$ 72.0
Commercial, primarily products	2.6	(0.7)
Consolidated	<u>\$ 108.8</u>	<u>\$ 71.3</u>
Sales by Reportable Segment ⁽¹⁾ :		
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	<u>\$1,089.0</u>	<u>\$696.8</u>
Operating income by Reportable Segment:		
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	<u>\$ 108.8</u>	<u>\$ 71.3</u>

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

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

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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 T²CAS 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 (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 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 of 14.0 million shares of our common stock on June 28, 2002, as well as the dilutive effect of our 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.

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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.

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.

	Three Months Ended March 31,	
	2003	2002
	<i>(in millions)</i>	
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	<u>\$ (100.5)</u>	<u>\$ (315.0)</u>

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 \$26 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 \$43 million for each of the second and fourth quarters of 2003 and approximately \$17 million for the third quarter of 2003.

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 of 2003.

Financing Activities

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. See Note 8 to our consolidated financial statements for fiscal year ended December 31, 2002, included in our Annual Report on Form 10-K filed on March 11, 2003, for a description of our debt and related financial covenants at December 31, 2002. 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.

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 \$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,	
	2003	2002
	<i>(in millions)</i>	
Net cash from operating activities	\$ 106.1	\$ 41.4
Less: Adjustments to reconcile net income to net cash from operating activities	<u>(56.4)</u>	<u>(36.5)</u>
Net income	49.7	4.9
Add: Cumulative effect of a change in accounting principle, net of income taxes	—	24.4
Provision for income taxes	28.0	16.0
Interest expense, net of interest and other income	30.8	25.1
Minority interest	0.3	0.9
Depreciation and amortization	<u>22.8</u>	<u>15.2</u>
EBITDA	<u>\$ 131.6</u>	<u>\$ 86.5</u>

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 performance measurement 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.

Contingencies

See Note 11 to the Unaudited Condensed Consolidated Financial Statements.

Recently Issued Accounting Standards

In May of 2002, the Financial Accounting Standards Board (FASB) issued Statement of Financial Accounting Standards (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. SFAS No. 145 is not expected to have a material effect on our consolidated results of operations or financial position. However, in accordance with the provisions of SFAS No. 145, beginning on January 1, 2003, the loss on the extinguishment of debt of \$16.2 million (\$9.9 million after-tax) that we recorded in June 2002 will be reported as a component of income from continuing operations instead of an extraordinary item.

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. We do not believe that we hold any interests in VIEs, however, we are currently evaluating whether we hold 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. We are currently evaluating the effect of EITF No. 00-21 on our revenue recognition accounting policies and on our consolidated results of operations and financial position.

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 document 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 filing to reflect events or changes or circumstances or changes in expectations or the occurrence of anticipated events.

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ITEM 3.

QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

See Part II, Item 7, "Management's Discussion and Analysis of Results of Operations and Financial Condition — Liquidity and Capital Resources — Derivative Financial Instruments," of the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2002 for a discussion of the Company's exposure to market risks. The only substantial change in those risks during the three months ended March 31, 2003 is discussed below.

Derivative Financial Instruments

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 Report. 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 our Annual Report on Form 10-K for the fiscal year ended December 31, 2002 and in Note 8 to our unaudited condensed consolidated financial statements for the three months ended March 31, 2003.

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

	Interest Rate Swap Agreements <i>(in millions)</i>
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)

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ITEM 4.

CONTROLS AND PROCEDURES

Within 90 days prior to the filing date of this report, our Chairman and Chief Executive Officer and our President and Chief Financial Officer evaluated the effectiveness of the design and operation of our "disclosure controls and procedures" (as defined in the Securities Exchange Act of 1934 Rules 13a – 14(c) and 15(d) – 14(c)). Based on that evaluation, our Chairman and Chief Executive Officer and our President and Chief Financial Officer have concluded that our disclosure controls and procedures are effective to ensure that information required to be disclosed by us in the reports that we file and submit under the Exchange Act is recorded, processed, summarized and reported as and when required, and are effective to ensure that such information is accumulated and communicated to our management, including our Chairman and Chief Executive Officer and our President and Chief Financial Officer, as appropriate to allow timely decisions regarding required disclosure. There have been no significant changes in our internal controls or in other factors which could significantly affect internal controls subsequent to the date of the evaluation, including any corrective actions with regard to significant deficiencies and material weaknesses.

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PART II – OTHER INFORMATION

ITEM 1.

LEGAL PROCEEDINGS

From time to time we are involved in legal proceedings arising in the ordinary course of our business. We believe that we are adequately reserved for these liabilities and that there is no litigation that could have a material adverse effect on our consolidated results of operations, financial condition or cash flows.

On August 6, 2002, Aviation Communications & Surveillance Systems, LLC (ACSS), a subsidiary of L-3 Communications Corporation, 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. We had previously investigated the Honeywell patents and believe 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 us.

On November 18, 2002, we 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 we had fulfilled all of our obligations under a letter of intent with OSI (the "OSI Letter of Intent"). Under the OSI Letter of Intent, we were to negotiate definitive agreements with OSI for the sale of certain businesses we acquired from PerkinElmer, Inc. on June 14, 2002. On December 23, 2002, OSI responded by filing suit against us in the United States District Court sitting in the Central District of California (the "California action") alleging, among other things, that we breached our 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, we proposed selling to OSI the conventional detection business and the ARGUS business that we 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. We believe that the claims asserted by OSI in its suit are without merit and intend to defend against the OSI claims vigorously.

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ITEM 6.

EXHIBITS AND REPORTS ON FORM 8-K

(a) Exhibits

Exhibit Number	Description of Exhibit
3.1	Certificate of Incorporation of L-3 Communications Holdings, Inc. (incorporated by reference to Exhibit 3.1 to the Registrants' Quarterly Report on Form 10-Q for the period ended June 30, 2002).
3.2	By laws of L-3 Communications Holdings, Inc. (incorporated by reference to Exhibit 3.2 to the Registration Statement on Form S-1 No. 333-46975).
3.3	Certificate of Incorporation of L-3 Communications Corporation (incorporated by reference to Exhibit 3.1 to L-3 Communications Corporation's Registration Statement on Form S-4 (File No. 333-31649)).
3.4	Bylaws of L-3 Communications Corporation (incorporated by reference to Exhibit 3.2 to L-3 Communications Corporation's Registration Statement on Form S-4 (File No. 333-31649)).
**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.
**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.
**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.

**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.

**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.

*11 L-3 Communications Holdings, Inc. Computation of Basic Earnings Per Share and Diluted Earnings Per Share

**12.1 Statement Re: Computation of Ratio of Earnings to Fixed Charges

**99.1 Certification Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.

**99.2 Certification Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.

* The information required in this exhibit is presented in Note 10 to the Unaudited Condensed Consolidated Financial Statements as of March 31, 2003 in accordance with the provisions of SFAS No. 128, *Earnings Per Share*.

** Filed herewith

(b) Reports on Form 8-K

None

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Pursuant to the requirements of the Securities Exchange Act of 1934, the registrants have duly caused this report to be signed on their behalf by the undersigned thereunto duly authorized.

L-3 Communications Holdings, Inc. and
L-3 Communications Corporation

Registrants

Date: May 13, 2003

/s/ Robert V. LaPenta

Name: Robert V. LaPenta
Title: President and Chief Financial Officer
(Principal Financial Officer)

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CERTIFICATIONS

I, Frank C. Lanza, certify that:

1. I have reviewed this quarterly report on Form 10-Q of L-3 Communications Holdings, Inc. and L-3 Communications Corporation;
2. Based on my knowledge, this quarterly report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this quarterly report;
3. Based on my knowledge, the financial statements, and other financial information included in this quarterly report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrants as of, and for, the periods presented in this quarterly report;
4. The registrants' other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-14 and 15d-14) for the registrants and we have:
 - a) designed such disclosure controls and procedures to ensure that material information relating to the registrants, including their consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this quarterly report is being prepared;
 - b) evaluated the effectiveness of the registrants' disclosure controls and procedures as of a date within 90 days prior to the filing date of this quarterly report (the "Evaluation Date"); and
 - c) presented in this quarterly report our conclusions about the effectiveness of the disclosure controls and procedures based on our evaluation as of the Evaluation Date;
5. The registrants' other certifying officer and I have disclosed, based on our most recent evaluation, to the registrants' auditors and the audit committee of the registrants' board of directors (or persons performing the equivalent function):

- a) all significant deficiencies in the design or operation of internal controls which could adversely affect the registrants' ability to record, process, summarize and report financial data and have identified for the registrants' auditors any material weaknesses in internal controls; and
 - b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrants' internal controls; and
6. The registrants' other certifying officer and I have indicated in this quarterly report whether or not there were significant changes in internal controls or in other factors that could significantly affect internal controls subsequent to the date of our most recent evaluation, including any corrective actions with regard to significant deficiencies and material weaknesses.

Date: May 13, 2003

/s/ Frank C. Lanza

Frank C. Lanza
Chairman and Chief Executive Officer

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CERTIFICATIONS

I, Robert V. Lapenta, certify that:

1. I have reviewed this quarterly report on Form 10-Q of L-3 Communications Holdings, Inc. and L-3 Communications Corporation;
2. Based on my knowledge, this quarterly report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this quarterly report;
3. Based on my knowledge, the financial statements, and other financial information included in this quarterly report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrants as of, and for, the periods presented in this quarterly report;
4. The registrants' other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-14 and 15d-14) for the registrants and we have:
 - a) designed such disclosure controls and procedures to ensure that material information relating to the registrants, including their consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this quarterly report is being prepared;
 - b) evaluated the effectiveness of the registrants' disclosure controls and procedures as of a date within 90 days prior to the filing date of this quarterly report (the "Evaluation Date"); and
 - c) presented in this quarterly report our conclusions about the effectiveness of the disclosure controls and procedures based on our evaluation as of the Evaluation Date;
5. The registrants' other certifying officer and I have disclosed, based on our most recent evaluation, to the registrants' auditors and the audit committee of the registrants' board of directors (or persons performing the equivalent function):
 - a) all significant deficiencies in the design or operation of internal controls which could adversely affect the registrants' ability to record, process, summarize and report financial data and have identified for the registrants' auditors any material weaknesses in internal controls; and
 - b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrants' internal controls; and
6. The registrants' other certifying officer and I have indicated in this quarterly report whether or not there were significant changes in internal controls or in other factors that could significantly affect internal controls subsequent to the date of our most recent evaluation, including any corrective actions with regard to significant deficiencies and material weaknesses.

Date: May 13, 2003

/s/ Robert V. LaPenta

Robert V. LaPenta
President and Chief Financial Officer

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EXHIBIT INDEX

Exhibit Number	Description of Exhibit
3.1	Certificate of Incorporation of L-3 Communications Holdings, Inc. (incorporated by reference to Exhibit 3.1 to the Registrants' Quarterly Report on Form 10-Q for the period ended June 30, 2002).
3.2	By laws of L-3 Communications Holdings, Inc. (incorporated by reference to Exhibit 3.2 to the Registration Statement on Form S-1 No. 333-46975).
3.3	Certificate of Incorporation of L-3 Communications Corporation (incorporated by reference to Exhibit 3.1 to L-3 Communications Corporation's Registration Statement on Form S-4 (File No. 333-31649)).
3.4	Bylaws of L-3 Communications Corporation (incorporated by reference to Exhibit 3.2 to L-3 Communications Corporation's Registration Statement on Form S-4 (File No. 333-31649)).
**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.
**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.
**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.
**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.
**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.
*11	L-3 Communications Holdings, Inc. Computation of Basic Earnings Per Share and Diluted Earnings Per Share
**12.1	Statement Re: Computation of Ratio of Earnings to Fixed Charges
**99.1	Certification Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
**99.2	Certification Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.

