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**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
Washington, D.C. 20549**

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**FORM 10-K**

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

For the year ended December 31, 2003

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

For the transition period from  
to

Commission file number  
1-16411

**NORTHROP GRUMMAN CORPORATION**

(Exact name of registrant as specified in its charter)

**DELAWARE**

(State or other jurisdiction of  
incorporation or organization)

**95-4840775**

(I.R.S. Employer Identification  
Number)

**1840 Century Park East, Los Angeles, California 90067**

www.northropgrumman.com

(Address of principal executive offices and internet site)

**(310) 553-6262**

(Registrant's telephone number, including area code)

Securities registered pursuant to section 12(b) of the Act:

Title of each class

Name of each exchange on which registered

Common Stock, \$1 par value

New York Stock Exchange  
Pacific Exchange

Series B Convertible Preferred Stock  
7.25% Equity Security Units

New York Stock Exchange  
New York Stock Exchange

Securities Registered pursuant to Section 12(g) of the Act:

None

Indicate by check mark whether the Registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or such shorter period that the Registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.

Yes

No

Indicate by check mark whether the Registrant is an accelerated filer (as defined in Exchange Act Rule 12b-2).

Yes

No

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of Registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.

As of June 30, 2003, 182,947,091 shares of Common Stock were outstanding, and the aggregate market value of the Common Stock (based upon the closing price of the stock on the New York Stock Exchange) of the Registrant held by nonaffiliates was approximately \$15,787 million.

As of March 3, 2004, 180,974,286 shares of Common Stock were outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the Proxy Statement for the 2004 Annual Meeting of Stockholders. Part III

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**SELECTED EXHIBITS**

*23	Independent Auditors' Consent
*31.1	Certification of Ronald D. Sugar pursuant to Rule 13a-14(a)/15d-14(a) of the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
*31.2	Certification of Charles H. Noski pursuant to Rule 13a-14(a)/15d-14(a) of the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
**32.1	Certification of Ronald D. Sugar pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
**32.1	Certification of Charles H. Noski pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
*	Filed with this Report
**	Furnished with this Report

**NORTHROP GRUMMAN CORPORATION**

**PART I**

**Item 1. Business**

Northrop Grumman Corporation (Northrop Grumman or the company) provides technologically advanced, innovative products, services, and solutions in defense and commercial electronics, nuclear and non-nuclear shipbuilding, information technology, mission systems, systems integration, and space technology. As prime contractor, principal subcontractor, partner, or preferred supplier, Northrop Grumman participates in many high-priority defense and commercial technology programs in the United States and abroad. The majority of the company's products and services are ultimately sold to the U.S. Government, which accounted for 86.7 percent of total revenue in 2003, and the company is therefore affected by, among other things, the federal budget process.

**History**

Originally formed in California in 1939, Northrop Corporation was reincorporated in Delaware in 1985. In 1994 the company purchased the outstanding common stock of Grumman Corporation and, effective May 18, 1994, Northrop Corporation was renamed Northrop Grumman Corporation. On April 2, 2001, NNG, Inc., a newly formed Delaware holding company, exchanged its common shares for all of the outstanding Northrop Grumman Corporation common shares on a one-for-one basis, through a merger in which Northrop Grumman Corporation became a subsidiary of NNG, Inc. In connection with this merger, NNG, Inc. changed its name to Northrop Grumman Corporation and the former Northrop Grumman Corporation changed its name to Northrop Grumman Systems Corporation (Northrop Systems).

In April 2001, the company purchased approximately 97 percent of the common stock and approximately 59 percent of the preferred stock of Litton Industries, Inc. (Litton). The company issued 13 million shares of its common stock and 3.5 million shares of its preferred stock and paid cash for the balance of the Litton shares. In May and June 2001, the company acquired all of the remaining shares of Litton common and preferred stock for cash.

In November 2001, pursuant to a tender offer that expired on November 29, 2001, the company purchased approximately 80.7 percent of the outstanding shares of Newport News Shipbuilding Inc. (Newport News). For the year ended December 31, 2001, the company accounted for the remaining 19.3 percent of Newport News common shares as minority interest. On January 18, 2002, the company acquired the remaining 19.3 percent of Newport News shares not purchased in the tender offer.

On December 11, 2002, the company issued 69.4 million shares in exchange for all outstanding shares of TRW Inc. (TRW) which consisted of two defense related businesses and an automotive business (Auto). On February 28, 2003, the company sold Auto to The Blackstone Group for \$3.3 billion in cash, a \$600 million face value payment-in-kind note, initially valued at \$455 million, and a 19.6 percent interest in the new enterprise, initially valued at \$170 million. The acquirer also assumed debt of approximately \$200 million. The cash received from the sale of Auto was adjusted from the sale agreement amount by cash sold with the business, preliminary purchase price adjustments, and an asset retained. Cash proceeds from the sale were primarily used to reduce debt. The payment-in-kind note matures in 2018 and bears interest at an effective yield of 11.7 percent per annum. In January 2004, the restrictions on the investment in Auto were amended to provide the company more flexibility in monetization. In February 2004, the company's investment in Auto was diluted to 17.2 percent as a result of Auto's initial public offering. In connection with the acquisition of TRW, the company entered into a formal stipulation and consent decree with the U.S. Department of Justice that was filed in the U. S. District Court for the District of Columbia on December 11, 2002. Key provisions of the consent decree are intended to assure that the merger will not impede fair and open competition related to certain electronic satellite payloads. The consent decree does not require the divestiture of any businesses, and permits the company to operate its businesses and those of TRW as planned. The retained portions of TRW represent the Mission Systems and Space Technology sectors discussed more fully herein. Additional information describing the aforementioned mergers and acquisitions is contained in Note 3 to the Consolidated Financial Statements in Part II, Item 8.

## NORTHROP GRUMMAN CORPORATION

In 2002, the company decided to sell the majority of the businesses comprising its Component Technologies (CT) operating sector and sold two businesses in its Electronic Systems sector; Ruggedized Displays and Electron Devices. These businesses and Auto are reported as discontinued operations. Additional information is contained in Note 4 to the Consolidated Financial Statements in Part II, Item 8.

