









### L-3 Communications

**SUMMARY ANNUAL REPORT 2003** 

# On Course



Military Transformation and Homeland Security – How L-3 is Positioning Itself for the Future

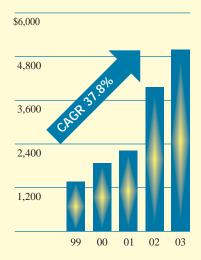


### FINANCIAL HIGHLIGHTS

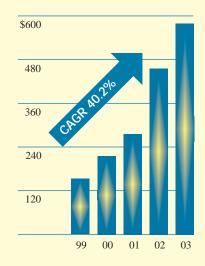
For the years ended December 31,	2003	2002	2001	2000	1999
(In thousands, except per share amounts)					
Sales	\$5,061,594	\$4,011,229	\$2,347,422	\$1,910,061	\$1,405,462
Operating income <sup>(a)</sup>	581,021	453,979	275,330	222,718	150,486
Income before cumulative effect of a change					
in accounting principle $^{\scriptscriptstyle{(a)}}$	$277,640^{(d)}$	$202,467^{(d)}$ (e)	115,458	82,727	58,689
Diluted earnings per share before					
cumulative effect of a change					
in accounting principle $^{(a)}$ $^{(b)}$	2.71 <sup>(d)</sup>	$2.18^{\scriptscriptstyle (d)\;(e)}$	1.47	1.18	0.88
Cash flow from operating activities	456,063	318,460	172,968	113,805	99,018
Capital expenditures, net of disposition					
of property, plant and equipment	79,020	58,510	46,884	15,520	16,743
Free cash flow $^{(c)}$	377,043	259,950	126,084	98,285	82,275
Shareholders' equity	2,574,496	2,202,202	1,213,892	692,569	583,175

- (a) The statement of operations data for 2001, 2000 and 1999 includes goodwill amortization expense.
- (b) Diluted earnings per share for all periods reflects our two-for-one stock split that became effective May 20, 2002.
- (c) We define free cash flow as net cash from operating activities, less net capital expenditures (capital expenditures less cash proceeds from disposition of property, plant and equipment).
- (d) Includes debt retirement charge of \$7.2 million after taxes, or \$0.06 per diluted share in 2003 and \$9.9 million after taxes, or \$0.11 per diluted share in 2002.
- (e) The year ended December 31, 2002 excludes the cumulative effect of a change in accounting principle for a goodwill impairment of \$24.4 million or \$0.25 per diluted share.

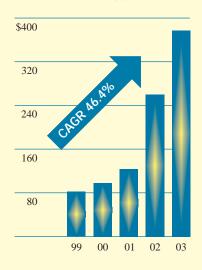
### **SALES** in millions



### **OPERATING INCOME** in millions



### **FREE CASH FLOW** in millions



### **MILESTONES**

### March 2003

L-3 acquired the Avionics Systems business from Goodrich Corporation. Avionics Systems is a leading designer and manufacturer of advanced cockpit equipment, innovative avionics solutions and safety systems.

### May 2003

L-3 sold \$400.0 million of 6 1/8% Senior Subordinated Notes. The company used a portion of the proceeds to redeem its \$180.0 million of 8 1/2% Senior Subordinated Notes.

### May 2003

L-3 completed its acquisition of Aeromet, Inc., a leader in electro-optical and infrared (EO/IR) programs supporting Intelligence, Surveillance and Reconnaissance (ISR) missions and specialized meteorological applications.

### September 2003

L-3 acquired Klein Associates, Inc., a business unit of OYO Corporation of Japan. Klein is a pioneer in the development of side-scan sonars, sub-bottom profilers and related instruments and accessories for undersea search and survey.

### October 200

L-3 successfully completed the acquisition of the Military Aviation Services (MAS) business of Bombardier Inc. MAS is a leader in systems engineering support and aircraft modernization, providing a full range of technical services in the areas of aircraft maintenance, repair and upgrade for military aircraft and regional jets and selected commercial aircraft.





**2** Letter to Shareholders

2003 shaped up to be an excellent year for L-3. Contributors: Frank C. Lanza and Robert V. LaPenta.

**∠** Secure Communications & ISR

ISR is at the forefront of military transformation.

Contributors include: Communication Systems-East, Communication Systems-West,
Integrated Systems, Aeromet & ComCept.

Training, Simulation & Support

Readiness and cost-effectiveness are driving a push for more training, simulation and support services.

Contributors include: Link Simulation and Training, GSI, MPRI, MPRI-Ship Analytics, SYColeman & ILEX.

Aviation Products & Aircraft Modernization

Key products and strategic acquisitions make L-3 a world player in this arena. *Contributors include: Aviation Recorders, Avionics Systems, ACSS, Display Systems, Electrodynamics, Integrated Systems, Vertex Aerospace, MAS & Spar Aerospace.* 

1 Q Specialized Products

With the broadest base of products in defense, L-3 added key products to its arsenal in 2003. Contributors include: IEC, KDI, BT Fuze Products, Space and Navigation, SPD Technologies, Ocean Systems, ESSCO, Narda Microwave-East, Narda Microwave-West, Narda Satellite Networks, Security and Detection Systems, Telemetry-East, Telemetry-West, Storm Control Systems, Ruggedized Command and Control Solutions, Randtron, WESCAM, Electron Devices & Wolf Coach.

1 Homeland Security

The threat of terrorism has not abated and the US government is working on protecting the nation's citizens and infrastructure.

Contributors include: Security and Detection Systems, Communication Systems-East, Communication Systems-West, Aviation Recorders, GSI, MPRI, MPRI-Ship Analytics & Wolf Coach.

26 Shareholder Information

**22** Condensed Consolidated Financial Data and Management Team

### December 2003

L-3 successfully completed its acquisition of Vertex Aerospace LLC. Vertex is a leading provider of aerospace and other technical services to the Department of Defense (DoD) and other government agencies, including the US Air Force, US Navy, US Army, US Marine Corps, Department of Homeland Security (DHS), Drug Enforcement Administration (DEA) and NASA.

### December 2003

L-3 sold \$400.0 million of 6 1/8% Senior Subordinated Notes. The company initiated the redemption of \$300.0 million of 5 1/4% Convertible Senior Subordinated Notes, which resulted in the conversion of substantially all the 5 1/4% Notes into L-3 common stock in January, 2004.

### December 2003

L-3 acquired certain defense and aerospace assets of IPICOM, Inc. This business is a leading manufacturer of broadband communications products and systems, including advanced performance analog, digital and fiber-optic transmission systems widely used in broadband, cable TV, security and surveillance applications.

### January 2004

L-3's Board of Directors declared the company's first quarterly cash dividend of \$0.10 per share, payable March 15, 2004, to shareholders of record at the close of business on February 17, 2004.



ROBERT V. LAPENTA
PRESIDENT AND
CHIEF FINANCIAL OFFICER

FRANK C. LANZA
CHAIRMAN AND
CHIEF EXECUTIVE OFFICER

The



### Future for L-3

### **DEAR SHAREHOLDERS:**

In 2003, our military forces were engaged in a fierce conflict in Iraq, while in the US, federal, state and local authorities were continuing their work to secure the nation against terrorist threats. L-3 Communications – its employees, products and services – played a major role in sustaining and equipping our troops, as well as helping domestic agencies and local governments meet the difficult challenges they faced after September 11, 2001.

L-3 is proud of its support of the successful missions of the Special Operations Forces (SOF), whose role has been greatly expanded in both Iraq and Afghanistan. One of the key advantages the US military had in detecting and eliminating the enemy was its Intelligence, Surveillance and Reconnaissance (ISR) capability, as well as secure data links and systems provided by L-3 for all important manned intelligence aircraft and Unmanned Aerial Vehicles (UAV).

The challenging demands of ongoing operations increased the need for highly trained military personnel, and L-3's training, simulation and support services dramatically helped to improve combat skills and readiness for our forces. These demands also called for increased aircraft maintenance, systems integration and system upgrades by L-3 to ensure that the military's existing assets performed at their best.

L-3's work in ISR and secure communications, as well as precision weaponry products, global positioning equipment and safety and arming devices, enabled precise targeting of enemy assets with minimal collateral damage. There were thousands of L-3 personnel assisting our military forces and hundreds of L-3 products in use, including displays, antennas, satellite

communications terminals, command and control systems, microwave subsystems for radars, precision weapons and guidance systems, telemetry products and electronic wide-area remote security sensors.

In the area of homeland security, L-3's eXaminer® 3DX 6000s are hard at work at American airports inspecting checked baggage; the company's cargo inspection systems are also in operation around the world protecting ports and facilities. L-3's intrusion detection systems are guarding US borders and US military bases around the world. L-3's crisis management systems are helping New York City's anti-terrorism unit, as well as other state and local authorities, defend against threats.

In many ways, L-3 has become a major partner in US efforts to protect and equip its military and its homeland security authorities. This partnership has grown substantially from the company's beginnings.

In 1997, L-3 had revenues of \$705.4 million and was a product supplier of secure communications, avionics, telemetry and instrumentation and microwave products. Through internal growth and acquisition, L-3 is now a Fortune 500 company, with over \$5 billion in revenues in 2003. The company has evolved into a prime systems contractor for secure communications and ISR, training and simulation, government services and aircraft modernization and has become the largest and broadest supplier of products for the merchant market in the defense industry.

### STRONG RESULTS

In 2003, L-3 again demonstrated its commitment to high-performance standards, setting financial records and establishing new milestones. Sales increased to \$5,061.6 million from

\$4,011.2 million in 2002, a 26.2% increase, including 15.4% organic growth for L-3's defense business (5.4% for all of L-3 including the declines in L-3's explosives detection systems and commercial businesses).

For 2003, operating income rose 28.0% to \$581.0 million, increasing from \$454.0 million in 2002. Diluted earnings per share for 2003 rose 24.3% to \$2.71, from \$2.18 (before cumulative effect of a change in accounting principle) in 2002.

In May 2003, L-3 completed an offering of \$400.0 million principal amount of 6 1/8% Senior Subordinated Notes and redeemed all outstanding \$180.0 million aggregate principal amount of 8 1/2% Senior Subordinated Notes. Later that year, L-3 raised \$400.0 million in funds through a private placement of Senior Subordinated Notes and called for redemption of all its outstanding \$300.0 million aggregate principal amount of 5 1/4% Convertible Senior Subordinated Notes due 2009, substantially all of which were converted into L-3 common stock in January 2004. The net proceeds were used to repay indebtedness outstanding under our senior credit facilities and for general corporate purposes, including acquisitions.

L-3 generated \$377.0 million in free cash flow, compared to \$260.0 million in 2002, an increase of 45.0%. L-3 ended the year with \$134.9 million cash on hand and \$665.9 million of available borrowings under the company's bank credit facilities. These funds are available for investments in strategic acquisitions and other business opportunities.

It was a banner year for orders at L-3. The company recorded \$5,477.4 million in funded orders from all of L-3's major business areas. Backlog was \$3,893.3 million at December 31, 2003.

L-3 closed the year 2003 with a strong balance sheet. The company's debt to book capitalization was at 48.1% at December 31, 2003 (42.3% after adjusting for the conversion of \$300.0 million of 5 1/4% Convertible Notes into common stock in January 2004), compared to 44.8% at December 31, 2002.

### **ACQUISITIONS**

During 2003, L-3 made a number of key acquisitions with an aggregate purchase price of \$1.0 billion. These companies complemented L-3's existing operations in three of its four business segments and allowed L-3 to take advantage of synergies and offer more products, services and added value to customers.

In Secure Communications and ISR, L-3 added two important companies. Aeromet offers a broad array of services, including electro-optical and infrared (EO/IR) programs for ISR and specialized meteorological applications for key mission areas. The defense and aerospace assets purchased from IPICOM have leadership positions in secure optical data link systems for defense and aerospace applications for a variety of classified and unclassified customers.

L-3 significantly expanded its position in its Aviation Products and Aircraft Modernization segment with key acquisitions. In commercial aviation products, L-3 acquired Goodrich Avionics Systems (renamed L-3 Avionics Systems), which supplies a variety of safety-related avionics products, including the new SmartDeck® integrated flight control and display system for the general aviation market. Avionics Systems also offers products for military platforms, such as the Joint Primary Aircraft Training System (JPATS). Despite the slowdown in the overall commercial aviation sector,

### **L-3 ACCOLADES**

Communication Systems-East's Improved Remotely Monitored Battlefield Sensor System (IREM-BASS) has been awarded Government Executive Magazine's 2002 Grace Hopper Government Technology Leadership Award in the category of "Contributing to Advances in Homeland Security and the War on Terrorism."

ComCept was awarded a James S. Cogswell Outstanding Industrial Security Achievement Award for 2003. The Defense Security Service established this award in 1996 as a way to recognize a few of the cleared contractor facilities for outstanding performance in the field of security. ComCept received the Outstanding Achievement award from the Defense Industry in network-centric warfare from the Institute for Defense and Government Advancement (IDGA). ComCept was selected by a distinguished panel of experts over a field of strong competitors for its work on the Network-Centric Collaborative Targeting (NCCT) program with the US Air Force's Big Safari Program Office.

Link Simulation and Training's founder, Ed Link, developer of the first pilot training device in 1929, was inducted into the National Inventors Hall of Fame (NIHF) in Akron, Ohio.

Link received the 2003 Market Leadership Award in Military Flight Simulation from Frost & Sullivan, a global consulting and market research organization.

Avionics Systems, with its balanced business mix of military, business and general aviation and air transport products, continues to demonstrate solid growth.

With joint-venture partner Vertex Aerospace, L-3 won a major ten-year contract to provide logistics support for US Army aircraft training at Fort Rucker, Alabama. This successful partnership led L-3 to its largest acquisition of 2003 - Vertex Aerospace, a leading provider of logistics support, modernization, maintenance, supply chain management and depot services with a worldwide presence.

L-3 further solidified its position as a leader in aircraft modernization with the acquisition of Bombardier's Military Aviation Services (MAS). This operation adds to L-3's other Canadian aircraft modernization company - Spar Aerospace – and provides systems engineering support, aircraft modernization and a full range of technical services. With L-3's Integrated Systems operations and its new subsidiary Vertex, along with Spar and MAS, L-3 is now one of the largest aircraft modernization companies in the world.

In the Specialized Products segment, L-3 added Klein Associates, a leading sensor technology company, which provides high-resolution sonar systems, marine navigation systems and intrusion detection systems. Klein markets to US and international government and military organizations and offshore oil companies, among others. Klein's products were utilized as the principal sonar sensors in the search for the Titanic, Space Shuttle Challenger, Space Shuttle Columbia and TWA Flight 800.

### PROSPECTS FOR 2004 AND BEYOND

Te at L-3 expect that 2004 will be another solid year for the company. With the post-Cold War transformation of the military, the US defense budget will continue to be strong well into the future. In an election year and with troops overseas, we believe Congress and the American people will continue to support the DoD's requirements, as well as future transformation.

In 2006, the president will have the opportunity to reexamine DoD requirements, make decisions on the modernization of existing platforms and determine the survival of new platforms. Readiness will continue to be a mandatory funding commitment as well as spiral modernization of current weapons and platforms, regardless of strategic direction.

L-3 is in a position of strength in either a growing or flat defense budget environment. We are teamed on major new start programs in a growth market and we are strongly positioned on legacy programs in a flat market. L-3's products and services are in the higher growth areas of procurement - ISR, UAVs, precision weapons, training and simulation systems and networked secure communications.

In addition, L-3's sizeable presence in aircraft modernization will enable the company to take advantage of growth in the Operations Maintenance segment of the defense budget. Upgrading legacy platforms is one of the DoD's priorities, not only to ensure military readiness, but to provide an affordable alternative to purchasing larger quantities of expensive new platforms.

The Department of Homeland Security (DHS) budget in 2004 will be over \$36 billion, 7% more than 2003 levels. The focus of its spending will be on securing borders, air transportation and ports, as well as responding to national emergencies. L-3 has the broadest array of key products to protect US citizens and the national infrastructure, including products and systems for

airport, port and maritime security, intrusion detection, crisis management and vehicles for communications, bioterrorism and command and control.

The opportunities for internal growth are significant in the years ahead, as is the pipeline for acquisitions. Throughout its history, L-3 has been very selective in choosing companies with products and systems in highgrowth areas of defense spending. In 2004 and beyond, this combination of focused internal growth and opportunistic acquisitions will help to deliver double-digit growth rates and enable L-3 to become even more critical to the US military, as well as federal, state and local homeland security initiatives.

None of this growth would be possible without the effort, dedication and skill of our L-3 workforce. Year after year, they have delivered on their promise to provide excellent value to our customers and growth to our shareholders and they will continue that commitment in 2004.

Reflecting our confidence in L-3's future growth, the L-3 Board of Directors declared L-3's first quarterly cash dividend to the company's common stock holders payable on March 15, 2004. This year's annual report will examine how the company is on course for the future with promising technologies, new programs and future growth opportunities.

Frank C. Lanza

Chairman and Chief **Executive Officer** 

Robert V. LaPenta

President and Chief Financial Officer

Display Systems was selected in 2003 as Boeing's 2002 Supplier of the Year for Aerospace Support.

Display Systems also received the distinguished Preferred Supplier **Certification Award from The Boeing** Company in recognition of its commitment and dedication to continuous business process improvements, ontime delivery, achievements in advanced quality systems, customer satisfaction and affordability.

**Security and Detection Systems** received an award in the category of Innovative Security Technology for its VCT30 explosives detection system (EDS). Awarded in Rome, Italy at AVSEC World 2002 - a cooperative forum comprised of government organizations, airlines and airports in the global air transport industry - the VCT30 is the only Federal Aviation Administration (FAA) ARGUS system to receive such an award.

BT Fuze Products was awarded the "We Make a Difference Award" for its Integrated Product Team (IPT) efforts on the M762A1/M767A1 Fuze Program from the US Army's Armament Research, Engineering and Development Center.

Electrodynamics received certification in the Process Validation Program (PVP) from Lockheed Martin Aeronautics Company and retained its certification as a Silver Supplier with The Boeing Company.

ESSCO was honored with a Gold **Supplier award from Northrop** Grumman Space Technology as a result of the company's performance on a contract to supply a 100-footdiameter metal space frame radome.

Space and Navigation has received the Large Business of the Year award from United Space Alliance (USA). This honor is in recognition of the outstanding performance demonstrated on the Space Shuttle program.



## L-3's systems provide the command, control and communications needed for network-centric interoperability.

he war in Iraq had many transformational elements, including joint operations, the effective use of Special Operations Forces (SOF) and speedy movement of troops and supplies. But perhaps two of the most effective advantages were the superiority of US technology – data links, satellites and airborne sensors – that detect the enemy through challenging weather conditions; and the coordination among ground, air and space assets to deliver precisionguided weaponry and eliminate threats.

These technological achievements are the continuation of US efforts to fully realize the promise of network-centric warfare – providing real-time, executable

battlefield information from multiple platforms and sources to the warfighters. A leader in secure communications and ISR, L-3 is also continuing its vital role in assisting the US military in realizing that vision. There were several key developments in 2003 that will continue into the future.

### THE FUTURE OF NCCT AND ISR

L-3 serves as a prime contractor for ISR by supplying signals intelligence (SIGINT) and communications intelligence (COMINT) systems, which when combined with human intelligence (HUMINT), provide real-time situational awareness for the responding warfighter. L-3 is also a leader in

secure communications, providing secure data links, secure telephone and network communications infrastructure equipment and encryption management and communication systems for tactical, unmanned and reconnaissance aircraft, surface and undersea vessels and manned space flights and satellites.

The US Air Force selected L-3 Communication Systems-West to design develop the Multi-Platform Common Data Link (MP-CDL), supporting the transmission and receipt of data between ground facilities and multiple simultaneous air vehicle platforms. L-3 is also developing the third-generation Tactical Common Data Link (TCDL) system, called the Multi-Role TCDL (MR-TCDL). This Joint Tactical Radio System (JTRS)-compliant system provides wideband backbone and networking services and operates in numerous CDL, MP-CDL and satellite communications modes. Both MP-CDL and MR-TCDL are cornerstones for future network-centric communications - providing the wideband communication

architecture that connects critical information flow within the ISR community.

In addition, L-3 ComCept is the prime contractor for Joint and Coalition Forces – Network-Centric Collaborative Targeting (NCCT), which is transforming network-centric warfare technology. L-3's Network Enabled Technologies (NET) allow forces to use their platforms, sensors and weapons more efficiently by managing all of their networked resources as a single high-performance system. NCCT is being installed on the core ISR-enabled fleets for the US and UK and is on track for a successful demonstration in 2004. NCCT participants include the Airborne Warning and Control System (AWACS), Distributed Common Ground Systems (DCGS), Joint Surveillance Target Attack Radar System (JSTARS), Nimrod, Rivet Joint, Guardrail and the Combined Air Operations Center. Also in 2003, L-3 Integrated Systems (IS) demonstrated its Lightweight SIGINT (LITES) technology, which dramatically increases SIGINT capability via multiple-platform collaboration. This key enabler for the NCCT system exemplifies transformational ISR.

### RECONNAISSANCE

L-3 Communication Systems-West is also a major supplier to special intelligence military programs and aircraft. In 2003, L-3 continued its supportive role for the Predator and Global Hawk UAV platforms and for the U-2 reconnaissance aircraft.

L-3 IS had record bookings for its tactical reconnaissance programs, which resulted in important new capability development efforts for the RC-135

(left)

### **Outfitting Special Operations Soldiers**

The Joint Operations Group of L-3 Integrated Systems provides worldwide logistics support to the US Special Operations Command (USSOCOM) as part of the \$1.5 billion Special Operations Forces Support Activity contract, one of the largest contracts in L-3's history. L-3's integrated logistics support includes a full range of Special Operations Aviation systems integration and maintenance, unique wheeled vehicle engineering and design, integrated logistics support, gunsmithing, watercraft refurbishment and communications-electronics and night vision device repair and return.



### **Secure Communications and ISR**

(right) The High Altitude **Observatory (HALO-**II), a modified **Gulfstream business** jet, carries the L-3 Aeromet-developed Heimdall-IR<sup>TM</sup> surveillance system, which uses precision EO/IR radiometric and tracking data to support key test and measurement objectives during missile defense development. Aeromet was acquired by L-3 in May 2003 and is now part of L-3 IS.





(left)
L-3 IS continues to modernize and support the US Air Force's RC-135
Rivet Joint fleet by performing airframe and mission systems modifications. The on-board sensor suite allows the mission crew to detect, identify and geolocate signals throughout the electromagnetic spectrum.

Rivet Joint. In addition, L-3 IS received increased funding for ongoing and continuous support of the Big Safari Logistics program. L-3 also won expanded work to provide special mission self-protection and communications systems installation for a variety of aircraft platforms.

The 14-aircraft EH-130H Compass Call fleet performs tactical command, control and communications countermeasures and recently completed missions in support of Operation Iraqi Freedom. In addition to its support of the Compass Call program, L-3 IS will now supply periodic depot maintenance, modifications and contractor support services for the EH-130H.

L-3 Communication Systems-East's state-of-the-art S/TAR™ Digital Solid State Recorder was selected for the US Air Force's F-16 Theater Airborne Reconnaissance System (TARS) Electro-Optical Pre-Planned Product Improvement (P3I) program. Along with an L-3 Communication Systems-West data link, the new subsys-

tems will allow the TARS pod to provide the warfighter with real-time Image Intelligence (IMINT) for Bomb Damage Assessment (BDA) that is superior to their current reconnaissance pod.

A key tactical communications project for the US Army is the Phoenix program. L-3 Communication Systems-West will design, integrate and test the Tri-Band Satellite Communication System to be mounted on High Mobility Multipurpose Wheeled Vehicles (HMMWV). The Phoenix system will replace the Army's aging fleet of more than 150 Ground Mobile Forces (GMF) Tactical Satellite Communication Systems for higher bandwidth satellite communications.

### **EXPANDED CAPABILITY - EO/IR**

L-3 expanded its electro-optical and infrared (EO/IR) services capability with the acquisition of Aeromet. In 2003, the business received an option from the Missile Defense Agency (MDA) for the extension of the Airborne Infrared Surveillance (AIRS) concept

development program. The proposed AIRS system consists of a high-performance, infrared telescope and data collection system capable of being integrated on either manned or unmanned air vehicles to detect, track and discriminate ballistic missiles in all phases of flight. The system is also capable of providing infrared detection and detailed imaging of ground targets.

L-3 is also playing a critical role in the MDA's development of the Groundbased Midcourse Defense Segment (GMDS). Communication Systems-East is under contract to provide Solid State Power Amplifier Assemblies (PAA) for the GMD Extremely High Frequency (EHF) communications subsystem. The PAA, developed, manufactured and tested by L-3, resides on the Ground-Based Interceptor (GBI) booster and is part of the communications system between the kill vehicle and the ground-based command and control system. It collects and processes target acquisition information and provides inflight updates that enable the kill vehicle to acquire, intercept and destroy the target.

### **SECURE PRODUCTS**

L-3 Communication Systems-East has recently received National Security Agency (NSA) certification for the RedEagle<sup>TM</sup> KG-240, a 100 Mbps network encryptor. The RedEagle KG-240 is the first product ever to both receive NSA certification and meet the US government's stringent High Assurance Internet Protocol Interoperability Specification (HAIPIS). L-3's Red-Eagle family of products is expected to play a key role in establishing a secure infrastructure in support of the DoD's transformational communication networking initiatives.

L-3 Communication Systems-East reached a major program milestone in 2003 with the delivery of its 100,000th Secure Terminal Equipment (STE) unit since procurement began in 1998. In 2003, there were also orders for L-3's Secure Voice Conference Services (SVCS) from the DHS and for STE-R as the next member of the STE family of products.

## On the battlefield, there are no runners up.



There's a reason why L-3 is an incumbent on major C<sup>4</sup>ISR programs. L-3's secure communications and ISR products prove themselves successfully every day in every theater – on the ground, in the air and at sea.

At the heart of the DoD's network-centric warfare systems are L-3's SATCOM terminals, secure communications products, data links and sensors.

he superior performance of
US troops in both
Afghanistan and Iraq was due
to many factors, including the
personal courage and skill of
our forces, their sharing of intelligence
and information, the precision and
lethality of their weapons – and the quality of their training.

By using state-of-the-art training and simulation systems that replicate the challenges, terrain and weather conditions of specific combat zones, military personnel can achieve the readiness needed to embark on missions. A high degree of realism in a training environment facilitates a better response in actual action and provides a key psychological advantage in the field.

Training will continue to be a high priority for the DoD for many reasons. Ongoing operations and a shift toward joint coalition forces are creating an increased need for simulated training, as cost factors, complex environments and deployment schedules decrease live training opportunities. New training technologies, which provide realistic, immersive experiences, will be used to maintain optimum readiness and L-3 Link Simulation and Training is at the forefront of this initiative with advanced simulation products and training services.

### **AVCATT-A**

In 2003, Link delivered four of its unique Aviation Combined Arms Tactical Trainer-Aviation Reconfigurable Manned Simulator (AVCATT-A) suites to the Army and Army National Guard. AVCATT-A suites replicate five separate helicopter platforms to support a highly realistic combat environment. This envi-

# Training, Simulation and Support



(clockwise from top left)

In 2004, Link will deliver an F-16C Block 52+ Aircrew Training Device to the Hellenic Air Force.

Link continues to deliver F/A-18E/F Tactical Operational Flight Trainers (TOFT) to the US Navy to support pilot and weapon systems officer training. These F/A-18E/F TOFTs are the first simulators to incorporate the company's SimuSphere $^{\rm TM}$  dodecahedron visual system display.

E-3 Airborne Warning and Control System flight crews now use modern simulators to practice challenging air refueling operations.

The F/A-22 Weapons Tactics Trainer enables Raptor pilots to gain extensive procedural training and build competence in both individual and team weapon systems employment.



ronment enables aircrews to fly in all combat modes, day and night, against an enemy force in networked exercises. Each suite consists of two mobile 53-foot trailers that house six reconfigurable simulators, a Battle Master Control Room and an After Action Review Theater that can be transported wherever necessary. L-3 will deliver three more suites and expects to receive additional production contracts during 2004.

One of the most innovative technologies associated with AVCATT-A is its helmet-mounted display, which sets a new standard in visual simulation display capability. Each of the suite's 12

pilots use helmets that provide a 360degree field-of-regard. L-3 is continuing to make investments in this technology and is working on a new, lightweight system, which will attach to a pilot's actual helmet, enabling ondemand training anytime and anywhere.

In addition to AVCATT-A, L-3 provides howitzer crew gunnery simulators and training simulators for such major air platforms as the F/A-18, F/A-22, F-117, F-16 and the B-2. L-3 also supplies computer-based training and simulators for the E-3 AWACS and the P-3 maritime surveillance aircraft.



### FLIGHT SCHOOL XXI

In early 2004, Link won a contract to provide simulators and contractor logistics support for the Army's Flight School XXI, a major program designed to increase aviators' aircraft experience prior to their first combat unit assignment. Under this program, Link will develop, test, install, operate and maintain all of Flight School XXI's Advanced Aircraft Virtual Simulators and Reconfigurable Training Devices. These training devices will incorporate the latest virtual simulation technologies developed at Link and will contribute to the Army's goal of increasing pilot proficiency and better supporting units' efforts to sustain combat readiness. Link will also provide extended logistics support for these products for the life of the program.

There were many key awards during 2003, including funding from Boeing to build additional F/A-22 pilot training devices and a delivery order award for concurrency upgrades on aircrew and maintenance training systems for the US Air Force B-2A Spirit training program. There was also a strategic win to provide contractor aircrew training services for the US Air Force's E-8C JSTARS Flight Crew Training program.

Link trainers already account for over 90% of the fielded flight simulators for F/A-18 training. In 2003, Link received a contract to build and upgrade F/A-18E/F flight simulators and a Link and L-3 Government Services, Inc. (GSI) team was awarded a contract option to develop a second F/A-18C Distributed Mission Training suite.

On the international front, the Commonwealth of Australia announced it has entered into a Deed of Agreement with Link and Raytheon Australia to provide the Royal Australian Air Force (RAAF) with a modern F/A-18 Hornet Aircrew Training System.

Also in conjunction with Link, GSI was selected to bid on the US Navy's \$3 billion Training Systems Contract II from the Naval Air Systems Command (NAVAIR) Training Systems Division. Through 2011, Link and GSI will have the opportunity to bid on delivery orders for training design, development, production, modification, evaluation, delivery, product support and system test and evaluation.

The market for government outsourcing services also continues to be a growth area, as it accommodates expanding requirements cost-effectively. L-3 divisions are equipped to respond to governmental agency requests for experienced support personnel in national security and organizational management programs, emergency management systems and leadership training and educational development areas.

### **GREATER DEMAND FOR SERVICES**

In 2003, L-3 consolidated four companies, creating GSI from its Analytics, EER Systems, IMC and TMA businesses. GSI serves a customer base that includes the DoD, DHS, state and local governments and selected US government intelligence agencies.

In 2003, GSI was awarded a task order under a USSOCOM 5-year Indefinite Delivery/Indefinite Quantity (ID/IQ) contract to provide intelligence and security support to the Joint Special Operations Command (JSOC). Under this order, L-3 will provide analytical support for intelligence services, including exploitation and analysis operations, operational and exercise planning, imagery system exploitation and security management support.

The L-3 GSI team has also received awards under a major intelligence community client blanket purchase agreement to provide information technology services, such as systems and enterprise engineering, communications, information technology infrastructure operations and life-cycle support to members of the intelligence community.

During 2003, L-3 MPRI continued to provide its expertise in the US and around the world with programs that support the US DoD, non-DoD agencies and companies in the corporate sector. MPRI provided a wide range of services to foreign governments, including organizing democracy transition efforts and strategic planning.

MPRI supports the Program Executive Office (PEO) Soldier program, which distributes equipment to those US Army units deploying to Afghanistan and Iraq. In addition, L-3 ILEX Systems Field Software Engineers were deployed at the onset of Operation Enduring Freedom in Afghanistan. In Iraq, engineers are providing direct systems support to more than 400 All Source Analysis Systems, Integrated Meteorological Systems, Digital Topographic Support Systems

and Common Ground Station Systems.

In addition, L-3 provides administrative support to the Defense Intelligence Agency, performing document searches and providing linguists in the Middle East. In Iraq, MPRI is working closely with the New Iraqi Army Training Program, augmenting the Defense Intelligence Agency, as well as providing staff instruction to the Iraqi Ministry of Defense. MPRI also provides staff instruction to the Afghanistan Ministry of Defense and training programs for the Afghan National Army. In Kuwait, MPRI has been working with the Kuwaiti National Guard to enhance its professional development program and is also providing Observer/Controller assistance to its units.

L-3 is also a leading provider of intelligence technology service and support to several US space and missile defense organizations and is a supplier of engineering and scientific services and information technology services to the government sector. In 2003, L-3 received awards for NUMAS (NORAD and US Space Command Mission Architecture Support) supporting NORTHCOM in areas such as cruise missile defense and strategic intelligence for special operations units developing critical communications links around the world.



## Preparing for battle. Anytime. Anywhere.



For the first time... a mobile, reconfigurable training system, enabling teams to operate the US Army's full complement of tactical helicopters and collectively train as they will fight... before they ever leave the ground.

The Aviation Combined Arms Tactical Trainer-Aviation Reconfigurable Manned Simulator (AVCATT-A) - developed exclusively by Link Simulation and Training.



# Aviation Products and Aircraft Modernization

he Aviation Products and Aircraft Modernization segment expanded significantly in 2003, taking advantage of growth in the military aircraft modernization portion of the DoD budget and providing additional capabilities to key international allies and customers. Supporting current operations in Afghanistan and Iraq necessitates modernization and maintenance services to keep the fleet in good working order.

At the same time, the balance between new platforms and fleet upgrades is another important development that will impact DoD spending over the next several years. Although the DoD anticipates the production of new and expensive platforms for the armed services, there is a limit to its spending. DoD officials are already decreasing the quantities they order of each new platform and are looking to upgrade and maintain existing platforms to ensure readiness and keep within spending limits. They are citing the superior performance of upgraded US platforms in Afghanistan and Iraq as evidence that the US can be effective by using existing aircraft in transformational ways.

### L-3 ADDS VERTEX AND MAS

In military aircraft modernization, L-3 added two synergistic companies to its L-3 IS and Spar Aerospace operations, making it one of the largest providers in this market niche. L-3 made the second-largest acquisition in its history with the addition of a former joint-venture partner, Vertex Aerospace LLC, a leader in logistics support, modernization, maintenance, supply chain management and depot services. Now an L-3 IS subsidiary, Vertex brings support for 2,800 active fixed- and rotarywing aircraft, as well as over 85 vehicle platforms and operations in 306 military sites and other US government sites worldwide to L-3.

Prior to its acquisition of Vertex Aerospace, L-3 had partnered with the company, as well as Paragon Systems and U.S. Helicopter, to win a competitively bid, 10-year, \$2.7 billion contract to provide contractor logistics support at Fort Rucker, Alabama. The partnership will provide personnel, management, material parts, supplies, transportation and equipment to perform aviation unit maintenance, aviation unit intermediate maintenance and approved depot maintenance in support of flight training of all assigned rotary-wing aircraft at Fort Rucker.

L-3 also acquired the US and Canada-based Military Aviation Services (MAS) from Bombardier Inc. L-3 MAS is a leader in systems engineering support and aircraft modernization and offers a full range of technical services in maintenance, repair and upgrade for military aircraft and regional jets. This acquisition significantly enhances L-3's Canadian operations



(WESCAM and Spar Aerospace) and favorably positions other divisions within L-3 for future in-country opportunities.

In 2003, L-3 Spar completed the design, development and prototyping of a number of structural life extension and systems reliability improvements for the Lockheed Martin C-130 transport aircraft. In addition, Spar was awarded the production phase of the Canadian Department of National Defence (DND) C-130 structural refurbishment and wiring upgrade program. Spar intends to combine its C-130 depot-level maintenance, structural modification and avionics upgrade capabilities and program experience to offer comprehensive fleet support to respond to the upcoming

### (below)

An L-3 joint-venture team won the contract to provide maintenance and logistics support for rotary-wing aircraft at Fort Rucker, Alabama, which represents the largest aircraft maintenance contract in the DoD. Aviation operations at Fort Rucker account for approximately 40% of the US Army's total flying program. Supported aircraft types include AH-64A, AH-64D, CH-47D, EH-60A, OH-58A/C, OH-58D, TH-67, UH-1 and UH-60A.



optimized C-130 weapon systems management requirements of the DND.

In addition, L-3 MAS is instrumental in the Canadian CF-18 modernization program, retrofitting the first CF-18 with an upgraded avionics suite in 2003. MAS is developing a Center Barrel Replacement prototype, a critical milestone for the CF-18 mid-life structural program. L-3 MAS is also working with Sikorsky Aircraft Corporation and General Dynamics Canada to offer in-service support of the H-92 helicopter for the Maritime Helicopter Program - the Canadian government's largest military capital program for the foreseeable future.

### INTEGRATED SYSTEMS CONTRACT WINS

L-3 IS has maintained a long and successful relationship with the USSOCOM and in 2003 was awarded a 10-year, \$1.5 billion ID/IQ award. Under this contract, L-3 will provide logistics support to the USSOCOM, its component commands, selected DoD customers and designated government agencies. The program is known as Special Operations Forces Support Activity (SOFSA).

L-3 IS was also awarded an initial contract for the Multimission Command and Control Aircraft (MC2A) for design of important radar-related aircraft systems as part of the MC2A Weapon Systems Integration effort. L-3 also completed the upgrade of the US Navy's E-6 fleet to an E-6B configuration, which now performs the missions of the E-6A Take Charge and Move Out (TACAMO) and the US Air Force EC-135 Airborne Command Post fleets. In 2003, L-3 IS extended its record of consecutive on-time US Navy deliveries to 158, which includes E-6B and P-3 aircraft.

In the international arena, L-3 IS continued its work on designing and modifying the prototype aircraft for the Canadian CP-140 Aurora Incremental Modernization Program. L-3 will also continue delivering upgraded AP-3Cs to the RAAF as part of the Sea Sentinel program. The AP-3Cs have already been successful in service in the Middle East and in winning the prestigious Fincastle trophy, an international anti-submarine warfare competition.



### Aviation Products and Aircraft Modernization

The RAAF has also certified L-3 MAS as an Authorized Engineering Organization (AEO) to perform work on its F/A-18 aircraft.

### **AVIATION PRODUCTS**

In aviation products, L-3 received a host of key contracts in 2003, includ-Communication Management Systems for B737 aircraft to support the Special Air Mission of the US Air Force, as well as displays for the C-130J and KC-130J and the F-15K Eagle fighter aircraft. There was also an award for the Army Airspace Command and Control (A2C2) program, a tactical operations command post hosted on a UH-60 Black Hawk helicopter. L-3 Display Systems also won awards for the AH-64 Apache, C-130H Hercules, CH-46 Sea Knight, C-27J Spartan, C-17 Globemaster, T-38C Talon, A/MH-6 SOF helicopters and JAS-39 Gripen.

In 2003, Display Systems received Federal Aviation Adminis-

tration (FAA) Technical Standard Order (TSO) certification approval of its first product specifically developed for the commercial avionics marketplace - the PVI-600™ Series commercial Multi-Function Display (MFD). This active matrix liquid crystal display (AMLCD) replaces existing radar indicators with an instrument capable of displaying radar, Traffic Alert and Collision Avoidance System (TCAS) and Terrain Awareness and Warning System (TAWS) data. L-3 also delivered the Display & Control Subsystem (DCS) for the Virtual Imaging System for Approach and Landing (VISUAL) initiative. This system provides vital situational awareness information to the Landing Signal Officer during aircraft recovery operations on conventional aircraft carriers.



(above left to right)

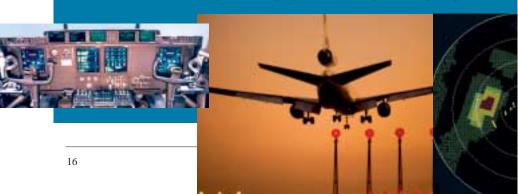
Display Systems will be providing mission computer Display Units (DU) for the C-17 Globemaster III airlifter. These 4-inch by 3-inch active matrix liquid crystal displays feature high-resolution, high-brightness performance and night vision goggle compatibility.

SkyWatch is the leading general aviation collision avoidance system, providing pilots with up to the second traffic information anywhere in the world. Its active technology operates independently of ground-based radar and easily integrates with most MFDs, Electronic Flight Instrument Systems (EFIS) and radar indicators.

### (below left to right)

Display Systems was awarded a multi-year contract to provide cockpit displays for C-130J aircraft for the US Air Force and KC-130J aircraft for the US Marines.

The ACSS FAA-certified T<sup>2</sup>CAS is a unique safety avionics product that combines a Terrain Awareness and Warning System (TAWS) with the industry's leading Traffic Alert and Collision Avoidance System, the TCAS 2000. T<sup>2</sup>CAS can be applied to any air transport, regional, business or military aircraft and provides unique predictive warnings and cockpit displays.



L-3's Military Airborne Surveillance System (MASS™), an enhanced TCAS for military formation and rendezvous operations, made its first flight in August of 2003. Produced by L-3's Aviation Communication & Surveillance Systems (ACSS), MASS has been selected for the Boeing 767 Global Tanker Transport Aircraft. In addition, L-3 Electrodynamics received a follow-on contract from Lockheed Martin for Crash Survivable Memory Units (CSMU) for the F-22 Raptor, as well as a contract from Boeing for the initial production of ten Advanced Signal Data Computers (ASDC) for the T-45 Goshawk trainer. Additionally, L-3 Targa Systems has developed an Ethernet Data Transfer System for the X-45 Unmanned Combat Aerial Vehicle (UCAV) development program.

L-3 has the distinction of being involved in the creation of the world's largest airborne observatory for NASA and the German space agency DLR. A 2.5-meter telescope assembly from Germany was installed by L-3 IS aboard the 747 aircraft that will serve as the Stratospheric Observatory for Infrared Astronomy (SOFIA).

### **GROWING GENERAL AVIATION MARKETS**

In addition to providing comprehensive military aviation products and services, L-3 offers the marketplace a broad range of products for commercial and general aviation. These include cockpit displays, collision avoidance and proximity warning systems, flight management systems and solid state flight data and cockpit voice recorders and data transfer units.

In 2003, commercial air travel continued to be weak due to a combination of economic recession, the presence of SARS in Asia and lingering air travel safety concerns. However, during the fourth quarter, there was an increase in travel and many analysts believe that there will be a recovery in this industry beginning in 2004.

Despite this environment, L-3 ACSS achieved some key milestones in 2003. Its next-generation TCAS was selected by Dassault to be a standard installation on the new Falcon 7X business jet. T<sup>2</sup>CAS<sup>TM</sup>, a combined TCAS



and TAWS, earned FAA approval and its first supplemental type certification (STC) and has been selected by more than 25 commercial and military operators. Airbus has begun to offer L-3's T2CAS as a supplier-furnished equipment option for its current production long-range aircraft.

One bright spot in the air travel market is general aviation. In 2003, L-3 acquired Avionics Systems, a growing commercial and military avionics business from the Goodrich Corporation. L-3 Avionics Systems has been a pioneer in general aviation systems with its popular Stormscope® lightning detection instrument, SkyWatch® collision avoidance product and its new LandMark<sup>™</sup> TAWS. In addition, the division has developed SmartDeck®, a revolutionary integrated avionics suite combining navigation, attitude and heading reference system (AHRS) and situational awareness technologies, while also integrating communications, engine and aircraft systems monitoring and autopilot capabilities.

Avionics Systems continues to seek out niche opportunities that expand its business mix. The division's Electronic Standby Instrument System (ESIS) will be standard equipment aboard Cessna business jets, its ESIS model GH-3001 will be part of the US Army Apache Helicopter program in Europe and the GH-3100 was also selected by Raytheon for all Beechcraft King Air 200 and 350 models.

Boeing also selected Avionics Systems to install Tactical Air Navigation (TACAN) systems in more than 400 T-38C aircraft for the T-38C Talon Avionics Upgrade Program. As part of the Air Education and Training Command program, the T-38C Talon is a primary trainer for the US Air Force. Equipped with the L-3 TACAN system, the aircraft will have the capability to track up to four ground stations simultaneously in range and two in bearing. The system's navigation information will display directly onto the Talon's Multi-Function Displays and can be used for air-to-air or air-to-ground operations.

L-3 Aviation Recorders was selected as the exclusive supplier of the Cockpit Voice Recorder and Flight Data Recorder for Airbus' new A380 doubledeck jetliner scheduled to enter service in 2006. This selection makes Aviation

Recorders the standard supplier for the entire fleet of Airbus aircraft. L-3 was also selected by Alitalia Express to be the supplier of the Combined Voice and Data Recorder for its new 170/190 aircraft. In addition, Aviation Recorders has introduced the Micro Quick Access Recorder (mQAR). The mQAR, less than four cubic inches in size, plugs into an existing cockpit connector and can record over one thousand hours of flight data parameters onto fixed or removable Compact Flash media.

Aviation Recorders' Hardened Voyage Recorder (HVR) product maintained its market position by securing multiple million-dollar bookings with industry-leading companies, such as Japan Radio Corporation, Kongsberg Maritime Ship Systems, Consilium Navigation, Rutter Technologies and Samsung Heavy Industries. The HVR has become recognized in the industry as the standard for maritime black box technology.

hen L-3 was formed in 1997, one of its primary goals was to become a leading merchant supplier of hightechnology products to the DoD and prime contractors. Since that time, L-3 has become the largest merchant supplier in the defense industry by developing new products and selecting acquisitions with key products in DoD priority areas, including precision guidance and munitions, telemetry, microwave and sensors, naval warfare and security.

In the conflicts in Afghanistan and Iraq, precision weaponry became critical in eliminating enemy targets and minimizing civilian casualties. L-3's telemetry, fuzing, electronic and electromechanical safety and arming devices (ESAD) and GPS-based guidance and satellite navigation products were resident on many of the nation's key weapons. L-3 KDI has developed products for several advanced precision weapon systems, including the Joint Standoff Weapon System (JSOW), AIM-9X Sidewinder Air-to-Air Missile System, Guided Multiple Launch Rocket System (GMLRS), Extended Range Guided Munition (ERGM) and the Evolved Sea Sparrow Missile.

### THE PROVING GROUND OF PRECISION WEAPONS

In 2003, the US Navy selected KDI to produce over 70,000 FMU-139 bomb fuzes, which are used on the Joint Direct Attack Munition (JDAM), as well as laser-guided bombs that were used extensively in Operation Iraqi Freedom. Additionally, L-3 Telemetry-West provides Compact Telemetry Kits (CTM), which will provide telemetry during flight tests of the JDAM program. Each CTM includes a PCM300 telemetry encoder, CTS-905 synthesized 5-watt S-band transmitter and electrical harnessing, configured as an integral telemetry subsystem.

In 2003, L-3 fuze businesses KDI and BT Fuze Products won several key awards, including one from the US Army's Tank-automotive and Armaments Command-Armament Research Development and Engineering Center (TACOM-ARDEC) Command for its M762A1/M767A1 Electronic

L-3 offers the broadest range of advanced electronics, ocean, telemetry and precision guidance, navigation and munition products for air, sea, ground and space applications in the defense industry.

## SPECIALIZED PRODUCTS

Time Artillery fuzes. L-3 received orders for M234 electronic Self-Destruct Fuzes used in Dual Purpose Improved Conventional Munitions (DPICM) grenades and delivered wall-breaching tank ammunition for the new Stryker Brigade Combat Team.

In addition, there were awards to develop, produce and qualify an improved Tactical Munitions Dispenser (TMD) fuze for the US Air Force's Sensor Fuzed Weapon. KDI and Telemetry-West were also selected to supply the fuze and telemetry hardware for the Small Diameter Bomb, the next-generation precision weapon being developed by Boeing and the Air Force. In addition, BT Fuze was selected to provide a safety and arming device for the US Army's Precision-Guided Mortar Munitions.

KDI is designing a safety and arming device for the US Navy for use in its new Long Range Land Attack Projectile. KDI has also received a contract for a jam-resistant Height of Burst Sensor for Raytheon, which will be incorporated in the UK's Paveway IV precision-guided munition.

L-3 Space and Navigation was selected by the Army and Marine Corps Surveyors to receive a competitively awarded contract for the provision of the Improved Position and Azimuth Determining System (IPADS). Space and Navigation's Compact Tactical Surveyor (CATS) will provide the Army

and Marine Corps Surveyors with the capability to seamlessly adopt technological improvements that enhance reliability, which increases crew readiness to accomplish missions.

Developing new products is central to the growth of merchant suppliers such as L-3. The DoD and prime contractors looking to acquire products and subsystems for new platforms or for upgrading existing assets need to review them well in advance to ensure they meet requirements. L-3 BT Fuze and KDI are the only two US firms under contract with the US Army to develop Self-Destruct Fuzing, a program required to eliminate unexploded ordnance in the battlefield. BT Fuze is employing a pyrotechnic technology solution, while KDI is employing electronic technology to adapt to numerous ammunition products.

L-3 Interstate Electronics Corporation (IEC) was awarded a program research and development contract by the Space and Missile Systems Center at Los Angeles Air Force Base to reduce risk and advance the technology required for the future development of Modernized Military Global Positioning System User Equipment (MUE).

The results of L-3's work will provide a better understanding of the technical specifications and the risks regarding the implementation, certification, integration and operation of the MUE security architecture.



### PRODUCTS FOR THE DIGITAL BATTLEFIELD

L-3 Ruggedized Command and Control Solutions (RCCS) is a leading supplier of ruggedized, state-of-the-art military displays and computers designed for demanding operational environments. RCCS portable computers meet the military's digital battlefield requirements and are versatile, upgradeable solutions for situational awareness, command and control and weapons targeting applications. RCCS is currently developing military displays with the added capability of compatibility with night vision goggles, which will also have homeland security applications. In addition, RCCS provides the ruggedized COTS hardware for the UPX-24, a product that operates as part of a shipboard Identification Friend or Foe (IFF) sys-

L-3 Telemetry-West developed breakthrough technology, ENTR (the



ENTR is a tactical receiver that packs the power of a formerly rack-mounted receiver into a small, lightweight model suitable for use in portable configurations in the field.

Embedded National Tactical Receiver), and successfully tested it in 2003. This miniaturized receiver packs the power of a rack-mounted system into a small, lightweight module that delivers unprecedented tactical intelligence to the warfighter. Across the corporation, L-3 continues to improve its ISR recorders, unattended sensor suites, command and control terminals and intelligence processors.

Because of the demands of current US military operations, the need for small, portable and mobile satellite communications terminals has been very strong in 2003. L-3 Narda Satellite Networks received an order from the US Navy's Space & Naval Warfare Systems Command for Fly-Away Tri-Band Satellite Terminals (FTSAT) and the new Defense Satellite Communications System (DSCS)-certified mobile HumVee-mounted Quad-

### **Specialized Products**



### (above)

Randtron is supplying the next-generation
Airborne Early Warning (AEW) radar antenna
for the Navy's E-2C Hawkeye surveillance aircraft.
The new antenna and rotary coupler will be developed as part of the System Development and
Demonstration (SD&D) of the Advanced Hawkeye
(AHE) program and will replace the TRAC-A
antenna and rotary coupler currently in
production.

### (below)

Designed under the Army's Force XXI Battle Command, Brigade and Below (FBCB2) program, the Appliqué+ V4 computer offers rugged technology and an impressive array of features that deliver the performance needed for the digital battle-field. This system has Pentium performance and a remote color display and keyboard that facilitate installation in vehicles and modular designs.

Band Dual Hub Terminals (QDHT). In addition, the US Army's Communications Electronics Command placed an order for FTSATs, allowing its users quick deployment of high-speed satellite applications for use around the world. Most recently, the FTSAT was selected as part of the Kuwait Iraq C4 Commercialization (KICC) program.

L-3 Electron Devices' advanced line of vacuum electron devices are gaining new customers and market share and the company's microwave power modules for UAV data links and radar systems are also being utilized by US military forces. The division was awarded a contract from Raytheon Missile Systems to supply all Traveling Wave Tubes (TWT) used in the AIM-120 Advanced Medium Range Missile Air-to-Air (AMRAAM). Electron Devices was also awarded a contract from the US Air Force to supply TWTs for two high-power surveillance radar systems. The Perimeter Acquisition Radar Attack Characterization System (PARCS) and the Cobra Dane Radar System provide early warning and attack assessment for missiles that would impact the continental United States. L-3 is also a leader in high-performance antennas for surveillance and display units for the US military.

In 2003, L-3 Randtron won a major award to provide the next-generation Airborne Early Warning (AEW) radar antenna for the US Navy's E-2C Hawkeye surveillance aircraft. Slated as the single most important development for the E-2C Hawkeye, the radar and antenna system will provide the operational community with significantly advanced Navy AEW and Theater Air and Missile Defense (TAMD) capabilities. In addition, L-3 ESSCO recently replaced a 68-foot-diameter space frame radome as part of the Millimeter Wave Radar Replacement Radome Program for Kwajalein Range Services.

L-3 WESCAM is a world leader in the design and manufacture of wireless visual information systems. Its capabilities include the capture of highly stable images from aerial platforms for surveillance and targeting or the real-time transmission of the imagery to tactical command sites for interpretation or to television production facilities for live broadcast. WESCAM's primary products are the MX Series stabilized EO/IR turrets for image capture and SkyPOD and WISARD™ Aztrack for air-to-ground image transmission and reception.



L-3 WESCAM supplied its MX-15s to the UK Ministry of Defence (MoD), which were operationally deployed during Operation Telic by the Royal Air Force (RAF), providing an improved EO/IR capability for the Nimrod aircraft. L-3 is supplying MX-20 sensor systems for the Canadian DND's CP-140 Aurora Incremental Modernization Program. The MX-20. one of the highest performing stabilized multi-sensor systems in the world, provides superior video reconnaissance capabilities from a broad array of rotary- and fixed-wing aircraft and is uniquely suited for surveillance and intelligence applications over land or sea

In addition, WESCAM is contracted to deliver state-of-the-art digital video EO/IR countermine step-stare sensor systems for the US Army's Airborne Standoff Minefield Detection System.

L-3 Telemetry-West announced the initial sales of its latest high-performance real-time I/O computing platform - Avalon™. Based on the widely successful heritage System 550 product family, Avalon offers telemetry processing, satellite commanding, avionics acquisition, simulation and processing in a completely modular system. In addition, Telemetry-West received initial orders for the new TCM-930 highcapacity portable microwave radio system. The TCM-930's portability and tunability allow it to be used in both homeland security and military applications.

L-3 Storm signed a contract with EADS Astrium to supply its InControl- $NextGeneration^{TM}$  (InControl-NG) satellite command and control software for use in the UK MoD's Skynet 4 and Skynet 5 Satellite Control Centres (SCC). In addition, Storm introduced its Automated Remote Tracking Station (ARTS) Interface Module II™ (AIM II), which provides flexible VME-based connectivity between spacecraft command and control systems and the US Air Force's worldwide Satellite Control Network (AFSCN). In addition, L-3 Telemetry-East signed a licensing agreement with Boeing for the rights to make aerospace products based on

Boeing's patented IntelliBus Network Systems technology.

### SMART SHIPS AND NEW TECHNOLOGY

In its ocean products businesses. L-3 supplies a broad range of equipment to the DoD and key international customers. From power conversion, power switching and protection devices to communications devices and anti-mine weapons and systems, L-3 products are resident on dozens of littoral platforms, including the Astute class of submarines and AEGIS cruisers and destroyers. As a leader in advanced underwater sonars and towed array products, L-3 Ocean Systems was selected by the Egyptian Navy to provide Low Frequency Active Towed Sonars (LFATS) with Anti-Submarine Warfare (ASW) capability for use in littoral waters. In addition, the Italian Navy accepted the first of its EH-101 helicopters equipped with L-3's Helicopter Long Range Active Sonar (HELRAS).

In keeping with the US Navy's "Smart Ship" and "New Technology" initiatives, Northrop Grumman Ship Systems selected L-3 Henschel to supply the Automated Bridge System (ABS) for the USS Makin Island (LHD-8) amphibious assault ship. Internationally, Henschel has achieved Strategic Supplier status with BAE Marine Systems based on contract awards for the Computerized Information System and the Integrated Communication System, which are both used on the UK Royal Navy's Astute class submarine.

L-3 SPD Technologies has supplied, and is currently under contract for, high-quality, shock-hardened, reliable electrical distribution and protection equipment for combatant US Navy shipbuilding programs, such as the Nimitz class aircraft carriers, Virginia class submarines and Arleigh Burke class destroyers.

In 2003, Northrop Grumman selected SPD to design and produce several key components for the new Integrated Power System that provides electric drive propulsion to the Navy's DDX program. L-3 Power Magnetics developed a pioneering modified-dry transformer, while L-3 Westwood and L-3 SPD Electrical Systems are developing a new generation of medium voltage switchgear. L-3 Westwood received orders from existing option contracts for power distribution on the DDG-51 Arleigh Burke class destroyers, the LPD-17 San Antonio class transport dock ships, the LPD-4 Austin class upgrade and the littoral upgrade of the Ohio class nuclear submarines. L-3 PacOrd technicians provided emergent support services, installing new systems and upgrades and repairing equipment in preparation for the US Navy's Surface Fleet deployment to the Persian Gulf in support of the Iraqi War.





WESCAM's MX Series is a family of airborne multi-spectral imaging turrets that are sealed and ruggedized for high performance in extreme environments.

The WISARD<sup>TM</sup> digital microwave system provides a clean and secure downlink from airborne turrets to ground receiver sites.

L-3 is a major player in a number of key homeland security markets, including airport security, cargo inspection, port and maritime security, mobile command and control systems, sensors, intrusion detection, border patrol and crisis management.

# Homeland

After the horrific actions of terrorists on September 11, 2001, the US has had no shortage of threats leveled against its interests. Catastrophe can come in limitless forms – a biochemical attack, weapons of mass destruction or a threat to the nation's airlines, bridges, tunnels and economic infrastructure. As a result, the war on terrorism has caused the US government to reassess security vulnerabilities, consolidate its agencies and personnel for greater focus on the challenges and prioritize spending to shore up the nation's defenses.

In 2003, the DHS took steps to reinforce national security, including



Photo: Courtesy of Northrop Grumman/Ron Elias

allocating resources for the US Coast Guard Integrated Deepwater System program, for first responders to enhance, prevent, respond and recover from possible terrorist acts and for the consolidation of customs and border patrol agencies.

However, the "Code Orange" alerts issued by the DHS in December 2003 are evidence that the nation is still very vulnerable to attack and that more work needs to be done. As Secretary of Homeland Security Tom Ridge said in remarks to the American Enterprise Institute, "... no single technology, no single group of people and no single line of defense ... can protect us. Homeland security, instead, requires a combination of those factors ...."

In 2003, L-3 made important contributions in assisting US efforts to protect its citizens and infrastructure. With decades of experience in providing military forces with security and intelligence products and services, L-3's businesses are leaders in the homeland security market with one of the broadest arrays of products in the industry. Key areas of L-3 expertise include airport security and cargo inspection systems, port, maritime and military base security, border surveillance, mobile command, control and communications and crisis management.

### **DEEPWATER**

The Deepwater program is a multi-year effort to modernize and replace the Coast Guard's antiquated ships and aircraft, and command and control and logistics systems. It was

**Under the Integrated Deep**water System program, L-3 provided systems architecture and preliminary design of completely integrated external and internal communications systems for the **Coast Guard's surface assets** and selected regionally dispersed shore site facilities.



awarded to the Integrated Coast Guard Systems joint venture led by Lockheed Martin and Northrop Grumman. L-3 serves as Deepwater's communications system integrator and in 2003 provided Command, Control, Communications and Computers, ISR (C4ISR) systems architecture and preliminary design of completely integrated external and internal communications systems for surface assets and selected regionally dispersed shore site facilities.

improved utilization of staffing.

Also in 2003, L-3 Communication Systems-East shipped five MarCom Integrated Voice Communication Systems (IVCS) to 123-foot legacy cutters. L-3's MarCom IVCS was developed to replace multiple stand-alone communications systems aboard ships and tactical operations centers on shore, allowing flexible, tailored, multi-level secure voice communications to increase both operational awareness and personnel efficiency. In addition, Bell Helicopter selected Communication Systems-West to provide the wideband ISR data links for its Eagle Eye Vertical Takeoff and Landing UAV (VUAV) as a part of the Deepwater program.

L-3 GSI was awarded three homeland security contracts by the Air Force Research Laboratory in Rome, New York. In addition, as part of the TMASC joint-venture team, L-3 GSI was awarded an order to provide technical, logistics, acquisition, training and information technology support to the Naval Special Warfare counternarcotics and foreign military sales boat and craft programs.

### **GUARDING OUR BORDERS**

L-3 is also a leader in surveillance and intrusion sensors, command and control, access control, underwater and radar surveillance and crisis management products. L-3 GSI is the prime contractor on the US Border Patrol Remote Video Surveillance system and also supplies the integration for the US Navy's Waterside Security System. L-3 is assisting the Bureau of Customs and Border Protection in its efforts to monitor US northern and southern borders with a turnkey package of long-range thermal imaging and low-light cameras, video stabilization and motion detection, transmission equipment and a fully outfitted control room. The WatchTower™ is the remote video surveillance system that is currently installed at several hundred sites on US and international borders.

GSI was also one of four contractors awarded an important ID/IQ contract to provide Integrated Base Defense Security Systems (IBDSS) to the US Air Force's Force Protection Command and

### **Homeland Security**



(right)

The L-3 ProTec Automatic Identification System (AIS) is a radio transmitter and receiver that is part of the navigation system of ocean-going and inland waterway ships. Broadcasting data containing the number of passengers on a ship, its cargo and position, the AIS also serves as a collision avoidance tool. In combination with a port's radar data, it can also be used to identify homeland security risks.

(left)

L-3's Cabin Surveillance System (CSS) allows a flight crew to visually monitor cabin activity without having to leave the flight deck or open the door. The cabin-mounted cameras and flight deck display combine to provide vital information for flight crew decisions in response to possible threats to the aircraft, cabin crew or passengers, medical emergencies and unexpected turbulence.



Control Program Office for the next five years. GSI provides vital security for critical fixed, temporary or mobile assets throughout the world by integrating electronic detection, alarm assessment, access control, communications, command and control and display capabilities to allow for effective response.

### AIR TRAVEL AND CARGO

Airport security remains a global concern to governments and authorities are becoming increasingly aware of the vulnerability of cargo to tampering by terrorists. L-3 is one of the largest X-ray security screening solutions providers, serving airports and seaports throughout the world.

In 2003, the Transportation Security Administration (TSA) ordered 63 eXaminer® 3DX 6000 explosives detection systems from L-3 Security and Detection Systems (S&DS) to monitor checked baggage. This order was in addition to its 2002 order of 425 systems for airports in the United States. The TSA also certified the eXaminer® 3DX 1000 to detect small amounts of explosives in checked bags.

The first eXaminers incorporating Networked Explosives Detection Systems (NEDS) were successfully deployed in 2003 at John Wayne International Airport in Orange County, California. Networking gives the airport the ability to share data between systems quickly and effectively and is a standard feature on all new deliveries, providing operational savings to the TSA.

S&DS also received approval for new orders in 2003 from the TSA for its next-generation hand baggage X-ray screening system, which incorporates Threat Image Projection (TIP). This new TIP Ready X-ray (TRX) system began initial deployments in airports in 2003.

Additionally, L-3 has installed a state-of-the-art, fully integrated and networked baggage screening system utilizing three turnkey checked baggage products – VIS, MVT and eXaminer – into Singapore's Changi airport.

Further, S&DS received approval from the Department for Transport (DfT) in the UK for its Multi-View Tomography (MVT) system. L-3 began worldwide deployment of the MVT in 2003 in response to the increasing demands by international airports for cost-effective, high-throughput, in-line Hold Baggage Screening (HBS) inspection solutions. S&DS continues to

expand its international dominance in the HBS market by capturing new orders for its VIS line of automated X-ray systems. L-3 also won an award for the first ever HBS for Poland's Warsaw Frederick Chopin airport with the VIS 108 system.

L-3 S&DS also received orders for five X-ray imaging cargo systems from the Kingdom of Saudi Arabia. These high-energy 9 MeV imaging subsystems will be incorporated into a fixed-site, high-throughput cargo inspection facility designed for 100% cargo inspection. Each L-3 X-ray imaging system was developed to inspect shipping containers at a rate of 50 units per hour, making these systems the fastest in the world today. In addition, S&DS received orders for two high-energy 2.5 MeV cargo screening mobile units for border control in Europe.

With increased emphasis on cockpit security, L-3 Aviation Recorders introduced a family of Cabin Surveillance System (CSS) products. The FAA-approved CSS allows pilots in the cockpit to monitor various areas of the cabin, especially in and around the cockpit door. The system supports up to 16 video cameras placed in the cabin

with two LCD video displays mounted in the cockpit. A wireless signaling capability allows the cabin crew to alert the pilots to any cabin activity requiring cockpit attention.

### SECURING OUR SHORES

With over 300 ports and 3,700 maritime terminals around the nation, port security represents a growing market for L-3, as a single instance of terrorism at a US port could have a devastating impact on the nation. In 2003, L-3 began to integrate capabilities and products from many divisions toward developing a comprehensive solution for securing America's ports. In 2003, L-3 GSI won a key contract from the Virginia Port Authority to provide security improvements for the Norfolk International Terminal, Portsmouth Marine Terminal and the Newport News Marine Terminal. L-3 will serve as the lead contractor and systems integrator for a closed circuit TV (CCTV) system and its supporting communications infrastructure.

L-3 Aviation Recorders completed development and industry certification (including US Coast Guard and Federal Communications Commission approval) of the ProTec Automatic Identification System (AIS) product. The AIS radio transponder autonomously transmits a ship's identification, position, heading, speed and other relevant information to all similarly equipped vessels within radio range. This equipment is now required for all large ships on international voyages as a means of avoiding collisions and increasing the overall safety of navigation. Aviation Recorders has entered into two key international distribution agreements for its AIS with Hellenic Radio Services of Piraeus. Greece to deliver the AIS to Greece and areas throughout the Mediterranean and with Polaris Electronics A/S of Aalborg, Denmark to supply Denmark, Sweden, Iceland and other key areas of Northern Europe.

To add to its capabilities, L-3 acquired Klein Associates, which supplies Integrated Intrusion Detection Systems. These systems include sonar, radar and other specialized sensors. The Klein high-performance intrusion detection systems provide protection for harbors, ports and anchored vessels worldwide.

By integrating an L-3 data handling backbone with vessel traffic and identification systems, surveillance sensors and communications capabilities, L-3 can offer a comprehensive, integrated port security solution - SecureNet. L-3 is currently demonstrating this integrated system and is marketing it to commercial ports around the nation and internationally.

### **MOBILE COMMAND AND CONTROL**

L-3 also is a leader in mobile communications vehicles for homeland security, military and law enforcement uses, broadcast newsgathering and telecommunications. In 2003, L-3 Wolf Coach received an award from the US Army's Aberdeen Proving Ground for mobile substance analysis lab vehicles. These vehicles, which will be used by the Civil Support Teams of the National Guard, are equipped with the most advanced biological testing capabilities available and will be used for mobile testing and analysis of chemical or biological agents in the event of a terrorist attack.

(clockwise from top left)

- 1. The perimeter assessment thermal imager, one of many available IBDSS components, provides day or night vision range up to a few kilometers, motion detection and pan, tilt and zoom capability to view intruding
- 2. Wolf Coach is providing mobile substance analysis lab vehicles for the **Civil Support Teams of the US** National Guard. The Analytical Lab **System-System Enhancement** Program (ALS-SEP) vehicles are equipped with advanced biological testing capabilities and will be used for mobile testing and analysis of chemical or biological agents in the event of a terrorist attack.
- 3. In October 2003, Communication Systems-East was commended by the **US Army Program Executive Office** for Intelligence, Electronic Warfare & Sensors (PEO IEW&S) for an outstanding and patriotic effort in support of Operation Iraqi Freedom. The **Remotely Monitored Battlefield** Sensor System Version II (REMBASS-II) was instrumental throughout the campaign, providing commanders with timely and critical intelligence and effective force



### SHAREHOLDER INFORMATION

### **Corporate Headquarters**

You can contact the corporate headquarters by writing to: L-3 Communications, 600 Third Avenue, New York, NY 10016, or by calling 212-697-1111. To send a fax, dial 212-867-5249.

### **Corporate Information**

News media, analysts, shareholders and others seeking corporate information about L-3 Communications should contact Cynthia Swain, vice president of corporate communications at 212-697-1111.

### **Printed Materials**

Printed financial materials, including the 2003 Annual Report, may be obtained without charge by calling (866) INFO-LLL (866-463-6555).

### Internet

You can access quarterly and annual financial information, news releases and an overview of the company's products and services through the L-3 web site at http://www.L-3com.com on the Internet.

### **Shareholder Assistance**

If you have questions concerning your shareholder account, please contact the stock transfer agent, EquiServe Trust Company N.A., P.O. Box 219045, Kansas City, Missouri 64121-9045, or call 877-282-1168. For the hearing impaired, the phone number is TDD: 781-575-2692.

You can also contact the stock transfer agent at their web site at http://www.equiserve.com on the Internet.

### **Stock Exchange Listing**

The common stock of L-3 Communications is traded on the New York Stock Exchange under the symbol LLL.

### **Annual Meeting**

The annual meeting of shareholders will be held at 2:30 p.m. on Tuesday, April 27, 2004 at the Rihga Royal New York Hotel, 151 West 54th Street, New York, NY.

### **Equal Opportunity Employer**

L-3 Communications Corporation is an equal opportunity employer. All matters regarding recruiting, hiring, training, compensation, benefits, promotions, transfers and all other personnel policies will continue to be free from discriminatory practices.

### **BOARD OF DIRECTORS**

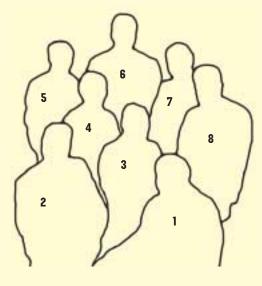
1. Frank C. Lanza

**CHAIRMAN AND CHIEF EXECUTIVE OFFICER** 

2. ROBERT V. LAPENTA

PRESIDENT AND CHIEF FINANCIAL OFFICER

- 3. GENERAL (RET.) JOHN M. SHALIKASHVILI
- 4. ALAN H. WASHKOWITZ
- **5. CLAUDE R. CANIZARES**
- **6. THOMAS A. CORCORAN**
- 7. ARTHUR L. SIMON
- 8. ROBERT B. MILLARD





### **Condensed Consolidated Financial Data**

The accompanying L-3 condensed consolidated financial data was derived from L-3's consolidated financial statements included in the Company's Annual Report on Form 10-K for the year ended December 31, 2003, and is not a complete financial statement presentation in accordance with generally accepted accounting principles, because it does not include the notes to the financial statements. The condensed consolidated financial data should be read with L-3's audited consolidated financial statements included in the Company's Annual Report on Form 10-K for the year ended December 31, 2003. The comparability of L-3's condensed consolidated financial data is impacted significantly by the Company's business acquisitions.

### **CONDENSED CONSOLIDATED BALANCE SHEET DATA**

	DECEMBER 31,	
(in thousands, except share data)	2003	2002
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 134,876	\$ 134,856
Contracts in process	1,615,348	1,317,993
Deferred income taxes	152,785	143,634
Other current assets	34,693	42,891
Total current assets	1,937,702	1,639,374
Property, plant and equipment, net	519,749	458,639
Goodwill	3,652,436	2,794,548
Intangible assets	162,156	90,147
Deferred income taxes	100,482	147,190
Deferred debt issue costs	48,572	48,839
Other assets	71,793	63,571
Other assets		05,371
Total assets	\$6,492,890	\$5,242,308
LIABILITIES AND SHAREHOLDERS' EQUITY		
Current liabilities:		
Accounts payable, trade	\$ 195,548	\$ 167,240
Accrued employment costs	239,690	187,754
Accrued expenses	72,880	56,763
Customer advances	58,078	62,645
Accrued interest	25,898	18,395
Income taxes	70,159	33,729
Other current liabilities	261,959	183,416
Total current liabilities	924,212	709,942
Denoise and restrictions and housefits	250.020	242 507
Pension and postretirement benefits	359,020	343,527
Other liabilities	101,651	65,644
Long-term debt	2,457,300	1,847,752
Total liabilities	3,842,183	2,966,865
Minority interest	76,211	73,241
Shareholders' equity:		
Common stock; \$.01 par value; authorized 300,000,000 shares,		
issued and outstanding 97,077,495 and 94,577,331 shares	1,893,488	1,794,976
Retained earnings	757,467	479,827
Unearned compensation	(3,622)	(3,302)
Accumulated other comprehensive loss	(72,837)	(69,299)
Total shareholders' equity	2,574,496	2,202,202
Total liabilities and shareholders' equity	\$6,492,890	\$5,242,308
Total habilities and shareholders equity	ψυ, τ, 2,0,70	ψ5,242,300

### **CONDENSED CONSOLIDATED STATEMENT OF OPERATIONS DATA**

		YEAR ENDED DECEMBE	EK 31,
(in thousands, except per share data)	2003	2002	2001
Calac			
Sales: Contracts, primarily U.S. Government	\$4,467,554	\$3,581,102	\$1,932,205
Commercial, primarily products	594,040	430,127	415,217
Commercial, primarily products	274,040	430,127	+13,217
Total sales	5,061,594	4,011,229	2,347,422
Costs and expenses:			
Contracts, primarily U.S. Government	3,905,449	3,137,561	1,699,617
Commercial, primarily products:			
Cost of sales	384,727	270,800	252,790
Selling, general and administrative expenses	137,626	114,052	93,238
Research and development expenses	52,771	34,837	26,447
Total costs and expenses	4,480,573	3,557,250	2,072,092
Operating income	581,021	453,979	275,330(1)
Interest and other income	215	4,921	1,739
Interest expense	132,683	122,492	86,390
Minority interest	3,515	6,198	4,457
Loss on retirement of debt	11,225	16,187	
		·	
Income before income taxes and cumulative effect of a	422.012	214.022	107.222
change in accounting principle	433,813	314,023	186,222
Provision for income taxes	156,173	111,556	70,764
Income before cumulative effect of a change in			
accounting principle	277,640	202,467	115,458
Cumulative effect of a change in accounting principle,			
net of income tax benefit of \$6,428		(24,370)	
Net income	\$ 277,640	\$ 178,097	\$ 115,458(2)
Earnings per common share:			
Basic:			
Income before cumulative effect of a change in			
accounting principle	\$ 2.89	\$ 2.33	\$ 1.54(3)
Cumulative effect of a change in accounting			
principle		(0.28)	
Net income	\$ 2.89	\$ 2.05	\$ 1.54(3)
Diluted:			
Income before cumulative effect of a change in			
accounting principle	\$ 2.71	\$ 2.18	\$ 1.47(3)
Cumulative effect of a change in accounting			
principle		(0.25)	
Net income	\$ 2.71	\$ 1.93	\$ 1.47(3)
Weighted average common shares outstanding:			
Basic	96,022	86,943	74,880
Diluted	106,068	· · · · · · · · · · · · · · · · · · ·	
Dudled	100,008	97,413	85,438

<sup>(1)</sup> Effective January 1, 2002, L-3 ceased amortizing goodwill. Goodwill amortization expense recorded in 2001 was \$42.4 million.

 $<sup>(2) \</sup>quad \text{Net income, as adjusted to exclude goodwill amortization expense, net of income tax benefit, was $149.4 \ \text{million in 2001}.}$ 

<sup>(3)</sup> Basic earnings per share, as adjusted to exclude goodwill amortization expense, was \$1.99 in 2001. Diluted earnings per share, as adjusted, was \$1.87 in 2001.

### CONDENSED CONSOLIDATED STATEMENT OF SHAREHOLDERS' EQUITY DATA

For the Years Ended December 31, 2003, 2002 and 2001 (in thousands)	Shares Issued	Par Value	Paid-in Capital	Additional Retained Earnings	Unearned Compensation	Accumulated Other Comprehensive Income (Loss)	Total
Balance December 31, 2000	67,213	\$672	\$ 515,254	\$186,272	\$(2,457)	\$ (7,172) \$	692,569
Comprehensive income:  Net income  Minimum pension liability, net of \$11,955 tax benefit				115,458		(19,519)	115,458 (19,519)
Foreign currency translation adjustment, net of \$164 tax benefit						(268)	(268)
Unrealized loss on securities, net of \$111 tax benefit Unrealized loss on securities reclassified to net income from						(180)	(180)
other comprehensive loss, net of \$2,274 tax expense Unrealized losses on hedging instruments, net of \$100 tax						3,632 (163)	3,632
benefit						(103)	98,960
Shares issued:	0.150	02	252 520				252 (22
Sale of common stock	9,150 418	92 4	353,530 16,864				353,622 16,868
Acquisition consideration	588	6	17,351				17,357
Exercise of stock options	1,128	11	28,253				28,264
Employee stock purchase plan			4,861				4,861
Grant of restricted stock			2,118		(2,118)		1 270
Amortization of unearned compensation			21		1,370		1,370 21
Balance December 31, 2001	78,497	785	938,252	301,730	(3,205)	(23,670)	
Comprehensive income:  Net income				178,097			178,097
Minimum pension liability, net of \$29,859 tax benefit Foreign currency translation adjustment, net of \$1,626 tax						(45,580)	(45,580)
benefit						65	65
income from other comprehensive loss, net of \$198 tax expense						323	323
benefit						(437)	<u>(437)</u> 132,468
Shares issued:	14.000	1.40	766 640				
Sale of common stock	14,000 529	140 5	766,640 28,133				766,780 28,138
Acquisition consideration	229	2	10,605				10,607
Exercise of stock options	970	10	30,665				30,675
Employee stock purchase plan	352	4	17,474				17,478
Grant of restricted stock			2,231		(2,231)		. <del></del>
Amortization of unearned compensation			20		2,134		2,134
Other	94,577	946	1,794,030	479,827	(3,302)	(69,299)	30 2,202,202
Comprehensive income:  Net income				277,640			277,640
Minimum pension liability, net of \$2,313 tax benefit				277,010		(4,189)	(4,189)
Foreign currency translation adjustment, net of							
\$141 tax benefit						(245)	(245)
\$571 tax expense						896	896 274,102
Shares issued:							,
Employee savings plans	912	9	39,485				39,494
Acquisition consideration	110	1	4,968				4,969
Exercise of stock options	835	8	22,722				22,730
Employee stock purchase plan	603	6	26,378				26,384
Notes	40	1	1,629		(2.55		1,630
Grant of restricted stock			3,295		(3,295) 2,975		2,975
Other			10		2,7,3		10
Balance December 31, 2003	97,077	\$971	\$1,892,517	\$757,467	\$(3,622)	\$(72,837) \$	2,574,496

### CONDENSED CONSOLIDATED STATEMENT OF CASH FLOWS DATA

		YEAR ENDED DECEMBE	R 31,
(in thousands)	2003	2002	2001
Operating activities:			
Net income	\$ 277,640	\$ 178,097	\$ 115,458
Cumulative effect of a change in accounting principle	_	24,370	_
Loss on retirement of debt	11,225	16,187	_
Goodwill amortization		<del></del>	42,356
Depreciation	77,340	66,230	40,362
Amortization of intangibles and other assets	18,083	9,630	4,233
(included in interest expense)	7,977	7,392	6,388
Deferred income tax provision	94,747	79,092	52,638
Minority interest	3,515	6,198	4,457
Other non-cash items, principally contributions to			
employee savings plans in common stock	39,773	28,653	17,576
Subtotal	530,300	415,849	283,468
Changes in operating assets and liabilities,			
excluding acquired amounts:  Contracts in process	(120,397)	(75,031)	(40,652
Other current assets	(1,731)	(15,257)	1,643
Other assets	(15,861)	(16,641)	(12,033
Accounts payable	(19,503)	(21,904)	(43,165
Accrued employment costs	20,558	30,100	11,931
Accrued expenses	5,646	(2,581)	(20,300
Customer advances	(4,773)	(11,272)	12,627
Accrued interest	7,503	7,199	(3,047
Income taxes	44,081	30,852	14,431
Other current liabilities	(25,384)	(41,206)	(37,555
Pension and postretirement benefits	5,088	(1,670)	4,550
Other liabilities	19,008	20,517	1,423
All other operating activities, principally foreign currency translation	11,528	(495)	(353
Subtotal	(74,237)	(97,389)	(110,500
Net cash from operating activities	456,063	318,460	172,968
		,	. ,
nvesting activities:	(1.014.430)	(1.742.122)	(446.011
Acquisition of businesses, net of cash acquired	(1,014,439) 8,795	(1,742,133)	(446,911 75,206
Capital expenditures.	(82,874)	(62,058)	(48,121
Disposition of property, plant and equipment	3,854	3,548	1,237
Other investing activities	(3,393)	(9,885)	(6,301
Net cash used in investing activities	(1,088,057)	(1,810,528)	(424,890
linancing activities			
Financing activities:  Borrowings under revolving credit facilities	295,000	566,000	316,400
Repayment of borrowings under revolving credit facilities.	(295,000)	(566,000)	(506,400
Borrowings under bridge loan facility	( <b>2</b> ) <b>2</b> ,000)	500,000	(500,100
Repayment of borrowings under bridge loan facility	_	(500,000)	_
Proceeds from sale of senior subordinated notes	790,788	750,000	420,000
Redemption of senior subordinated notes	(187,650)	(237,468)	_
Proceeds from sale of common stock, net	_	766,780	353,622
Debt issuance costs	(9,591)	(19,759)	(16,671
Proceeds from exercise of stock options	14,273	17,372	16,325
Proceeds from employee stock purchase plan	26,384	17,478	4,861
Distributions paid to minority interest	(1,975)	(2,854)	(2,530
Other financing activities	(215)	(25,647)	(5,343
Net cash from financing activities	632,014	1,265,902	580,264
Net increase (decrease) in cash	20	(226,166)	328,342
Cash and cash equivalents, beginning of the period	134,856	361,022	32,680
Cash and cash equivalents, beginning of the period	\$ 134,876	\$ 134.856	\$ 361,022

\$ 134,876

Cash and cash equivalents, end of the period . . . . . . . .

\$ 134,856

\$ 361,022

### L-3 COMMUNICATIONS MANAGEMENT TEAM



Christopher C. Cambria Senior Vice President, Secretary and General Counsel



James W. Dunn Senior Vice President and President of Sensors and Simulation Group



**Charles J. Schafer**Senior Vice President of Business Operations and President of Products Group



Michael T. Strianese Senior Vice President of Finance and Corporate Ethics Officer



**Jimmie V. Adams**Vice President of
Washington Operations



A. Michael Andrews II, Ph.D. Chief Technology Officer



David T. Butler III
Vice President of Planning



Ralph G. D'Ambrosio Vice President and Controller



Kenneth R. Goldstein Vice President of Taxes



**Larry L. Henry** Vice President of Air Force Programs



**David M. Reilly**Vice President,
Assistant General Counsel
and Assistant Secretary



Robert W. RisCassi Vice President



Ronald G. Sabbagh Vice President of Software Development and Special Projects



**Lawrence H. Schwartz**Vice President of
Homeland Security



**Sheila M. Sheridan**Director of Administration



**Curtis Brunson**Corporate Vice President and President of
Communication Systems-West Division



Anthony Caputo
Corporate Vice President
and President of L-3
Communications
Canada



Robert W. Drewes Corporate Vice President and President of L-3 Integrated Systems



Daniel A. Grafton President of L-3 Communications Vertex Aerospace LLC



Dr. Jai N. Gupta President of L-3 Government Services, Inc.



**Dennis A. Jones**Vice President of
Maritime Programs



**Kenneth W. Manne** Vice President of Human Resources



Ted McFarland Vice President-International



**Richard A. Nordstrom** Vice President of Operations Review



Joseph S. Paresi Vice President of Product Development and President of L-3 Security and Detection Systems Division



**Stephen M. Souza** Vice President and Treasurer



**Cynthia Swain**Vice President of
Corporate Communications



**Vincent T. Taylor**Vice President and Chief
Information Officer



**Fred Wahl**Vice President of
Government Affairs



**Jill J. Wittels, Ph.D.** Vice President of Business Development



Steve Kantor Corporate Vice President and President of SPD Technologies Group



**Joseph Lopez** President of L-3 ILEX Systems Group



John S. Mega Corporate Vice President and President of Microwave Group



**Gregory B. Roberts**Corporate Vice President and President of
Communication SystemsEast Division



Carl E. Vuono President of MPRI



600 Third Avenue New York, NY 10016