* The information required in this exhibit is presented in Note 10 to the Unaudited Condensed Consolidated Financial Statements as of March 31, 2003 in accordance with the provisions of SFAS No. 128, *Earnings Per Share*.

**Filed herewith

SUPPLEMENTAL INDENTURE TO BE DELIVERED
BY GUARANTEEING SUBSIDIARIES

SUPPLEMENTAL INDENTURE (this "Supplemental Indenture"), dated as of May 5, 2003, among AMI Instruments, Inc., an Oklahoma corporation, Apcom, Inc., a Maryland corporation, Broadcast Sports Inc., a Delaware corporation, Celerity Systems Incorporated, a California corporation, EER Systems, Inc., a Virginia corporation, Electrodynamics, Inc., an Arizona corporation, Goodrich Aerospace Component Overhaul & Repair, Inc., a Delaware corporation, Goodrich Avionics Systems, Inc., a Delaware corporation, Goodrich FlightSystems, Inc., an Ohio corporation, Henschel Inc., a Delaware corporation, Hygienetics Environmental Services, Inc., a Delaware corporation, Interstate Electronics Corporation, a California corporation, KDI Precision Products, Inc., a Delaware corporation, L-3 Communications AIS GP 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 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 IMC Corporation, a Connecticut 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 Security and Detection Systems Corporation California, a California corporation, L-3 Communications SPD Technologies, Inc., a Delaware 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, MPRI, Inc., a Delaware corporation, Pac Ord Inc., a Delaware corporation, Power Paragon, Inc., a Delaware corporation, Ship Analytics, Inc., a Connecticut corporation, Ship Analytics International, Inc., a Delaware corporation, Ship Analytics USA, Inc., a Connecticut corporation, Southern California Microwave, Inc., a California corporation, SPD Electrical Systems, Inc., a Delaware corporation, SPD Holdings, Inc., a Delaware corporation, SPD Switchgear Inc., a Delaware corporation, SYColeman Corporation, a Florida corporation, Telos Corporation, a California corporation, Troll Technology Corporation, a California 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 Incorporated, a Florida corporation, Wescam LLC, a Delaware limited liability company, Wescam Sonoma Inc., a California corporation and Wolf Coach, Inc., a Massachusetts corporation (each, a "Guaranteeing Subsidiary", and collectively, the "Guaranteeing Subsidiaries"), each a 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").

W I T N E S S E T H

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WHEREAS, the Company has heretofore executed and delivered to the Trustee an indenture (the "Indenture"), dated as of May 22, 1998 providing for the issuance of an

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aggregate principal amount of up to \$250,000,000 of 8 1/2% Senior Subordinated Notes due 2008 (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 under the Notes and the Indenture on the terms and conditions set forth herein (the "Subsidiary Guarantee"); and

WHEREAS, pursuant to Section 4.13 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 any other current or future guarantors of the Notes (collectively, "the Guarantors" and each, a "Guarantor"), Guaranteeing Subsidiaries, 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 and interest 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 and interest 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.

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- (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, each Guaranteeing Subsidiary hereby agrees that a notation of such Subsidiary Guarantee substantially in the form of Exhibit C 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, each 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 of the Notes or the Indenture, 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 SUBSIDIARIES 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 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 Article 4 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 Subsidiary, 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 each 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

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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.

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- (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.

6. NO RECOURSE AGAINST OTHERS. No past, present or future director, officer, employee, incorporator, stockholder or agent of any Guaranteeing Subsidiary, as such, shall have any liability for any obligations of the Company or any Guaranteeing Subsidiary 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 Commission that such a waiver is against public policy.

7. SUBORDINATION OF SUBSIDIARY GUARANTEES; ANTI-LAYERING. 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. 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.

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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: May 5, 2003

L-3 COMMUNICATIONS CORPORATION

By:/s/ Christopher C. Cambria

Name:
Title:

Dated: May 5, 2003

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 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 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 TECHNOLOGIES INCORPORATED
MICRODYNE CORPORATION
MICRODYNE OUTSOURCING INCORPORATED
MPRI, INC.
PAC ORD INC.
POWER PARAGON, INC.
SHIP ANALYTICS, INC.

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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 INCORPORATED
WESCAM LLC
WESCAM SONOMA INC.
WESCAM HOLDINGS (US) INC.
WOLF COACH, INC.
As Guaranteeing Subsidiaries

By:/s/ Christopher C. Cambria

Name:
Title:

Dated: May 5, 2003

THE BANK OF NEW YORK,
as Trustee

By:/s/ Kisha A. Holder

Name:
Title:

SUPPLEMENTAL INDENTURE TO BE
DELIVERED BY GUARANTEEING SUBSIDIARIES

SUPPLEMENTAL INDENTURE (this "Supplemental Indenture"), dated as of May 5, 2003, among AMI Instruments, Inc., an Oklahoma corporation, Apcom, Inc., a Maryland corporation, Broadcast Sports Inc., a Delaware corporation, Celerity Systems Incorporated, a California corporation, EER Systems, Inc., a Virginia corporation, Electrodynamics, Inc., an Arizona corporation, Goodrich Aerospace Component Overhaul & Repair, Inc., a Delaware corporation, Goodrich Avionics Systems, Inc., a Delaware corporation, Goodrich FlightSystems, Inc., an Ohio corporation, Henschel Inc., a Delaware corporation, Hygienetics Environmental Services, Inc., a Delaware corporation, Interstate Electronics Corporation, a California corporation, KDI Precision Products, Inc., a Delaware corporation, L-3 Communications AIS GP 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 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 IMC Corporation, a Connecticut 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 Security and Detection Systems Corporation California, a California corporation, L-3 Communications SPD Technologies, Inc., a Delaware 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, MPRI, Inc., a Delaware corporation, Pac Ord Inc., a Delaware corporation, Power Paragon, Inc., a Delaware corporation, Ship Analytics, Inc., a Connecticut corporation, Ship Analytics International, Inc., a Delaware corporation, Ship Analytics USA, Inc., a Connecticut corporation, Southern California Microwave, Inc., a California corporation, SPD Electrical Systems, Inc., a Delaware corporation, SPD Holdings, Inc., a Delaware corporation, SPD Switchgear Inc., a Delaware corporation, SYColeman Corporation, a Florida corporation, Telos Corporation, a California corporation, Troll Technology Corporation, a California 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 Incorporated, a Florida corporation, Wescam LLC, a Delaware limited liability company, Wescam Sonoma Inc., a California corporation and Wolf Coach, Inc., a Massachusetts corporation (each, a "Guaranteeing Subsidiary", and collectively, the "Guaranteeing Subsidiaries"), each a 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").

W I T N E S S E T H:
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WHEREAS, the Company has heretofore executed and delivered to the Trustee an indenture (the "Indenture"), dated as of December 11, 1998 providing for the issuance of an

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aggregate principal amount of up to \$300,000,000 of 8% Senior Subordinated Notes due 2008 (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 under the Notes and the Indenture on the terms and conditions set forth herein (the "Subsidiary Guarantee"); and

WHEREAS, pursuant to Section 4.13 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) Each 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 and interest 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 and interest 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

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(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 each 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, each 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, each 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 of the Notes or the Indenture, the recovery of any judgment against the Company, any action to enforce the same or any other

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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.

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4. GUARANTEEING SUBSIDIARIES 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 Article 4 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 such 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 such 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 Subsidiary, 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

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each 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

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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.

6. NO RECOURSE AGAINST OTHERS. No past, present or future director, officer, employee, incorporator, stockholder or agent of any Guaranteeing Subsidiary, as such, shall have any liability for any obligations of the Company or any Guaranteeing Subsidiary 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 Commission that such a waiver is against public policy.

7. SUBORDINATION OF SUBSIDIARY GUARANTEES; ANTI-LAYERING. 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. 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.

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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: May 5, 2003

L-3 COMMUNICATIONS CORPORATION

By:/s/ Christopher C. Cambria

Name:
Title:

Dated: May 5, 2003

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 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 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 TECHNOLOGIES INCORPORATED
 MICRODYNE CORPORATION
 MICRODYNE OUTSOURCING INCORPORATED
 MPRI, INC.
 PAC ORD INC.
 POWER PARAGON, INC.

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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 INCORPORATED
 WESCAM LLC
 WESCAM SONOMA INC.
 WESCAM HOLDINGS (US) INC.
 WOLF COACH, INC.

As Guaranteeing Subsidiaries

By:/s/ Christopher C. Cambria

 Name:
 Title:

Dated: May 5, 2003

THE BANK OF NEW YORK,
 as Trustee

By:/s/ Kisha A. Holder

 Name:
 Title:

SUPPLEMENTAL INDENTURE TO BE
DELIVERED BY GUARANTORS

SUPPLEMENTAL INDENTURE (this "Supplemental Indenture"), dated as of May 5, 2003, among AMI Instruments, Inc., an Oklahoma corporation, Apcom, Inc., a Maryland corporation, Broadcast Sports Inc., a Delaware corporation, Celerity Systems Incorporated, a California corporation, EER Systems, Inc., a Virginia corporation, Electrodynamics, Inc., an Arizona corporation, Goodrich Aerospace Component Overhaul & Repair, Inc., a Delaware corporation, Goodrich Avionics Systems, Inc., a Delaware corporation, Goodrich FlightSystems, Inc., an Ohio corporation, Henschel Inc., a Delaware corporation, Hygienetics Environmental Services, Inc., a Delaware corporation, Interstate Electronics Corporation, a California corporation, KDI Precision Products, Inc., a Delaware corporation, L-3 Communications AIS GP 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 Aydin Corporation, a Delaware corporation, L-3 Communications Corporation, a Delaware corporation, L-3 Communications ESSCO, Inc., a Delaware corporation, L-3 Communications ILEX Systems, Inc., a Delaware corporation, L-3 Communications IMC Corporation, a Connecticut 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 Security and Detection Systems Corporation California, a California corporation, L-3 Communications SPD Technologies, Inc., a Delaware 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, MPRI, Inc., a Delaware corporation, Pac Ord Inc., a Delaware corporation, Power Paragon, Inc., a Delaware corporation, Ship Analytics, Inc., a Connecticut corporation, Ship Analytics International, Inc., a Delaware corporation, Ship Analytics USA, Inc., a Connecticut corporation, Southern California Microwave, Inc., a California corporation, SPD Electrical Systems, Inc., a Delaware corporation, SPD Holdings, Inc., a Delaware corporation, SPD Switchgear Inc., a Delaware corporation, SYColeman Corporation, a Florida corporation, Telos Corporation, a California corporation, Troll Technology Corporation, a California corporation, Wescam Air Ops Inc., a Delaware corporation, Wescam Air Ops LLC, a Delaware limited liability, Wescam Holdings (US) Inc., a Delaware corporation, Wescam Incorporated, a Florida corporation, Wescam LLC, a Delaware limited liability company, Wescam Sonoma Inc., a California corporation and Wolf Coach, Inc., a Massachusetts corporation (each, a "Guarantor", and collectively, the "Guarantors"), each an indirect subsidiary of L-3 Communications Holdings, Inc. (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").

W I T N E S S E T H:

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WHEREAS, the Company has heretofore executed and delivered to the Trustee an indenture (the "Indenture"), dated as of November 21, 2000 providing for the issuance of an

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aggregate principal amount of up to \$300,000,000 of 5 1/4% Convertible Senior Subordinated Notes due 2009 (the "Notes");

WHEREAS, the Indenture provides that under certain circumstances the Guarantors shall execute and deliver to the Trustee a supplemental indenture pursuant to which the Guarantors shall unconditionally guarantee all of the Company's Obligations under the Notes and the Indenture on the terms and conditions set forth herein (the "Guarantee"); and

WHEREAS, pursuant to Section 14.7 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 Guarantors 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 Guarantor hereby agrees as follows:

(a) Each Guarantor, jointly and severally with all other current and future guarantors of the Notes (collectively, the "Guaranteeing Subsidiaries" and each, a "Guaranteeing Subsidiary"), 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 Liquidated Damages, 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

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(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 each Guarantor under this Supplemental Indenture and its Guarantee shall be reduced to the maximum amount permissible under such fraudulent conveyance or similar law.

3. EXECUTION AND DELIVERY OF GUARANTEES.

(a) To evidence its Guarantee set forth in this Supplemental Indenture, each Guarantor hereby agrees that a notation of such Guarantee, the form of which is included in the Form of Security attached as Exhibit A to the Indenture, shall be endorsed by an officer of such Guarantor on each Note authenticated and delivered by the Trustee 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 Supplemental Indenture or on the Guarantee 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 the Indenture, shall constitute due delivery of the Guarantee set forth in this Supplemental 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 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 of the Notes or the Indenture, 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.

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(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 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 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 Supplemental 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 4 of the Indenture for the purposes of the Guarantee made pursuant to this Supplemental Indenture, notwithstanding any stay, injunction or other prohibition preventing such acceleration in respect of the obligations guaranteed hereby;
 - (ii) in the event of any declaration of acceleration of such obligations as provided in Article 4 of the 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 Supplemental Indenture; and
 - (iii) 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 Supplemental Indenture.

4. GUARANTORS MAY CONSOLIDATE, ETC. ON CERTAIN TERMS.

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- (a) Except as set forth in Articles 6 and 9 of the Indenture, nothing contained in the Indenture, this Supplemental Indenture or in the Notes shall prevent (a) any consolidation or merger of any Guarantor with or into the Company or any other Guaranteeing Subsidiary, (b) 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 Guaranteeing Subsidiary or (c) any merger of a Guarantor with or into an Affiliate of that Guarantor in another State of the United States so long as the amount of Indebtedness of the Company and the domestic non-Guarantor subsidiaries is not increased thereby.
- (b) Except as set forth in Article 9 of the Indenture, nothing contained in the Indenture, this Supplemental 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 Guaranteeing Subsidiary (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 Guaranteeing Subsidiary (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 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 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, (ii) immediately after giving effect to such consolidation, merger, sale or conveyance no Default or Event of Default exists, and (iii) such

transaction will only be permitted under the Indenture and this Supplemental Indenture if it would be permitted under the terms of all of the indentures governing the Outstanding Senior Subordinated Notes as the same are in effect on the date hereof (whether or not those indentures are subsequently amended, waived, modified or terminated or expire and whether or not any of these notes continue to be outstanding).

- (c) In case of any such consolidation, merger, sale or conveyance and upon the assumption by the successor corporation, by

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supplemental indenture, executed and delivered to the Trustee and satisfactory in form to the Trustee, of the 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 each 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 the 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 the Indenture and this Supplemental Indenture as the Guarantees theretofore and thereafter issued in accordance with the terms of the Indenture and this Supplemental Indenture as though all of such 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 Guarantor), all Liens, if any, in favor of the Trustee in the assets sold thereby shall be released. 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 Supplemental Indenture and its Guarantee made pursuant hereto. 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 the Indenture and this Supplemental Indenture, the Trustee shall execute any documents reasonably required in order to evidence the release of the Guarantor from its obligations under this Supplemental 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 on the Notes and for the other obligations of such Guarantor under the Indenture as provided in this Supplemental Indenture.
- (b) Upon the designation of a Guarantor as an Excluded Subsidiary in accordance with the terms of the Indenture and the indentures

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governing the Outstanding Senior Subordinated Notes as the same are in effect on the date hereof (whether or not those indentures are subsequently amended, waived, modified or terminated or expire and whether or not any of those notes continue to be outstanding), such Guarantor shall be released and relieved of its obligations under the Indenture 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 Guarantor as an Excluded Subsidiary was made by the Company in accordance with the provisions of the Indenture and the indentures governing the Outstanding Senior Subordinated Notes as the same are in effect on the date hereof (whether or not those indentures are subsequently amended, waived, modified,

terminated or expired and whether or not any of those notes continue to be outstanding), 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 the Indenture as provided herein.

6. NO RECOURSE AGAINST OTHERS. No past, present or future director, officer, employee, incorporator, stockholder or agent of any Guarantor, as such, shall have any liability for any obligations of the Company or any Guarantor under the Notes, any 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 Commission that such a waiver is against public policy.

7. SUBORDINATION OF GUARANTEES; ANTI-LAYERING. 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 Guarantees. Notwithstanding the foregoing sentence, the Guarantee of each Guarantor shall be subordinated to the prior payment in full of all Senior Debt of that Guarantor, which shall include all guarantees of Senior Debt.

8. 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.

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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 Guarantors and the Company.

9

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: May 5, 2003

L-3 COMMUNICATIONS HOLDINGS, INC.

By:/s/ Christopher C. Cambria

Name:
Title:

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Dated: May 5, 2003

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.
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MICRODYNE OUTSOURCING INCORPORATED
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PAC ORD INC.

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SYCOLEMAN CORPORATION
TELOS CORPORATION
TROLL TECHNOLOGY CORPORATION
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WESCAM AIR OPS LLC
WESCAM INCORPORATED
WESCAM LLC
WESCAM SONOMA INC.
WESCAM HOLDINGS (US) INC.
WOLF COACH, INC.
As Guaranteeing Subsidiaries

By:/s/ Christopher C. Cambria

Name:
Title:

Dated: May 5, 2003

THE BANK OF NEW YORK,
as Trustee

By:/s/ Kisha A. Holder

Name:
Title:

SUPPLEMENTAL INDENTURE TO BE
DELIVERED BY GUARANTORS

SUPPLEMENTAL INDENTURE (this "Supplemental Indenture"), dated as of May 5, 2003, among AMI Instruments, Inc., an Oklahoma corporation, Apcom, Inc., a Maryland corporation, Broadcast Sports Inc., a Delaware corporation, Celerity Systems Incorporated, a California corporation, EER Systems, Inc., a Virginia corporation, Electrodynamics, Inc., an Arizona corporation, Goodrich Aerospace Component Overhaul & Repair, Inc., a Delaware corporation, Goodrich Avionics Systems, Inc., a Delaware corporation, Goodrich FlightSystems, Inc., an Ohio corporation, Henschel Inc., a Delaware corporation, Hygienetics Environmental Services, Inc., a Delaware corporation, Interstate Electronics Corporation, a California corporation, KDI Precision Products, Inc., a Delaware corporation, L-3 Communications AIS GP 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 Aydin Corporation, a Delaware corporation, L-3 Communications Corporation, a Delaware corporation, L-3 Communications ESSCO, Inc., a Delaware corporation, L-3 Communications ILEX Systems, Inc., a Delaware corporation, L-3 Communications IMC Corporation, a Connecticut 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 Security and Detection Systems Corporation California, a California corporation, L-3 Communications SPD Technologies, Inc., a Delaware 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, MPRI, Inc., a Delaware corporation, Pac Ord Inc., a Delaware corporation, Power Paragon, Inc., a Delaware corporation, Ship Analytics, Inc., a Connecticut corporation, Ship Analytics International, Inc., a Delaware corporation, Ship Analytics USA, Inc., a Connecticut corporation, Southern California Microwave, Inc., a California corporation, SPD Electrical Systems, Inc., a Delaware corporation, SPD Holdings, Inc., a Delaware corporation, SPD Switchgear Inc., a Delaware corporation, SYColeman Corporation, a Florida corporation, Telos Corporation, a California corporation, Troll Technology Corporation, a California 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 Incorporated, a Florida corporation, Wescam LLC, a Delaware limited liability company, Wescam Sonoma Inc., a California corporation and Wolf Coach, Inc., a Massachusetts corporation (each, a "Guarantor", and collectively, the "Guarantors"), each a subsidiary of L-3 Communications Holdings, Inc. (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").

W I T N E S S E T H:
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WHEREAS, the Company has heretofore executed and delivered to the Trustee an indenture (the "Indenture"), dated as October 24, 2001 providing for the issuance of an

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aggregate principal amount of up to \$420,000,000 of 4.00% Senior Subordinated Convertible Contingent Debt Securities (CODES) due 2011 (the "Securities");

WHEREAS, the Indenture provides that under certain circumstances the Guarantors shall execute and deliver to the Trustee a supplemental indenture pursuant to which the Guarantors shall unconditionally guarantee all of the Company's Obligations under the Securities and the Indenture on the terms and conditions set forth herein (the "Guarantee"); and

WHEREAS, pursuant to Section 14.7 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 Guarantors and the Trustee mutually covenant and agree for the equal and ratable benefit of the Holders of the Securities 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 Guarantor hereby agrees as follows:

- (a) Each Guarantor, jointly and severally with all other current and future guarantors of the Securities (collectively, the "Guaranteeing Subsidiaries" and each, a "Guaranteeing Subsidiary"), unconditionally guarantees to each Holder of a Security 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 Securities or the Obligations of the Company under the Indenture or the Securities, that:

- (i) the principal of, premium, interest (including Contingent Interest, if any) and Additional Amounts, if any, on the Securities 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 (including Contingent Interest, if any) and Additional Amounts, if any, on the Securities, 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

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- (ii) in case of any extension of time for payment or renewal of any Securities 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 each Guarantor under this Supplemental Indenture and its Guarantee shall be reduced to the maximum amount permissible under such fraudulent conveyance or similar law.

3. EXECUTION AND DELIVERY OF GUARANTEES.

- (a) To evidence its Guarantee set forth in this Supplemental Indenture, each Guarantor hereby agrees that a notation of such Guarantee, substantially in the form included as Exhibit B to the Indenture, shall be endorsed by an Officer of such Guarantor on each Security authenticated and delivered by the Trustee 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 Security a notation of such Guarantee.
- (c) If an Officer whose signature is on this Supplemental Indenture or on the Guarantee no longer holds that office at the time the Trustee authenticates the Security on which a Guarantee is endorsed, the Guarantee shall be valid nevertheless.
- (d) The delivery of any Security by the Trustee, after the authentication thereof under the Indenture, shall constitute due delivery of the Guarantee set forth in this Supplemental 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 Securities or the Indenture, the absence of any action to enforce the same, any waiver or consent by any Holder of the Securities with respect to any provisions of the Securities or the Indenture, 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

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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 Supplemental Indenture will not be discharged except by complete performance of the obligations contained in the Securities and the 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 Supplemental 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 4 of the Indenture for the purposes of the Guarantee made pursuant to this Supplemental Indenture, notwithstanding any stay, injunction or other prohibition preventing such acceleration in respect of the Obligations guaranteed hereby;
 - (ii) in the event of any declaration of acceleration of such Obligations as provided in Article 4 of the 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 Supplemental Indenture; and
 - (iii) 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 Supplemental Indenture.

4. GUARANTORS MAY CONSOLIDATE, ETC. ON CERTAIN TERMS.

- (a) Except as set forth in Articles 6 and 9 of the Indenture, nothing contained in the Indenture, this Supplemental Indenture or in the Securities shall prevent (a) any consolidation or merger of any

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Guarantor with or into the Company or any Guaranteeing Subsidiary, (b) 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 Guaranteeing Subsidiary or (c) any merger of a Guarantor with or into an Affiliate of that Guarantor in another State of the United States so long as the amount of Indebtedness of the Company and the domestic non-Guarantor subsidiaries is not increased thereby.

- (b) Except as set forth in Article 9 of the Indenture, nothing contained in the Indenture, this Supplemental Indenture or in the Securities shall prevent any consolidation or merger of any Guarantor with or into a corporation or corporations other than the Company or any other Guaranteeing Subsidiary (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 Guaranteeing Subsidiary (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 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 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, (ii) immediately after giving effect to such consolidation, merger, sale or conveyance no Default or Event of Default exists, and (iii) such transaction will only be permitted under the Indenture and this Supplemental Indenture if it would be permitted under the terms of all of the indentures governing the Outstanding Senior Subordinated Notes as the same are in effect on the date hereof (whether or not those indentures are subsequently amended, waived, modified or terminated or expire and whether or not any of these Securities continue to be outstanding).

- (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 Supplemental Indenture and the due and punctual

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performance of all of the covenants and conditions of the Indenture and this Supplemental Indenture to be performed by each 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 Securities issuable under the 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 the Indenture and this Supplemental Indenture as the Guarantees theretofore and thereafter issued in accordance with the terms of the Indenture and this Supplemental Indenture as though all of such 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 Guarantor), all Liens, if any, in favor of the Trustee in the assets sold thereby shall be released. 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 Supplemental Indenture and its Guarantee made pursuant hereto. 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 the Indenture and this Supplemental Indenture, the Trustee shall execute any documents reasonably required in order to evidence the release of the Guarantor from its obligations under this Supplemental 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 (including Contingent Interest, if any) and Additional Amounts, if any, on the Securities and for the other obligations of such Guarantor under the Indenture as provided herein.
- (b) Upon the designation of a Guarantor as an Excluded Subsidiary in accordance with the terms of the Indenture and the indentures governing the Outstanding Senior Subordinated Notes as the same are in effect on the date hereof (whether or not those indentures are

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subsequently amended, waived, modified or terminated or expire and whether or not any of those Securities continue to be outstanding), such Guarantor shall be released and relieved of its obligations under the Indenture 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 Guarantor as an Excluded Subsidiary was made by the Company in accordance with the provisions of the Indenture and the indentures

governing the Outstanding Senior Subordinated Notes as the same are in effect on the date hereof (whether or not those indentures are subsequently amended, waived, modified, terminated or expire and whether or not any of those Securities continue to be outstanding), 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 Securities and for the other obligations of any Guarantor under the Indenture as provided herein.

6. NO RECOURSE AGAINST OTHERS. No past, present or future director, officer, employee, incorporator, stockholder or agent of any Guarantor, as such, shall have any liability for any obligations of the Company or any Guarantor under the Securities, any 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 Securities by accepting a Security waives and releases all such liability. The waiver and release are part of the consideration for issuance of the Securities. 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.

7. SUBORDINATION OF GUARANTEES; ANTI-LAYERING. 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 Guarantees. Notwithstanding the foregoing sentence, 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 Securities are subordinated to Senior Debt), which shall include all guarantees of Senior Debt.

8. 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.

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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 Guarantors and the Company.

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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: May 5, 2003 L-3 COMMUNICATIONS HOLDINGS, INC.

By:/s/ Christopher C. Cambria

Name:
Title:

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Dated: May 5, 2003 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 AND TECHNOLOGY CORPORATION
 L-3 COMMUNICATIONS AYDIN CORPORATION'
 L-3 COMMUNICATIONS 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 TECHNOLOGIES INCORPORATED
 MICRODYNE CORPORATION
 MICRODYNE OUTSOURCING INCORPORATED
 MPRI, INC.
 PAC ORD INC.

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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 INCORPORATED
 WESCAM LLC
 WESCAM SONOMA INC.
 WESCAM HOLDINGS (US) INC.
 WOLF COACH, INC.
 As Guaranteeing Subsidiaries

By:/s/ Christopher C. Cambria

 Name:
 Title:

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Dated: May 5, 2003

THE BANK OF NEW YORK,
 as Trustee

By:/s/ Kisha A. Holder

 Name:
 Title:

SUPPLEMENTAL INDENTURE TO BE DELIVERED
BY GUARANTEEING SUBSIDIARIES

Supplemental Indenture (this "Supplemental Indenture"), dated as of May 5, 2003, among AMI Instruments, Inc., an Oklahoma corporation, Apcom, Inc., a Maryland corporation, Broadcast Sports Inc., a Delaware corporation, Celerity Systems Incorporated, a California corporation, EER Systems, Inc., a Virginia corporation, Electrodynamics, Inc., an Arizona corporation, Goodrich Aerospace Component Overhaul & Repair, Inc., a Delaware corporation, Goodrich Avionics Systems, Inc., a Delaware corporation, Goodrich FlightSystems, Inc., an Ohio corporation, Henschel Inc., a Delaware corporation, Hygienetics Environmental Services, Inc., a Delaware corporation, Interstate Electronics Corporation, a California corporation, KDI Precision Products, Inc., a Delaware corporation, L-3 Communications AIS GP 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 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 IMC Corporation, a Connecticut 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 Security and Detection Systems Corporation California, a California corporation, L-3 Communications SPD Technologies, Inc., a Delaware 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, MPRI, Inc., a Delaware corporation, Pac Ord Inc., a Delaware corporation, Power Paragon, Inc., a Delaware corporation, Ship Analytics, Inc., a Connecticut corporation, Ship Analytics International, Inc., a Delaware corporation, Ship Analytics USA, Inc., a Connecticut corporation, Southern California Microwave, Inc., a California corporation, SPD Electrical Systems, Inc., a Delaware corporation, SPD Holdings, Inc., a Delaware corporation, SPD Switchgear Inc., a Delaware corporation, SYColeman Corporation, a Florida corporation, Telos Corporation, a California corporation, Troll Technology Corporation, a California 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 Incorporated, a Florida corporation, Wescam LLC, a Delaware limited liability company, Wescam Sonoma Inc., a California corporation and Wolf Coach, Inc., a Massachusetts corporation (each, a "Guaranteeing Subsidiary", and collectively, the "Guaranteeing Subsidiaries"), each a 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").

W I T N E S S E T H
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WHEREAS, the Company has heretofore executed and delivered to the Trustee an indenture (the "Indenture"), dated as of June 28, 2002 providing for the issuance of an

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aggregate principal amount of up to \$750,000,000 of 7 5/8% Senior Subordinated Notes due 2012 (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 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:

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- (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

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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

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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 Article 4 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

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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

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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 Guaranteeing Subsidiary, as such, shall have any liability for any obligations of the Company or any Guaranteeing Subsidiary 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

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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. SUBORDINATION OF SUBSIDIARY GUARANTEES; ANTI-LAYERING. 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. 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.

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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: May 5, 2003

L-3 COMMUNICATIONS CORPORATION

By:/s/ Christopher C. Cambria

Name:

Title:

Dated: May 5, 2003

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 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 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 TECHNOLOGIES INCORPORATED
 MICRODYNE CORPORATION
 MICRODYNE OUTSOURCING INCORPORATED
 MPRI, INC.
 PAC ORD INC.
 POWER PARAGON, INC.
 SHIP ANALYTICS, INC.

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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 INCORPORATED
 WESCAM LLC
 WESCAM SONOMA INC.
 WESCAM HOLDINGS (US) INC.
 WOLF COACH, INC.

As Guaranteeing Subsidiaries

By:/s/ Christopher C. Cambria

 Name:
 Title:

Dated: May 5, 2003

THE BANK OF NEW YORK,
 as Trustee

By: /s/ Kisha A. Holder

 Name:
 Title:

**L-3 COMMUNICATIONS HOLDINGS, INC. AND
L-3 COMMUNICATIONS CORPORATION**

RATIO OF EARNINGS TO FIXED CHARGES

(DOLLARS IN THOUSANDS)

	<u>Three Months Ended March 31, 2003</u>
Earnings:	
Income before income taxes	\$ 77,714
Add:	
Interest expense	30,197
Amortization of debt expense	2,019
Interest component of rent expense	5,788
Earnings	<u>\$ 115,718</u>
Fixed Charges:	
Interest expense	30,197
Amortization of debt expense	2,019
Interest component of rent expense	5,788
Fixed Charges	<u>\$ 38,004</u>
Ratio of earnings to fixed charges	<u><u>3.0x</u></u>

**Certification Pursuant to
18 U.S.C. Section 1350,
As Adopted Pursuant to
Section 906 of the Sarbanes-Oxley Act of 2002**

In connection with the Quarterly Report of L-3 Communications Holdings, Inc. ("L-3 Holdings") and L-3 Communications Corporation ("L-3 Corporation" together with L-3 Holdings referred to as "L-3") on Form 10-Q for the period ended March 31, 2003 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Frank C. Lanza, Chairman and Chief Executive Officer of L-3 Holdings and L-3 Corporation, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

(1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of L-3.

/s/ Frank C. Lanza

Frank C. Lanza
Chairman and Chief Executive Officer
May 13, 2003

A signed original of this written statement required by Section 906 has been provided to L-3 and will be retained by L-3 and furnished to the Securities and Exchange Commission or its staff upon request.

**Certification Pursuant to
18 U.S.C. Section 1350,
As Adopted Pursuant to
Section 906 of the Sarbanes-Oxley Act of 2002**

In connection with the Quarterly Report of L-3 Communications Holdings, Inc. ("L-3 Holdings") and L-3 Communications Corporation ("L-3 Corporation" together with L-3 Holdings referred to as "L-3") on Form 10-Q for the period ended March 31, 2003 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Robert V. LaPenta, President and Chief Financial Officer of L-3 Holdings and L-3 Corporation, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

(1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of L-3.

/s/ Robert V. LaPenta

Robert V. LaPenta
President and Chief Financial Officer
May 13, 2003

A signed original of this written statement required by Section 906 has been provided to L-3 and will be retained by L-3 and furnished to the Securities and Exchange Commission or its staff upon request.