### Summary Segment Financial Data

In the following table of segment and major customer data, revenue from the U.S. Government includes revenue from contracts on which Northrop Grumman is the prime contractor as well as those on which the company is a subcontractor and the ultimate customer is the U.S. Government. The company's discontinued operations are excluded from all of the data elements in this table, except for assets designated as held for sale. The 2002 income statement does not include TRW's post-acquisition results as they were not material. TRW backlog acquired and assets at December 31, 2002, are included in the following table. The following are certain factors to be considered when analyzing the segment financial data presented below:

*Foreign Sales* – Foreign sales amounted to approximately \$1.6 billion, \$1.3 billion, and \$1.3 billion or 6.1 percent, 7.6 percent, and 10 percent of total revenue for the years ended December 31, 2003, 2002, and 2001, respectively. All of the company's segments engage in international business, for which the company retains a large number of sales representatives and consultants who are not employees of the company. Foreign sales by their very nature are subject to greater variability in risk than the company's domestic sales, particularly to the U.S. Government. International sales and services subject the company to numerous stringent U.S. and foreign laws and regulations, including, without limitation, regulations relating to import-export control, repatriation of earnings, exchange controls, the Foreign Corrupt Practices Act, and the anti-boycott provisions of the U.S. Export Administration Act. Failure by the company or its sales representatives or consultants to comply with these laws and regulations could result in administrative, civil, or criminal liabilities and could in the extreme case result in suspension or debarment from government contracts or suspension of the company's export privileges, which could have material adverse consequences.

*Unallocated Expenses* – The reconciling item captioned "Unallocated expenses" includes the portion of corporate, legal, environmental, state income tax, other retiree benefits, and other expenses not considered allowable under Cost Accounting Standards (CAS) and not allocated to the segments.

*Pension* – Pension expense is included in the sectors' cost of sales to the extent that these costs are currently recognized under CAS. In order to reconcile from segment operating margin to total company operating margin, these amounts are reported under the caption "Reversal of CAS pension expense included above." Total pension (expense) income, determined in accordance with accounting principles generally accepted in the United States, is reported separately as a reconciling item under the caption "Pension (expense) income."

*Goodwill* – During the second quarter of 2002, the company completed the first step of the required initial test for potential impairment of goodwill as of January 1, 2002. The company used a discounted cash flow approach, corroborated by comparative market multiples, where appropriate, to determine the fair value of its reporting units. The results indicated potential impairment only in the reporting units of the Component Technologies sector due to unfavorable market conditions. Accordingly, the company recorded a non-cash charge of \$432 million, or \$3.67 per diluted share, which is reported as "Cumulative effect of accounting change." For additional information see Note 9 to the Consolidated Financial Statements contained in Part II, Item 8.

*Realignment* – Effective January 1, 2004, the company realigned businesses among three of its operating segments that possess similar customers, expertise, and capabilities. The realignment more fully leverages existing capabilities and enhances development and delivery of highly integrated information systems and services. Mission Systems' Global Information Technology, Civil Systems, and Mission Systems Europe businesses were transferred to the

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**NORTHROP GRUMMAN CORPORATION**

Information Technology segment. Prior to January 1, 2004, the three business areas comprised Mission Systems' Federal & Civil Information Systems business. The Defense Mission Systems (DMS) business within the Information Technology segment was transferred to the Mission Systems segment. Prior to January 1, 2004, DMS is contained within Information Technology's Government Information Technology business. The Command, Control & Intelligence (C2I) Systems business area of the Missions Systems segment transferred its Unmanned Air Vehicle business to the Air Combat Systems (ACS) business area within the Integrated Systems segment. Had the realignment taken place on January 1, 2003, 2003 sales would have been approximately \$104 million lower than reported for the Information Technology sector, \$57 million higher than reported for the Mission Systems sector, and \$47 million higher than reported for the Integrated Systems sector. Subsequent to December 31, 2003, all financial information will be presented reflecting the above realignment. The realignment is not reflected in any historical financial information contained within this Form 10-K.

*Reclassifications* – Certain amounts for 2002 and 2001 have been reclassified to conform to the 2003 presentation.

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## NORTHROP GRUMMAN CORPORATION

## RESULTS OF OPERATIONS BY SEGMENT AND MAJOR CUSTOMER

	Year ended December 31		
<i>\$ in millions</i>	2003	2002	2001
<b>Sales and Service Revenue</b>			
<b>Electronic Systems</b>			
United States Government	\$ 3,481	\$ 2,959	\$ 2,824
Other customers	2,199	2,114	1,586
Intersegment sales	359	253	166
	6,039	5,326	4,576
<b>Ships</b>			
United States Government	5,276	4,445	1,487
Other customers	174	251	392
Intersegment sales	1	1	1
	5,451	4,697	1,880
<b>Information Technology</b>			
United States Government	4,155	3,707	3,237
Other customers	455	473	496
Intersegment sales	144	70	61
	4,754	4,250	3,794
<b>Mission Systems</b>			
United States Government	3,502		
Other customers	418		
Intersegment sales	195		
	4,115		
<b>Integrated Systems</b>			
United States Government	3,590	3,096	2,869
Other customers	181	161	121
Intersegment sales	29	16	11
	3,800	3,273	3,001
<b>Space Technology</b>			
United States Government	2,718		
Other customers	57		
Intersegment sales	48		
	2,823		
Intersegment eliminations	(776)	(340)	(239)
Total revenue	\$26,206	\$17,206	\$13,012
<b>Operating Margin</b>			
Electronic Systems	\$ 590	\$ 434	\$ 349
Ships	295	306	19
Information Technology	281	250	174
Mission Systems	258		
Integrated Systems	380	331	265
Space Technology	193		
Adjustments to Reconcile to Total Operating Margin			
Unallocated expenses	(141)	(105)	(134)

Pension (expense) income	(568)	90	335
Reversal of CAS pension expense included above	265	100	43
Reversal of royalty income included above	(15)	(15)	(18)
<hr/>			
Total operating margin	\$ 1,538	\$ 1,391	\$ 1,033
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## NORTHROP GRUMMAN CORPORATION

<i>\$ in millions</i>	Year ended December 31		
	2003	2002	2001
<b>Contract Acquisitions</b>			
Electronic Systems	\$ 6,018	\$ 5,930	\$ 5,515
Ships	4,839	5,286	11,652
Information Technology	5,322	4,398	4,286
Mission Systems	4,509	2,748	
Integrated Systems	4,279	3,488	2,233
Space Technology	3,073	1,308	
Intersegment Eliminations	(1,021)	(300)	(379)
Total contract acquisitions	\$27,019	\$22,858	\$ 23,307
<b>Capital Expenditures</b>			
Electronic Systems	\$ 173	\$ 263	\$ 195
Ships	136	76	44
Information Technology	30	45	46
Mission Systems	28		
Integrated Systems	158	134	79
Space Technology	105		
General Corporate	5	3	3
Total capital expenditures	\$ 635	\$ 521	\$ 367
<b>Depreciation and Amortization</b>			
Electronic Systems	\$ 229	\$ 226	\$ 301
Ships	142	147	82
Information Technology	47	44	90
Mission Systems	60		
Integrated Systems	86	78	102
Space Technology	115		
General Corporate	3	1	1
Total depreciation and amortization	\$ 682	\$ 496	\$ 576
<b>Assets</b>			
December 31			
<i>\$ in millions</i>	2003	2002	2001
<b>Assets</b>			
Electronic Systems	\$ 5,660	\$ 5,442	\$ 5,761
Ships	6,482	6,532	6,040
Information Technology	2,120	2,182	2,102
Mission Systems	6,467	4,759	
Integrated Systems	2,244	2,173	2,088
Space Technology	4,717	4,889	
General Corporate	5,198	6,728	3,620
Assets of Businesses Held for Sale	121	9,621	1,207
Total assets	\$33,009	\$42,326	\$20,818
<b>Funded Backlog</b>			
Electronic Systems	\$ 6,468	\$ 6,489	\$ 5,885
Ships	9,749	10,361	9,772
Information Technology	2,163	1,595	1,447
Mission Systems	3,142	2,748	
Integrated Systems	4,217	3,738	3,523
Space Technology	1,558	1,308	
Intersegment Eliminations	(431)	(186)	(226)

Total funded backlog

\$ 26,866

\$26,053

\$ 20,401

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## NORTHROP GRUMMAN CORPORATION

### Organization, Products, and Services

The company operates in seven business sectors: Electronic Systems, Newport News, Ship Systems, Information Technology, Mission Systems, Integrated Systems, and Space Technology. For financial reporting purposes, the Electronic Systems, Information Technology, Mission Systems, Integrated Systems, and Space Technology sectors are each reportable segments. In accordance with the provisions of SFAS No. 131 – *Disclosures about Segments of an Enterprise and Related Information*, Newport News and Ship Systems results are aggregated and reported as the Ships segment.

*Electronic Systems* – Electronic Systems is a leading designer, developer, and manufacturer of a wide variety of advanced defense electronics and systems. Electronic Systems provides airborne radar systems, secondary surveillance systems, inertial navigation systems and sensors, electronic warfare systems, precision weapons, air traffic control systems, air defense systems, communications systems, space systems, marine systems, oceanic and naval systems, integrated avionics systems, and automation and information systems. Headquartered in Baltimore, Maryland, the sector includes the Aerospace Systems; Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance (C4ISR) & Naval Systems; Defensive Systems; Navigation Systems; and Space Systems divisions. Operations not included in these divisions are reported as “Other.” Key products include fire control radars for the F-16, F-22 and F-35 fighter aircraft, as well as for the Longbow Apache helicopter. Other principal products include the Airborne Warning and Control System (AWACS) radar, Joint Surveillance Target Attack Radar System (Joint STARS) air-to-ground surveillance radar sensor, Longbow Hellfire missile, tactical military radars, countrywide air defense systems, airborne electronic countermeasures systems, sophisticated undersea warfare systems, and naval propulsion and power generation systems. Electronic Systems has 129 locations worldwide, 63 international offices, and approximately 23,600 employees.

*Newport News* – Newport News’ primary business is the design, construction, repair, maintenance, overhaul, life-cycle support, and refueling of nuclear-powered aircraft carriers and the design, life-cycle support, and construction of nuclear-powered submarines for the U.S. Navy. Newport News is the nation’s sole designer, builder, and refueler of nuclear-powered aircraft carriers and one of only two companies capable of designing and building nuclear-powered submarines. Major programs are the CVN 21 (next generation aircraft carrier), the Nimitz-class nuclear powered aircraft carriers, and the Virginia-class submarine program. The sector also provides after-market services for a wide array of naval and commercial vessels. Headquartered in Newport News, Virginia, the sector has approximately 19,000 employees.

*Ship Systems* – Ship Systems is one of the nation’s leading full service systems providers for the design, engineering, construction, and life cycle support of major surface ships for the U.S. Navy, U.S. Coast Guard, international navies, and for commercial vessels of all types. Major programs for the U.S. Navy include the WASP LHD 1 Class and San Antonio LPD 17 Class amphibious assault ships, the Arleigh Burke DDG 51, and next generation DD(X) destroyers. The company is also a partner in the Coast Guard’s Deepwater modernization program and produces double-hulled crude oil tankers. Ship Systems is headquartered in Pascagoula, Mississippi, with primary operations in Pascagoula, Mississippi; New Orleans, Louisiana; Gulfport, Mississippi; and Tallulah, Louisiana, as well as in fleet support offices in the U.S. and Japan. Ship Systems has approximately 19,000 employees.

*Information Technology* – Information Technology is a premier provider of advanced information technology (IT) solutions, engineering, and business services for government and commercial customers. The segment consists of four lines of business: Government Information Technology, Enterprise Information Technology, Technology Services, and Commercial Information Technology. Government Information Technology covers a wide range of large-scale systems integration, solutions, and services programs. This work is performed for government customers at the Department of Defense, federal, state, and local levels, and covers C4ISR, training and simulation, science and technology, and information systems markets. Enterprise Information Technology focuses on the delivery and integration of commercially available computers, networks, hardware, software, and peripherals to government and commercial customers. Technology Services include base and range support, training and simulation, information

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**NORTHROP GRUMMAN CORPORATION**

systems, and state and local information technology services. Commercial Information Technology provides complete IT outsourcing services directed at the commercial market. In addition, the sector provides IT services internally to all Northrop Grumman sectors. Headquartered in Herndon, Virginia, the sector employs approximately 22,200 professionals located in 197 sites worldwide.

*Mission Systems* – Mission Systems is a leading global system integrator of complex, mission-enabling systems for government, military, and business clients. The organization's technology leadership spans four business areas: Command, Control & Intelligence Systems, Missile Systems, Federal & Civil Information Systems, and Technical and Management Services. Products and services are focused on the fields of command and control, strategic missiles, missile and air defense, airborne reconnaissance, unmanned aerial vehicles, intelligence management and processing, electro-magnetic and infrared analysis, and decision support systems. Headquartered in Reston, Virginia, Mission Systems has approximately 15,600 employees in more than 145 locations around the world.

*Integrated Systems* – Integrated Systems is a leader in the design, development, and production of airborne early warning, electronic warfare and surveillance, and battlefield management systems. Integrated Systems includes the Air Combat Systems, Airborne Early Warning & Electronic Warfare Systems, and Airborne Ground Surveillance & Battle Management Systems business areas. Integrated Systems is the prime contractor for the Joint STARS advanced airborne targeting and battle management system, Global Hawk, and B-2 Spirit stealth bomber. The sector has principal roles in the F/A-18 Hornet strike fighter and F-35 joint strike fighter programs. Integrated Systems is upgrading the EA-6B Prowler electronic countermeasures aircraft and produces the E-2C Hawkeye early warning aircraft. Headquartered in El Segundo, California, the sector has approximately 13,400 employees.

*Space Technology* – Space Technology develops a broad range of systems at the leading edge of space, defense, and electronics technology. The sector creates products primarily for the U.S. Government that contribute significantly to the nation's security and leadership in science and technology. Its business areas focus on the design and manufacture of spacecraft systems and subsystems, electronic systems, including national defense space systems, space science instruments, environmental monitoring space systems, advanced avionics systems, and high energy laser systems. Headquartered in Redondo Beach, California, Space Technology has approximately 8,900 employees in 15 locations around the world.

*Corporate Offices* – The company's principal executive offices are located at 1840 Century Park East, Los Angeles, California 90067. Total corporate employees approximate 900. The company's telephone number is (310) 553-6262. The company's home page on the Internet is [www.northropgrumman.com](http://www.northropgrumman.com). The company makes web site content available for information purposes. It is not incorporated by reference into this Form 10-K.

**Employee Relations**

The company believes that it maintains good relations with its 122,600 employees, of which approximately 20 percent are covered by 33 collective bargaining agreements. The company currently expects to complete negotiation of 14 collective bargaining agreements in 2004. One of these agreements, covering over 8,000 employees in the Ships segment, is expected to be completed by the second quarter of 2004. It is not expected that these negotiations will either individually or collectively cause a material adverse effect on the operations of the company.

**Environmental Matters**

Federal, state, and local laws relating to the protection of the environment affect the company's manufacturing operations. The company has provided for the estimated cost to complete remediation where the company has determined that it is probable that the company will incur such costs in the future to address environmental impact at current or formerly owned operating facilities or at sites where it has been named a Potentially Responsible Party (PRP) by the Environmental Protection Agency or similarly designated by other environmental agencies. It

## **NORTHROP GRUMMAN CORPORATION**

is difficult to estimate the timing and ultimate amount of environmental cleanup costs to be incurred in the future due to the uncertainties regarding the extent of the required cleanup and the status of the law, regulations, and their interpretations.

In order to assess the potential impact on the company's financial statements, management estimates the possible remediation costs that reasonably could be incurred by the company. Such estimates take into consideration the professional judgment of the company's environmental engineers and, when necessary, consultation with outside environmental specialists. In most instances, only a range of reasonably possible costs can be estimated. However, in the determination of accruals, the most probable amount is used when determinable and the minimum is used when no single amount is more probable. The company records accruals for environmental cleanup costs in the accounting period in which the company's responsibility is established and the costs can be reasonably estimated. The company does not anticipate and record insurance recoveries before collection is probable.

Management estimates that at December 31, 2003, the range of reasonably possible future costs for environmental remediation is \$251 million to \$366 million, of which \$271 million has been accrued, including \$25 million recorded in liabilities of businesses held for sale. Environmental reserves are recorded on an undiscounted basis. At sites involving multiple parties, the company provides environmental reserves based upon its expected share of liability, taking into account the financial viability of other jointly liable parties. Environmental expenditures are expensed or capitalized as appropriate. Capitalized expenditures relate to long-lived improvements in currently operating facilities. In addition, should other PRP's not pay their allocable share of remediation costs, the company may have to incur costs in addition to those already estimated and accrued. Management does not believe that it will be required to assume a share of the liability of other PRP's in an amount that would have a material effect on the company's financial position or results of operations. The company makes the investments it believes will be necessary in order to comply with environmental laws.

### **Available Information**

Throughout this Form 10-K, the company incorporates by reference information from parts of other documents filed with the Securities and Exchange Commission (SEC). The SEC allows the company to disclose important information by referring to it in this manner, and you should review this information.

The company's annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and proxy statement for the annual shareholders' meeting, as well as any amendments to those reports, are available free of charge through the company web site as soon as reasonably practicable after electronic filing of such material with the SEC. You can learn more about the company by reviewing the company SEC filings on the company web site. The company SEC reports can be accessed through the investor relations page of the company web site. The SEC also maintains a web site at [www.sec.gov](http://www.sec.gov) that contains reports, proxy statements and other information regarding SEC registrants, including Northrop Grumman.

### **Item 2. Properties**

At December 31, 2003, the company's seven business sectors had available approximately 54 million square feet of space comprised of approximately 2,374 buildings/structures and land at 595 separate locations throughout the United States and the world for the purpose of manufacturing, warehousing, research and testing, administration, and various other productive and facility uses. Of the total square footage available to the company at December 31, 2003, 57 percent was company-owned, 39 percent was leased, and 4 percent was government-owned. At December 31, 2003, the company leased to others approximately 1.75 million square feet of floor space.

At December 31, 2003, the company had major operations at the following locations:

- **Electronic Systems** – Annapolis, Baltimore, Belcamp, Elkridge, Gaithersburg, Hagerstown, Linthicum and Sykesville, MD; Apopka, FL; Azusa, Northridge, San Jose, Sunnyvale and Woodland Hills, CA; Charlottesville,

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VA; Cincinnati, OH; Garland, TX; Elk Grove and Rolling Meadows, IL; Salt Lake City, UT; Norwalk, CT; Tempe, AZ; Melville and Williamsville, NY; Ocean Springs, MS; Huntsville, AL; Warner Robins, GA; and Westwood, MA. Outside United States locations in Canada, France, Germany, Italy, Norway, and United Kingdom.

- **Ships** – Avondale, Harahan, Harvey, Jefferson, Tallulah and Waggaman, LA ; Gulfport and Pascagoula, MS; San Diego, CA; and Newport News, VA.
- **Information Technology** – Hawthorne, San Diego and San Pedro, CA; Washington, DC; Reading, MA; Annapolis Junction, Bethesda, Greenbelt and Rockville, MD; Arlington, Chantilly, Dahlgren, Fairfax, Falls Church, Herndon, McLean, Newport News, Reston, Stafford, and Virginia Beach, VA; Brook Park and Fairborn, OH; Bethpage and Bohemia, NY; Dallas, TX; Bellevue, NE; Knoxville, TN; Lafayette, CO; and Oklahoma City, OK.
- **Mission Systems** – Albuquerque, NM; Huntsville, AL; Carson, Huntington Beach, McClellan, Redondo Beach, San Bernardino, San Jose, Sunnyvale, and Van Nuys, CA; Aurora and Colorado Springs, CO; Arlington, Chantilly, Chester, Fairfax, McLean, and Reston, VA; Sierra Vista, AZ; Columbia and Lanham, MD; Kettering, OH; Washington, DC; Clearfield, UT; and Atlanta, GA.
- **Integrated Systems** – Point Mugu, El Segundo, Hawthorne, Palmdale, Rancho Bernardo, and San Diego, CA; Jacksonville, Melbourne and St. Augustine, FL; Lake Charles, LA; Hollywood, MD; Bethpage and Hicksville, NY; Irving, TX; and New Town, ND.
- **Space Technology** – Charlotte, NC; El Segundo, Manhattan Beach, Rancho Carmel, Redondo Beach, and San Diego, CA; Warner Robins, GA; and St. Charles, MO.
- **Corporate** – Brea and Los Angeles, CA; Olathe, KS; Utica, NY; York, PA; Arlington, VA; Marshall, TX; and Englewood, NJ.

The following is a summary of floor space available to the company at December 31, 2003:

<i>(Square feet)</i>	<b>Owned</b>	<b>Leased</b>	<b>Government Owned/Leased</b>	<b>Total</b>
Electronic Systems	9,103,869	3,966,624		<b>13,070,493</b>
Ships	13,139,414	1,752,019	74,322	<b>14,965,755</b>
Information Technology	52,673	5,039,895		<b>5,092,568</b>
Mission Systems	374,154	3,941,651		<b>4,315,805</b>
Integrated Systems	4,080,599	3,787,121	1,969,690	<b>9,837,410</b>
Space Technology	3,186,549	2,148,030	4,656	<b>5,339,235</b>
Corporate	803,760	446,622		<b>1,250,382</b>
<b>Total</b>	<b>30,741,018</b>	<b>21,081,962</b>	<b>2,048,668</b>	<b>53,871,648</b>

The company believes its properties are well maintained and in good operating condition and that the productive capacity of the company's properties is adequate to meet current contractual requirements for the foreseeable future.

**Item 3. Legal Proceedings**

Various claims and legal proceedings arise in the ordinary course of business and are pending against the company and its properties. The company is a defendant in lawsuits alleging personal injury as a result of exposure to asbestos integrated into its premises and certain historical products. Many of these claims have been dismissed with no payment and the remaining resolved claims have involved amounts that were not material either individually or in the aggregate. Based upon the information available, the company does not believe that the resolution of any of these proceedings will have a material adverse effect upon its operations or financial condition.

## **NORTHROP GRUMMAN CORPORATION**

Departments and agencies of the U.S. Government have the authority to investigate various transactions and operations of the company, and the results of such investigations may lead to administrative, civil, or criminal proceedings, the ultimate outcome of which could be fines, penalties, repayments, or compensatory or treble damages. U.S. Government regulations provide that certain findings against a contractor may lead to suspension or debarment from future U.S. Government contracts or the loss of export privileges for a company or an operating division or subdivision. Suspension or debarment could have a material adverse effect on the company because of its reliance on government contracts. Based on available information, the company does not believe, but can give no assurance, that any matter resulting from a U.S. Government investigation would have a material adverse effect on its results of operations or financial condition.

In August 1992, in U.S. ex rel. Rex Robinson v. Northrop Grumman Corporation, the United States District Court for the Northern District of Illinois unsealed a complaint brought by four individuals in the name of the United States of America. The action was filed on August 10, 1989, seeking damages under the *qui tam* provision of the civil False Claims Act. On July 28, 1992, the government declined to intervene in this action. Plaintiffs amended their damage claim and now seek compensatory damages of approximately \$369 million, which could be trebled under the False Claims Act, together with statutory penalties of up to \$39 million, pre-judgment interest, loss of use of money and other unspecified damages for expenses, attorney fees, and costs. The individual relators also seek damages in their individual capacities for alleged retaliation. In 2001, the Civil Division of the U.S. Attorney's Office filed a motion to intervene in the action, which motion was granted on October 12, 2001. The company denies the allegations and continues to vigorously defend the action.

### **Environmental Matters**

On July 10, 2003, the South Coast Air Quality Management District (SCAQMD) issued a notice of violation (NOV) to the Space Technology facility in Redondo Beach, California alleging sixty-four deviations from the operating conditions of an air permit. The SCAQMD and the company settled all counts alleged in the NOV by agreement dated December 19, 2003. Pursuant to the terms of the settlement agreement, on January 12, 2004, the company paid a monetary penalty of \$15,000. The company is negotiating with the SCAQMD on other matters. Additional penalties, if any, are not expected to be significant.

On April 24, 2003, Lucas Western Inc. (a wholly-owned subsidiary of the company upon the acquisition of TRW) entered into an Administrative Consent Order (Order) with the New York State Department of Environmental Conservation (DEC) for the alleged unpermitted discharge of pollutants into the waters of the State. Lucas Western, Inc. agreed to eliminate discharges and pay a civil penalty of \$100,000, of which \$50,000 was paid, with the remainder suspended, but subject to assessment at DEC discretion in the event of a violation of the Order or applicable State laws. The elimination of all unpermitted discharge of pollutants has been effected. It is anticipated that the Order will be terminated, thereby extinguishing the \$50,000 penalty, in the first half of 2004.

### **Other Matters**

In the event of termination for the government's convenience, contractors are normally protected by provisions covering reimbursement for costs incurred subsequent to termination. The company received a termination for convenience notice on the Tri-Service Standoff Attack Missile (TSSAM) program in 1995. In December 1996, the company filed a lawsuit against the U.S. Government in the U.S. Court of Federal Claims seeking the recovery of approximately \$750 million for uncompensated performance costs, investments, and a reasonable profit on the program. In prior years, the company had charged to operations in excess of \$600 million related to this program. Northrop Grumman is unable to predict whether it will realize some or all of its claims, none of which are recorded on its balance sheet, from the U.S. Government related to the TSSAM contract.

**NORTHROP GRUMMAN CORPORATION**

**Item 4. Submission of Matters to a Vote of Security Holders**

No items were submitted to a vote of security holders during the fourth quarter of 2003.

**PART II**

**Item 5. Market for Registrant's Common Equity and Related Stockholder Matters**

The information required by this Item is contained in Notes 17 and 18 to the Consolidated Financial Statements located in Part II, Item 8.

The approximate number of common shareholders was 39,500 as of March 3, 2004.

**Item 6. Selected Financial Data**

The data for the periods 1999 and 2000 presented in the following table, Selected Financial Data, have been adjusted to exclude the company's discontinued operations except for number of employees at year-end, floor space, and all balance sheet data, including net working capital (deficit), total assets, notes payable to banks and long-term debt, long-term obligations and preferred stock, and shareholders' equity. All data presented for the periods 2001 through 2003 have been adjusted to exclude discontinued operations except for floor space, net working capital (deficit), current ratio, and total assets.



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## NORTHROP GRUMMAN CORPORATION

## Selected Financial Data

	Year ended December 31,				
<i>\$ in millions, except per share</i>	2003	2002	2001	2000	1999
<b>Sales and Service Revenue</b>					
United States Government	\$ 22,722	\$ 14,207	\$ 10,417	\$ 6,662	\$ 6,716
Other customers	3,484	2,999	2,595	956	900
Total revenue	\$ 26,206	\$ 17,206	\$ 13,012	\$ 7,618	\$ 7,616
<b>Operating margin</b>					
Operating margin	\$ 1,538	\$ 1,391	\$ 1,033	\$ 1,098	\$ 954
Income from continuing operations before cumulative effect of accounting change	808	697	459	625	474
Basic earnings per share, from continuing operations before cumulative effect of accounting change	4.36	5.82	5.22	8.86	6.84
Diluted earnings per share, from continuing operations before cumulative effect of accounting change	4.32	5.72	5.17	8.82	6.80
Cash dividends per common share	1.60	1.60	1.60	1.60	1.60
Net working capital (deficit)	(616)	4,462	473	(162)	329
Current ratio	.90 to 1	1.39 to 1	1.09 to 1	.94 to 1	1.13 to 1
Total assets	\$ 33,009	\$ 42,326	\$ 20,818	\$ 9,622	\$ 9,285
Notes payable to banks and long-term debt	5,881	9,623	5,488	1,615	2,225
Total long-term obligations and preferred stock	10,921	16,571	8,327	3,015	3,564
Notes payable to banks and long-term debt as a percentage of shareholders' equity	37.3%	67.2%	74.3%	41.2%	68.3%
Operating margin as a percentage of total revenue	5.9%	8.1%	7.9%	14.4%	12.5%
Income from continuing operations, net of tax, as a percentage of					
Total revenue	3.1%	4.1%	3.5%	8.2%	6.2%
Average assets	2.1	2.2	3.0	6.6	5.0
Average shareholders' equity	5.4	6.4	8.1	17.4	15.5
<b>Research and development expenses</b>					
Contract	\$ 2,703	\$ 922	\$ 847	\$ 900	\$ 1,147
Noncontract	434	406	330	318	195
Payroll and employee benefits	10,996	6,926	4,896	2,581	2,768
Number of employees at year-end	122,600	117,300	93,300	39,300	44,600
Number of shareholders at year-end	39,345	28,212	17,880	11,750	11,173
Depreciation	\$ 455	\$ 332	\$ 246	\$ 175	\$ 162
Amortization of purchased intangibles	227	164	129	92	92
Maintenance and repairs	242	150	163	96	79
Rent expense	463	303	214	122	101
<b>Floor space (in millions of square feet)</b>					
Owned	30.7	30.8	30.4	14.3	18.8
Commercially leased	21.1	20.9	16.2	9.8	10.6
Leased from United States Government	2.0	2.1	2.7	2.9	7.5

**NORTHROP GRUMMAN CORPORATION****Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations****OVERVIEW**

Northrop Grumman provides technologically advanced, innovative products, services, and solutions in defense and commercial electronics, nuclear and non-nuclear shipbuilding, information technology, mission systems, systems integration, and space technology. As a prime contractor, principal subcontractor, partner, or preferred supplier, Northrop Grumman participates in many high-priority defense and commercial technology programs in the United States and abroad. Northrop Grumman conducts most of its business with the U.S. Government, principally the Department of Defense (DOD). The company also conducts business with foreign governments and makes domestic and international commercial sales.

**2003 Results**

The 2003 financial statements include TRW Inc. (TRW), which was acquired on December 11, 2002. This acquisition had a significant effect on the company's operations and is an important factor to be considered in comparing 2003 results with 2002 results. Selected financial highlights are presented in the table below.

*\$ in millions, except per share*

	2003	2002
Sales and service revenue	\$ 26,206	\$17,206
Operating margin	1,538	1,391
Income from continuing operations before cumulative effect of accounting change	808	697
Net income	866	64
Diluted earnings per share from continuing operations before cumulative effect of accounting change	4.32	5.72
Diluted earnings per share	4.64	.34
Cash provided by operating activities	798	1,689
Cash and cash equivalents	342	1,412
Notes payable to banks and long-term debt	5,881	9,623

Sales increased in 2003 over 2002 by \$9 billion, or 52 percent, due to the \$6.7 billion of sales contributed by the newly acquired TRW business segments (Space Technology and Mission Systems) and the \$2.3 billion, or 13 percent, growth in the company's heritage segments (Electronic Systems, Ships, Information Technology, and Integrated Systems). Operating margin for 2003 increased by \$147 million, or 11 percent, over 2002, reflecting \$451 million from the new segments and an increase of \$225 million, or 17 percent, from the heritage segments, offset by increased pension cost. Total operating margin in 2003 includes pension expense of \$568 million compared with pension income of \$90 million in 2002. Cost Accounting Standards (CAS) pension expense increased to \$265 million in 2003 from \$100 million for 2002.

Net income for 2002 included a \$432 million charge for the cumulative effect of an accounting change on January 1, 2002, to recognize the impairment of goodwill in the company's Component Technologies reporting units, and an additional goodwill impairment loss of \$186 million reported in loss from discontinued operations.

Earnings per share are based on weighted-average diluted shares outstanding of 184.2 million for 2003 and 117.4 million for 2002. The significant increase in shares outstanding is primarily the result of the acquisition of TRW in exchange for stock.

Cash provided by operating activities was \$891 million lower in 2003 compared with 2002. In 2003, cash provided by operating activities was reduced by approximately \$1 billion for taxes paid related to the completion of the B-2 Engineering and Manufacturing Development (EMD) contract.

## **NORTHROP GRUMMAN CORPORATION**

In February 2003, the company sold the automotive business (Auto), a component of TRW, for \$3.3 billion in cash, a payment-in-kind note, and an interest in the new enterprise. The cash received was used primarily to reduce debt. In 2003, the company also implemented a share repurchase program of up to \$700 million of its outstanding common stock, purchasing over 2.2 million shares for approximately \$200 million as of December 31, 2003.

### **Outlook**

Through sixteen acquisitions over the past decade the company has evolved from an aircraft manufacturer into a global enterprise focused on providing a broad range of products and services needed to meet the nation's defense and homeland security challenges. The company believes that its portfolio of technologically advanced, innovative products, services, and solutions in systems integration, defense electronics, information technology, advanced aircraft, shipbuilding, and space technology will generate revenue growth in 2004 and beyond. In 2004, based on its current total backlog (funded and unfunded) of \$58 billion and its opportunity to win future programs, the company expects revenue of approximately \$28 billion and improvements in net income and cash provided by operations over 2003. The major industry and economic factors that will affect the company's future performance are described in the following paragraphs.

### **Industry Factors**

While Northrop Grumman is subject to the usual vagaries of the marketplace, it is also affected by the unique characteristics of the defense industry and by certain elements peculiar to its own business mix. Lockheed Martin Corporation, The Boeing Company, Raytheon Company, and General Dynamics Corporation are among the largest companies in the defense industry at this time. Northrop Grumman competes against these and other companies for a number of programs, both large and small. Intense competition and long operating cycles are both key characteristics of Northrop Grumman's business and the defense industry. It is common in this industry for work on major programs to be shared among a number of companies. A company competing to be a prime contractor may, upon ultimate award of the contract, turn out to be a subcontractor. It is not uncommon to compete with a peer company and, simultaneously on other contracts, to be either a supplier to or a customer of such competitor. The nature of major defense programs, conducted under binding contracts, allows companies that perform well to benefit from a level of program continuity unknown in many industries.

An individual company's success in the competitive defense industry depends upon its ability to develop and market its products, as well as its ability to provide the people, facilities, equipment, and financial capacity needed to deliver those products with maximum efficiency. It is necessary to maintain, as the company has, sources for raw materials, fabricated parts, electronic components, and major subassemblies. In this manufacturing and systems integration environment, effective oversight of subcontractors and suppliers is as vital to success as managing internal operations. Northrop Grumman's operating policies are designed to achieve these objectives.

### **Economic Opportunities, Challenges, and Risks**

The defense of the United States and other North Atlantic Treaty Organization (NATO) countries requires the ability to respond to one or more regional conflicts, terrorist acts, homeland security, and proactive threat identification. Such engagements may require unilateral or cooperative initiatives ranging from passive surveillance to active engagement, deterrence, policing, or peacekeeping. In addition, the DOD's strategy continues to be affected by the general public's concern for placing military or civilian personnel at risk. As a result of these trends, both the United States and other NATO countries are increasingly relying on sophisticated weapon systems that provide long-range surveillance and intelligence, battle management, and precision strike capabilities combined with the ability to rapidly deploy complete defensive platforms around the world. Accordingly, defense procurement spending is expected to be weighted towards the development and procurement of advanced electronics and software that enhance the capabilities of individual weapons systems and provide for the real-time integration of individual surveillance, information management, strike, and battle management platforms.

## **NORTHROP GRUMMAN CORPORATION**

United States defense contractors have benefited from the upward trend in overall defense spending over recent years. Defense spending in NATO countries has stabilized, while those countries continue to increase their focus upon the development and procurement of advanced electronics and information systems capabilities. Although the ultimate size of future defense budgets remains uncertain, current indications are that the defense budget will increase over the next five years. Looking forward, based on the 2004 budget submitted by the President of the United States, the company continues to plan for steady, sustainable growth in national security spending. The Future Year Defense Program (FYDP) shows an increase to the DOD investment accounts of about 3 percent for 2005, with double-digit increases in areas like missile defense. The remainder of the FYDP shows approximately 6 percent annual growth through 2009. The company believes that spending on recapitalization and transformation of our homeland security and defense assets will continue to be a national priority, with particular emphasis on areas like national missile defense.

Substantial new competitive opportunities for the company include space based radar, aerial common sensor, transformational communication system, the Joint Unmanned Combat Air System (J-UCAS), and several international and homeland security programs. The company continues to focus on operational and financial performance for continued growth in 2004 and beyond.

U.S. Government programs in which Northrop Grumman either participates, or strives to participate, must compete with other programs for consideration during our nation's budget formulation and appropriation processes. Budget decisions made in this environment will have long-term consequences for the size and structure of Northrop Grumman and the entire defense industry.

Northrop Grumman has historically concentrated its efforts in high technology areas such as stealth, airborne surveillance, battle management, precision weapons, systems integration, defense electronics, and information technology. Through its acquisitions of Litton Industries, Inc. (Litton), Newport News Shipbuilding Inc. (Newport News), and TRW, the company now has a significant presence in space technology, Command, Control & Intelligence (C2I), federal and civil information systems, missile systems, and the manufacture of a broad range of ships including aircraft carriers and submarines. The company believes that its programs are a high priority for national defense, but there remains the possibility that one or more of them may be reduced, extended, or terminated.

The company provides certain product warranties that require repair or replacement of non-conforming items for a specified period of time. Most of the company's product warranties are provided under government contracts, the costs of which are generally recoverable from the customer.

Prime contracts with various agencies of the U.S. Government and subcontracts with other prime contractors are subject to numerous procurement regulations, including the False Claims Act, and The International Traffic in Arms Regulation promulgated under the Arms Export Control Act with noncompliance found by any one agency possibly resulting in fines, penalties, debarment, or suspension from receiving additional contracts with all U.S. Government agencies. Given the company's dependence on U.S. Government business, suspension or debarment could have a material adverse effect on the company's future.

## **ORGANIZATION, PRODUCTS, AND SERVICES**

The company is aligned into seven business sectors: Electronic Systems, Newport News, Ship Systems, Information Technology, Mission Systems, Integrated Systems, and Space Technology. For financial reporting purposes, each business sector is a reportable segment with the exception of Newport News and Ship Systems, which are aggregated and reported as the Ships segment in accordance with the provisions of SFAS No. 131 – *Disclosures about Segments of an Enterprise and Related Information*.

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**NORTHROP GRUMMAN CORPORATION**

Segment reporting for Mission Systems and Space Technology, TRW businesses acquired on December 11, 2002, commenced in the first quarter of 2003, as 2002 results for these new segments were not material to the company.

Effective January 1, 2004, the company realigned businesses among three of its operating segments. For additional information see Realignment discussion contained in the “Summary Segment Financial Data” section contained in Part I, Item 1.

**Electronic Systems**

The Electronic Systems segment, headquartered in Linthicum, Maryland, develops, produces, and supports high performance sensors, intelligence and processing, and navigation systems operating in all environments from undersea to outer space. It also develops, produces, and supports power, power control, and ship controls for naval combatants. The segment is comprised of five major business areas: Aerospace Systems; Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance (C4ISR) & Naval Systems; Defensive Systems; Navigation Systems; Space Systems; and three smaller business areas referred to collectively as “Other.”

*Aerospace Systems* – Aerospace Systems products include sensors and integrated sensor suites which meet military surveillance and precision-strike needs. Such products include a wide variety of radar systems for fighter and surveillance aircraft as well as helicopters. Principal programs include: radar installed onboard F-16, F-16 Block 60, and F/A-22 aircraft as well as other key avionics systems for the B-1B and the F-35 Joint Strike Fighter; precision guided munitions for artillery and Unmanned Aerial Vehicle (UAV) delivery; night vision goggles and weapon sights; and airborne surveillance systems such as the Airborne Warning and Control System (AWACS) radar, the Multirole Electronically Scanned Array (MESA), the Multi-Platform Radar Technology Insertion Program (MP-RTIP), and the E-2C Radar Modernization Program (RMP).

*C4ISR & Naval Systems* – C4ISR & Naval Systems is a systems oriented business consisting of subsystems and major systems integration programs in C4ISR sensors and processing, ship power propulsion and control systems, and air defense/air traffic control systems. Principal programs include: various intelligence, surveillance and reconnaissance processing systems; bridge management and controls for naval combatants and commercial marine customers; large air defense systems for foreign states; launch tubes for Trident submarines; the Advanced SEAL Delivery System mini-submarine; power generation systems for aircraft carriers; and propulsion systems for the Virginia-class submarine.

*Defensive Systems* – Defensive Systems provides electronic and infrared countermeasure systems, targeting systems, automatic test equipment, simulation products, and laser systems. Products include radar warning receivers, self-protection jammers, special receivers, and integrated electronic warfare systems, which protect fixed-wing and rotary-wing aircraft. Countermeasure products also include the Directional Infrared Countermeasures (DIRCM) system, which protects military and commercial fixed-wing and rotary-wing aircraft from shoulder-launched, infrared-guided threats.

*Navigation Systems* – Navigation Systems supplies international and domestic defense and commercial markets with navigation and positioning systems as well as flight certified computers, multifunction displays, identification friend or foe interrogators/transponders, and integrates these components into complete systems. Its products are used in military air, land, space, and sea applications and in commercial aircraft and space applications. Key programs include: integrated avionics for the U.S. