ARCHIVED REPORT

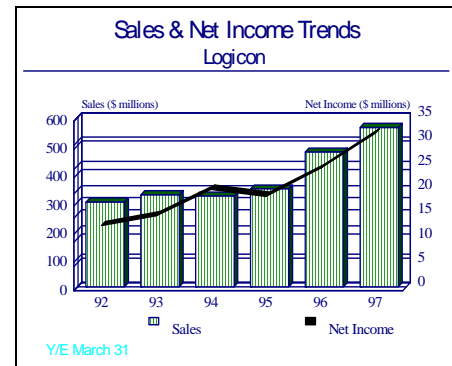### For data and forecasts on current programs please visit

www.forecastinternational.com or call +1 203.426.0800

Logicon, Inc - Archived 8/98

Outlook

- In May 1997, Northrop Grumman and Logicon announced that they had signed a definitive agreement for the merger of Northrop Grumman and Logicon in a stock-for-stock transaction

- The merger reflects Northrop Grumman's continuing strategic thrust into advanced battle management and information technology

- Logicon's I-CASE contract, valued at over $670 million, is expected to be a substantial revenue generator over its 10-year life span

Sales & Net Income Trends
Logicon

Headquarters

Logicon, Incorporated
3701 Skylark Drive
Torrance, CA 90505-4794
Telephone: (310) 373-0220
http://www.logicon.com

Logicon, Inc was founded in California in 1961 as a research and development house specializing in software and system development to support defense, national security, and industrial programs. Its initial contracts were in support of USAF strategic weapon systems, such as the B-52 and the Minuteman ICBM. Contracts with the US Government are Logicon's primary revenue source, accounting for 99 percent of total revenues from services and systems. Among the Department of Defense Top 100 Companies for Fiscal Year 1996 (based on prime contract awards), Logicon is listed 36th.

In early 1997, Northrop Grumman signed a definitive agreement to acquire Logicon in a stock-for-stock transaction valued at $750 million.

Following completion of the merger on August 1, 1997, Northrop Grumman formed a new Logicon Information Technology Division that combines substantial elements of Northrop Grumman's Data Systems and Services Division (DSSD), headquartered in Herndon, Va., and the operations of Logicon. The new division, which is led by John R. Woodhull, the former president and CEO of Logicon and headquartered in Torrance, California, will have revenues approaching $1 billion. Herbert W. Anderson, general manager of DSSD, will serve as deputy general manager of the new division.

Structure and Personnel

None. Company is a unit of Northrop Grumman.

Product Area

Logicon continues as a major R&D house in support of DoD programs in the market areas of weapon systems; command, control, communications, and intelligence (C3I); training and simulation; science and technology research; and information systems. Logicon's corporate structure is broken down as follows (it should be noted that many of the company's operating units operate across more than one of Logicon's market areas):

1. Communications Technology Group
1.1   Logicon Eagle Technology
1.2   Logicon Tactical Systems Division
2. Defense Technology Group
2.1   Logicon R&D Associates
2.2   Logicon Technical Services Inc
2.3   Logicon Ultrasystems Inc
2.4   Logicon Geodynamics Inc
3. Information Technology Group
3.1   Command Systems Division
3.2   Information Solutions Division
3.3   Logicon Fourth Generation Technology
3.4   Operating Systems Division
4. Logicon Syscon Inc

Markets. Logicon's markets break down into the following areas.

Logicon's largest and most important defense market is Command, Control, Communication, and Intelligence or C3I. Its areas of expertise include the development of survivable C3I systems; interoperability testing of tactical data systems; development of multilevel security and automated test and message handling systems for intelligence applications; and analysis to ensure effective command and control of weapon systems.

Weapon Systems programs have historically been one of Logicon's largest market segments. Logicon pioneered a technical specialty known as independent verification and validation (IV & V) of operational weapon systems software developed by other companies. In addition, the company provides high-technology services such as development of mission planning software to automate weapon assignment, development of operational software, and studies of national security issues relating to weapon systems.

The Training and Simulation market segment has focused on development of comprehensive training systems and simulation of military operations for applications in war-gaming and decision-making.

Logicon's work in the area of Science and Technology covers a variety of activities related to nuclear weapon effects, directed-energy weapons, warfare analysis, defense policy studies, and advanced technology research. A substantial portion of Logicon's Science and Technology segment's revenues are derived from its ongoing support of the Defense Nuclear Agency.

In the area of Information Systems, Logicon is focusing on creating products derived from its technology base that can be marketed to both government and commercial users. An example cited is the Logicon Message Dissemination System (LMDS), an automated message and text distribution software product introduced in 1990. The company has also developed the Case Management Control System (CMCS), an automated system that tracks the status of military equipment sales to other nations.

Facilities

Nine business locations currently contain Logicon's defense and government operations and support services. The locations are listed below with a brief description of each location's business activities.

Eastern Region

Communications Technology Group, 2100 Washington Blvd, Arlington, VA 22204.

Logicon Operating Systems Division, 2100 Washington Blvd, Arlington, VA 22204. Telephone (703) 486-3500. Provides program support to the US intelligence community to include the development and maintenance of large capacity text and message handling systems.

Logicon Eagle Technology, Inc, Arlington, VA. Provides defense-related professional services to the US Government in the training and simulation and C3I areas, specializing in courseware development, training analysis offerings, and in increasing Logicon's tactical C3I work.

Logicon Ultrasystems, Chantilly, VA.

Syscon Corporation, 8110 Gatehouse Rd, Falls Church, VA 22042.

Western Region

Corporate Headquarters, 3701 Skypark Dr, Torrance, CA 90505. Telephone (310) 373-0220. Coordinates business development and day-to-day operations of the company.

Defense Technology Group, 6053 West Century Blvd, Los Angeles, CA 90045.

Information Technology Group, 222 West Sixth St, San Pedro, CA 90731.

Information Solutions Division, San Pedro, CA. This unit handles the Integrated Computer-Aided Software Engineering (I-CASE) program.

Logicon Command Systems Division, San Pedro, CA. Specializes in the development of systems and operational software, software maintenance, systems integration, and systems analysis for C3I and weapon systems applications. Recent and ongoing efforts include nuclear safety analysis work for the Navy's Tomahawk sea-launched cruise missile and the Single Integrated Operational Plan (SIOP) software and mating and ranging program for the US Air Force.

Logicon Tactical Systems Division, P.O. Box 85158, 4010 Sorrento Valley Blvd, San Diego, CA 92138-5158. Telephone (619) 455-1330. Develops systems software for training and simulation applications. Currently Logicon supports the Tower Operator Training System (TOTS) for FAA air traffic control programs, as well as supporting several military command and control training activities.

Logicon Fourth Generation Technology, Inc, 10280 Torrey Pine Rd La Jolla, CA 92037. Telephone (619) 455-7663. Specializes in custom software development for large information systems applications. Among its programs, 4GT supplies USAF with financial information processing software.

Logicon R&D Associates, 6053 W. Century Blvd, Los Angeles, CA 90045. Telephone (310) 645-1122. Acquired in 1983, R&D Associates provides electronic systems, scientific research, and professional services to industry and government. R&D Associates has strengthened Logicon's C3I capabilities and added technical expertise in directed energy and nuclear weapons technology. This enhanced technical capability assists Logicon in supporting the Strategic Defense Initiative (SDI) program.

Logicon Technical Services, Inc, 222 West Sixth St, San Pedro, CA 90731. Telephone (213) 831-0611. This subsidiary was established in 1990 to handle support services for government and industrial clients.

Logicon Geodynamics, Torrance, CA. Acquired in 1996, this unit specializes in remote sensing, geographic information systems, modeling and simulation, software development and systems engineering for the DoD and other government agencies.

Corporate Overview

Logicon, Inc is a Top 100 DoD defense contractor specializing in software development, systems analysis, validation and verification services, training, and simulation. It performs scientific research in support of US defense and national security areas such as C3I; nuclear forces; strategic, operational, and tactical training and simulation; and intelligence programs. It occupies a unique position not only in developing software and systems analysis, but in providing ongoing support and upgrading capabilities for future enhancements.

New Products and Services

BCTP. During 1995, Logicon was awarded a five-year, $135 million contract recompetition for the company to continue its support of the US Army's Battle Command Training Program (BCTP). BCTP trains commanders and their staffs from the Brigade through the Corps echelon in the operational aspects of war.

Local Attack Controller. In 1995, the Advanced Research Projects Agency awarded Logicon a $9 million contract to develop a prototype system capable of providing intelligence processing and battle management decision support to battle staff commanders for the attack of time critical targets.

I-CASE. In April 1994, Logicon was awarded a $670 million contract for the Integrated Computer-Aided Software Engineering (I-CASE) program. I-CASE will provide the Department of Defense Central Design Activities with a state-of-the-art software engineering environment. I-CASE will be a combination of the commercial off-the-shelf hardware and software components and run-time licenses designed to provide automated tool support for software development, maintenance, and reengineering of Automated Information Systems applications. The contract will run for 10 years and is the largest in Logicon's history.

Plant Expansion/Organization Update

New Organization Adopted. In April 1995, Logicon adopted a new corporate organization to better position itself to develop new business and provide top quality products to its customers. The company's organization

now consists of four groups: Information Technology, Defense Technology, Communications Technology, and Syscon.

Mergers/Acquisitions/Divestitures

Northrop To Acquire Logicon. In May 1997, Northrop Grumman and Logicon announced that they had signed a definitive agreement for the merger of Northrop Grumman and Logicon in a stock-for-stock transaction. The merger reflects Northrop Grumman's continuing strategic thrust into advanced battle management and information technology. Stockholders of Logicon will receive, for each share of Logicon common stock, a fraction of a Northrop Grumman share determined by dividing $52 by the average closing price for Northrop Grumman common stock during a 30-trading day period prior to mailing the proxy statement in the merger. In no event will the exchange ratio be more than 0.6919:1 or less than 0.5661:1. The transaction is subject to normal government reviews and the approval of Logicon shareholders.

"The merger is consistent with our long-standing strategy to be a leader in the areas of surveillance, precision strike and advanced battle management," said Kent Kresa, Northrop Grumman chairman, president and chief executive officer. "Logicon's expertise in command, control, communications and intelligence (C3I); simulation and training; battle management and mission planning; and information technology, will further expand our systems integration expertise in these vital areas and create exciting new business opportunities for us in the coming years. Together, we will have the technology, skills and business base to play a leading role in the continued development of highly integrated systems essential to meet the future warfighting requirements of our military service."

Jack Woodhull, chief executive officer of Logicon, Inc, said, "This merger will improve the business prospects of both companies, provide much broader resources for our customers and enhanced opportunities for our employees. Needless to say, we are delighted with the prospect of becoming part of the Northrop Grumman team."

Upon completion of the merger, the company plans to form a new Logicon Information Technology Division that would combine substantial elements of Northrop Grumman's Data Systems and Services Division (DSSD), headquartered in Herndon, VA., and the operations of Logicon. The new division, which will be led by Mr. Woodhull and headquartered in Torrance, will have revenues approaching $1 billion. Herbert W. Anderson, general manager of DSSD, will serve as deputy general manager of the new division.

Geodynamics Acquired. In March 1996, Logicon completed the acquisition of Geodynamics Corporation for $31.7 million. Geodynamics will become a wholly owned subsidiary of Logicon and a unit within its Defense Technology Group. The new subsidiary has locations in Torrance, California, Fairfax, Virginia, and Colorado Springs and Denver, Colorado. The company specializes in remote sensing, geographic information systems, modeling and simulation, software development, and system engineering and integration for the Department of Defense and other government agencies.

Applied Technology Associates Unit Purchased. In September 1995, Logicon agreed to acquire the assets, liabilities and contracts of the Space and Engineering Group of Applied Technologies Associates, Inc. The group, which provides highly specialized engineering services and products for space systems, will become a unit of Logicon Ultrasystems. The unit is located in Mountain View, California, with additional offices in Colorado and Pennsylvania. Terms of the deal were not disclosed.

Syscon Acquired. In February 1995, Harnischfeger Industries agreed to sell its Syscon subsidiary to Logicon for $45 million. Syscon had revenues of approximately $130 million in 1994 and employed 1,500. The company specializes in systems engineering, software development and systems development and integration for the DoD and other government customers.
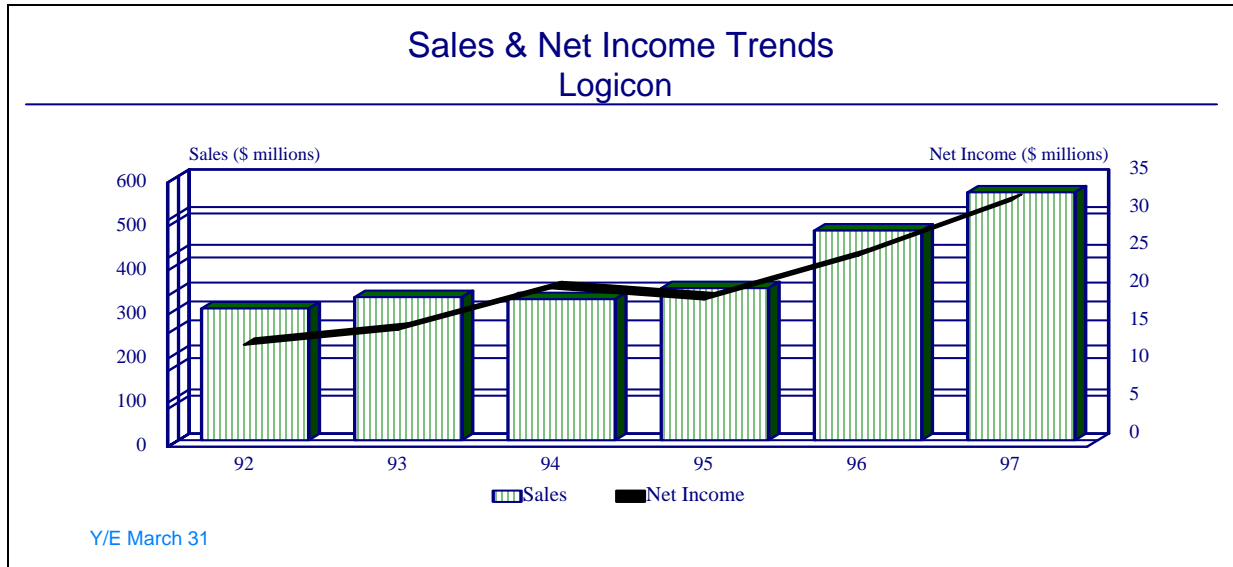
Teaming/Competition/Joint Ventures

McDonnell Douglas. Logicon is teamed with McDonnell Douglas Electronic Systems Co for the Survivable, Adaptive Planning Experiment (SPA) project, a USAF/DARPA-led effort aimed at developing a computer model for rapid retargeting and generation of new options in an environment before a nuclear conflict. The model is expanded to include those functions needed during a nuclear conflict and to create a new post-attack nuclear strike plan. The $12.2 million, two-year contract was awarded in October 1989.

Financial Results/Corporate Statistics

For the fiscal year ending March 31, 1997, Logicon reported revenues of $562.9 million, up from the $476.1 million in fiscal 1996. Net income was $32.6 million, compared with net income of $25.3 million, in fiscal 1996. The latest full-year statistics are given below.
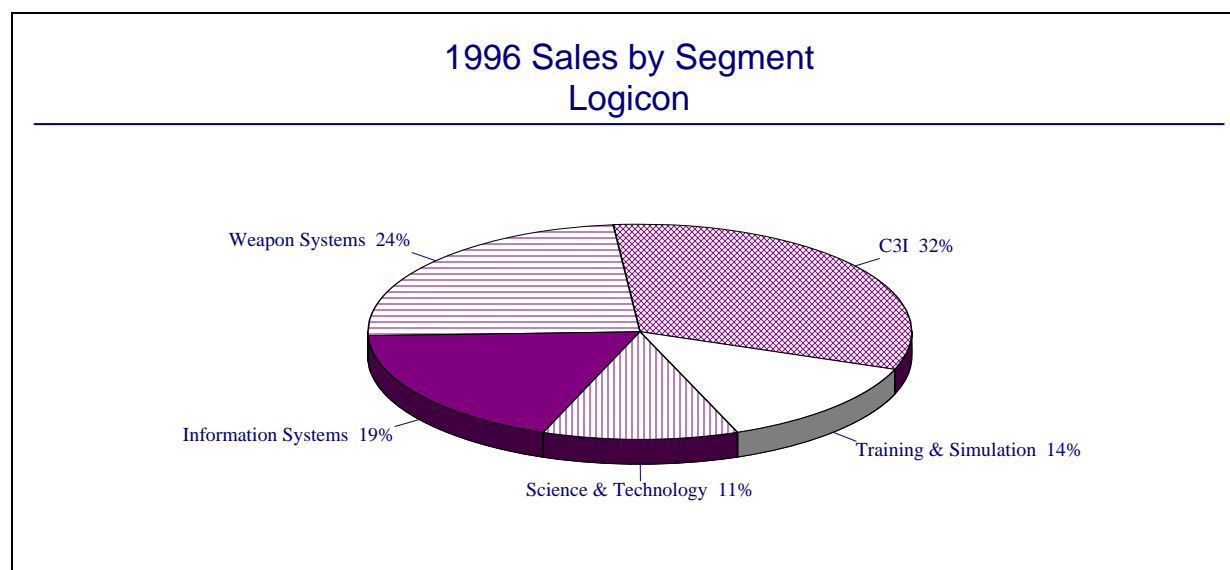
Y/E March 31 ($ millions)	1992	1993	1994	1995	1996	1997
Revenues	299.1	325.1	320.2	345.2	476.1	562.9
Net Income	13.5	15.5	21.0	19.5	25.3	32.6
Percent Govt	99.0	99.0	99.0	99.0	99.0	99.0
Backlog	658.0	631.0	727.4	1686.3	2037.8	2043.8

Sales & Net Income Trends
Logicon

Industry Segments

A breakdown of Logicon's sales by major market segment for the past three years is given below. Totals may not add due to rounding and intersegment eliminations. 1997 data were unavailable as of press date. Operating Income figures are not reported by Logicon.

SALES ($ millions)	1993	1994	1995	1996
C3I	113	116	127	152
Weapon Systems	65	65	62	114
Information Systems	39	46	57	89
Science & Technology	49	43	53	54
Training & Simulation	58	48	43	65

1996 Sales by Segment
Logicon

1997 Financial Reports

Financial data concerning Logicon's past eight quarters is detailed as follows.

1997 Quarters	6/30	9/30	12/31	3/31
($ millions)				
Net Sales	149.9	128.8	130.1	155.7
Net Income	7.7	7.8	7.8	9.3

1996 Quarters	6/30	9/30	12/31	3/31
($ millions)				
Net Sales	112.2	114.6	121.2	128.0
Net Income	5.3	5.7	6.8	7.3

Strategic Outlook

As a company that relies entirely on the US Government for its livelihood, Logicon is continuing to perform well. Even with the ongoing budget cuts, Logicon has managed to dodge the ax by focusing on market niches that are considered critical to the government. The company's expertise in communication systems interoperability, mission planning, intelligence systems, training and simulation, laser systems engineering and nuclear weapon issues are highly regarded by the DoD and these services are expected to remain in demand – albeit at a lower level than they were just five years ago.

Further enhancing the company's performance has been the acquisition of Syscon and the award of the I-CASE contract. The recent acquisition of Syscon has helped improve the bottom line by expanding the Logicon's base of customers to include even more government agencies such as the US Navy, the Department of Justice and US Customs just to name a few. Overall, this complementary acquisition has further strengthened Logicon's market niches and added an estimated $100 million to the company's sales.

The I-CASE contract is expected to be a substantial revenue generator for the company over its 10-year life span. Valued at over $670 million, the contract is the largest ever awarded Logicon in its history. The contract calls for Logicon to provide next-generation software engineering environments that will be used to manage the software development and rehosting processes and will reduce the cost and risk associated with developing software and deploying applications. To date Logicon has met several milestones on the contract, including the DoD's Formal Qualification Tests. The contract has since been opened up to all government agencies, enabling them to order software engineering environments and other hardware software and services from Logicon as part of the program.
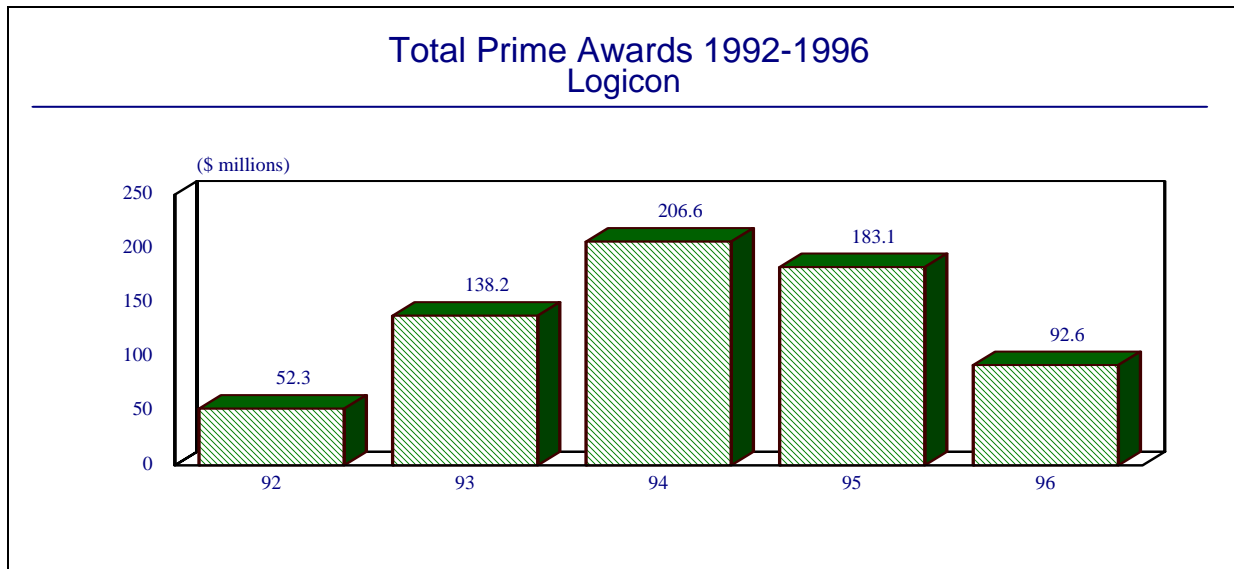
With a solid contract under its belt and an eye on niche acquisitions, Logicon has a very optimistic future ahead. And it is just this future that made the company attractive to Northrop Grumman. Overall, the acquisition is expected to be a good fit for Northrop Grumman, despite what some analysts see as a high price for the operation.

Perhaps most importantly, the addition of Logicon will allow Northrop Grumman to broaden and grow its current information technology operation. As the company did with its acquisition of Westinghouse, Northrop Grumman has recast itself once again into a major defense electronics and defense information technology corporation.

Prime Award Summary

Logicon's five-year summary of awards by US Government customer are provided below. Zeroes indicate awards, if any, of less $50,000. Dashes indicate no data available.

($ millions)	1992	1993	1994	1995	1996
AIR FORCE	31.3	43.4	86.9	73.7	60.2
ARMY	0.7	20.6	57.9	69.7	15.5
CORPS OF ENGINEERS	0.0	0.0	0.0	0.0	2.9
DEFENSE AGENCIES	0.1	0.1	19.0	13.7	0.1
DEF MAPPING AGENCY	0.0	0.0	0.3	0.8	0.0
DEPT OF COMMERCE	0.0	0.0	0.0	0.0	0.4
DEPT OF TREASURY	0.0	0.0	0.0	2.1	0.0
GEN SERVICES ADMIN	2.1	1.1	0.0	0.0	0.0
NASA	0.0	0.4	0.5	0.2	0.0
NAVY	18.1	72.6	42.3	22.9	13.5
TOTAL	52.3	138.2	206.6	183.1	92.6

Total Prime Awards 1992-1996
Logicon

($ millions)

Year	Value
92	52.3
93	138.2
94	206.6
95	183.1
96	92.6

EASTERN REGION

Arlington, VA	1992	1993	1994	1995	1996
($ millions)					
ARMY	0.0	0.0	3.2	10.4	11.0
DEF MAPPING AGENCY	0.0	0.0	0.3	0.8	0.0
DEPT OF COMMERCE	0.0	0.0	0.0	0.0	0.4
DEPT OF TREASURY	0.0	0.0	0.0	2.1	0.0
GEN SERVICES ADMIN	2.0	1.1	0.0	0.0	0.0
NAVY	3.7	10.7	0.1	0.5	0.8
TOTAL	5.7	11.8	3.3	13.8	12.2

WESTERN REGION

Various Locations, California	1992	1993	1994	1995	1996
($ millions)					
AIR FORCE	19.4	22.0	19.5	29.2	24.0
ARMY	0.0	0.1	2.4	3.1	0.0
CORPS OF ENGINEERS	0.0	0.0	0.0	0.0	2.9
DEFENSE AGENCIES	0.1	0.1	17.0	13.7	0.1
NAVY	13.6	54.5	31.3	10.8	8.6
TOTAL	33.1	76.7	70.2	56.8	35.6

Program Activity

Some important aerospace and government programs currently under way at Logicon are listed below. The briefs are intended to provide a listing of programs that are of major importance to the company. For detailed information or analysis of specific aerospace and defense programs or equipment, please refer to the appropriate FORECAST INTERNATIONAL binder (for example, AIRCRAFT, MILITARY VEHICLES, WARSHIPS, MISSILES, ELECTRONICS, and GAS TURBINES). The following is an outline of the company's business interests:

- Defense Electronics
- C3I Systems
- Sensors
- Missiles
- Space Systems
- Systems Integration
- Training Systems

Electronic Programs

(C3I)

ADDS

The Army Data Distribution System (ADDS) is a hybrid of the Enhanced Position Location Reporting System (EPLRS) and the Joint Tactical Information Distribution System (JTIDS). Logicon is providing engineering support services for the ADDS program. ADDS will support US Army data communications requirements in the five tactical battlefield functional areas: maneuver control, fire support, air defense, intelligence/electronic warfare, and combat service support. ADDS will also provide an automatic capability for relative navigation, identification and position reporting, and for data communications interoperability with other services and allies.

All Source Analysis System (ASAS)

The All Source Analysis System (ASAS) is a battlefield intelligence management system. ASAS automates the fusion of intelligence and combat information on the type of enemy units, as well as process information on their locations, movements, projected capabilities, and intentions. ASAS will also automate data analysis and supply a coherent picture of the enemy situation, disseminating this information to commanders to allow them to make timely, well-informed decisions. Logicon Eagle Technology provides system engineering and technical assistance to the ASAS effort.

ATCCS

The Army Tactical Command and Control System (ATCCS) is a C^3I system for the US Army. Logicon's Eagle Technology is a GE integration team partner handling training and logistics analysis under this program. The ATCCS program will result in the procurement of common computer hardware and software for the five major segments of the Army's Sigma battlefield management concept: air defense, combat service support, fire support, intelligence/electronic warfare, and maneuver control. While the ACCS is the original name for the overall program, ATCCS is now being used by the Army, especially in reference to requirements below the corps level. When automated data

processing for echelons above corps is added to ATCCS, this is apparently still called ACCS. The Marine Corps is implementing its own version, designated the MTCCS (Marine Corps Tactical Command and Control System), and is testing ATCCS components for possible application.

B-2 Mission Planning

The B-2 Mission Planning System supports the Joint Strategic Target Planning Staff (JSTPS) requirements at Strategic Air Command (SAC) headquarters and at main operating bases. The specialized software features a graphics-based interactive planning capability. A strategic mission data subsystem will be installed at the bomber's main operating bases to manage and format avionics data needed aboard the aircraft. As part of this effort, Logicon is also formatting the bomber's flight performance data to be used in various B-2 simulations.

Conventional Mating and Ranging Planning System (CMARPS)

CMARPS was developed by Logicon to assist planners in solving the air refueling requirements for strategic and tactical air operations. It consists of three programs. The Contingency Mating and Ranging Program (CMARP) provides planners with a quick feasibility check of a proposed mission and detailed flight plans for the mission and tanker aircraft. The Tanker Mating and Ranging Program (TMARP) is used to schedule and allocate tankers to support time-phased deployments of mission aircraft from their operating bases to forward areas. Finally, the Graphically Supported Interactive Control System (GSICS) is a single-sortie aircraft mission planning package that can process data for a CMARP/TMARP mission to provide a visual presentation of the results of that mission. The GSICS can also be employed as a stand-alone aircraft planning system.

Defense Support Program (DSP)

The primary mission of Defense Support Program satellites and associated ground stations is to detect the launch of strategic nuclear ballistic missiles and provide early warning of the incoming threat so that the National Command Authorities and authorized military commanders have the time and information required to order an appropriate response by US strategic nuclear forces. Logicon is writing software to control ground stations and communications for this program. The DSP program received some attention in 1991, as it was used to locate Iraqi Scud missile launches during Operation Desert Storm.

JINTACCS

The Joint Interoperability of Tactical Command and Control Systems (JINTACCS) is a developmental Command and Control (C^2) program. The JINTACCS effort is concerned with ensuring that current and future tactical C^3 systems are able to communicate with each other and interface effectively on a technical or engineering level. NATO interoperability is also being addressed. Logicon has been identified as one of several contractors working on this program.

Joint Surveillance System

The Joint Surveillance System (JSS) is an air defense surveillance and C^2 system for North America. JSS provides air surveillance over the North American continent using joint FAA/USAF radar sites and Canadian-based radar sites, as well as command and control for appropriate air defense forces. Logicon provides software support for the system.

MILSTAR Satellites

MILSTAR is a joint service advanced satellite-based military communications (EHF/SHF/UHF) system. Logicon provides security assessment of mission control and spacecraft software under this program. The MILSTAR satellite communication system is designed to provide the minimum essential wartime communication needs of the President and Commanders-in-Chief to command and control US strategic and tactical forces through all levels of conflict.

SINCGARS

The Single Channel Ground-to-Air Radio System (SINCGARS) is an advanced VHF/FM single-channel radio program. To date, an estimated 35,000+ radios have been produced. Logicon provides support services for the SINCGARS program.

Single Integrated Operational Plan (SIOP)

Since 1989 Logicon has enhanced and maintained software that supports development of the DoD's SIOP and a variety of its Mating and Ranging Programs (MARP). SIOP software aids US military leaders in planning how strategic nuclear and conventional weapons will be used. The nature of the system will require periodic software updates to match new technical developments in weapon systems, to improve or modify targeting for missiles and bombers, and to provide rapid response to changes in national security policy. According to Logicon, the need for SIOP/MARP software generally is not affected by international arms reduction agreements or by changes in the US defense budget, as it is a planning tool and is not dependent on weapons types or numbers. Software enhancements include emphasis on modern workstations and user friendliness to improve efficiency of the system.

Information Systems

Logicon Message Distribution System (LMDS)

The primary function of LMDS is the real-time screening of information as it is received electronically. According to Logicon, LMDS scans the data and automatically selects the individual to receive each incoming message or document based on user-provided criteria. The product provides a method to handle the increasingly complex and growing volumes of information that must be processed each day at government message centers and corporate mail rooms. Currently, LMDS is employed by several DoD agencies and contractors to include the National Security Agency at Ft Meade, MD; the Defense Intelligence Agency's National Military Intelligence Center, Arlington, VA; the US House of Representatives; and the Dow Jones News retrieval Service, Princeton, NJ.

Case Management Control System (CMCS)

CMCS is an automated information system designed to track the status of the US Air Force Foreign Military Sales program. CMCS provided timely information to various planners during Operation Desert Shield/Desert Storm concerning various US-manufactured equipment and supplies earmarked for the Persian Gulf. In 1991, Logicon was awarded a four-year contract valued in excess of $28 million, to continue to maintain and enhance the existing CMCS system, as well as develop enhancements.

Space System Programs

NAVSTAR Global Positioning System

The NAVSTAR Global Positioning Satellite System (GPS) is a constellation of US NAVSTAR (Navigation System using Timing and Ranging) satellites used for three-dimensional position and velocity determination. NAVSTAR GPS is designed for worldwide navigation coverage at sea, on the ground, in the air, or in low-Earth orbit. Logicon is one of numerous subcontractors identified with this program.

Training & Simulation Programs

Link Monitoring System (LMS)

In 1985, Logicon introduced its first Link Monitoring System, the LMS-11, to provide performance verification to US Navy users of the Link-11 (Naval Tactical Data System). The LMS-11 workstation is packaged in two ruggedized, portable containers. The LMS-11 aids in identifying net problems by displaying net information on a color CRT display. In 1989, the LMS-4A was added to the LMS family to handle Link-4A tactical data communications. During Operation Desert Storm, LMS-11 was employed by the US and Royal Australian navies, the US Air Force, and Canadian Forces to monitor the operation of tactical data links in real time.

LINK-11 Audio Signal Simulator (LASS)

LASS test equipment provides US Navy personnel with the ability to test individual Link-11 components, as well as to check complete end-to-end system continuity. LAS is a precision analog signal generator that reproduces the data tones of the Link-11 signal and is designed to operate in conjunction with a tactical data display of the LMS-11.

Tower Operator Training System (TOTS)

The TOTS will simulate an actual airport tower environment for student controllers. The 25-foot high, 210-degree wrap-around display provides day or night scenes of "out the tower window" simulation. The simulator also incorporates an advanced computer-based speech understanding and voice generation system to provide realistic communications with "pilots." TOTS were delivered to the FAA's training academy in Oklahoma City. A similar system has also been developed for the US Navy.

US Contract Awards

Below is a listing of major contracts awarded to Logicon from the United States government in the past two years (contracts as of press date).

Date	Award ($ millions)	Contract #	Description
1995			
3/29/95	$5.8	DNA001-93-C-0138	Tech assistance to the Defense Nuclear Agency
9/21/95	$23.8	F01620-94-D-0002	Seven software packages under the I-CASE contract.
9/27/95	$6.0	F19628-94-C-0117	Various software for the B-1B mission planning system.
9/28/95	$39.0	N60921-91-C-A205	Continuing test & evaluation of the AEGIS combat system, weapon system and software.
1996			
5/7/96	$6.6	F01620-94-D-0002	Varying quantities of 118 individual software tools in

Date	Award ($ millions)	Contract #	Description
			support of agencies government-wide as part of I-CASE.
6/13/96	$6.3	F01620-94-D-0002	Provide additional Sun products to I-CASE customers by incorporating them to the subject contract.
8/1/96	$9.5	N00244-96-C-5078	Engineering & support services for the Navy Center for Tactical Interoperability.
9/26/96	$24.9	N60921-91-C-A205	Continuing test & evaluation of the AEGIS combat and weapon system software.
10/1/96	$5.4	F42610-96-C-0062	Update of the operational targeting program software on the Minuteman III missile.
10/31/96	$7.2	N66604-97-D-0071	Management & deployment of ongoing computer-based projects for the Naval Undersea Warfare Center.
1997			
2/13/97	$11.1	N00024-97-C-5214	FY87 contractors field services and offsite support. Completed 10/87.
3/14/97	$5.4	DNA001-93-C-0138	20 AWG-9 weapon control systems for the F-14 aircraft. Completed 7/89.

*   *   *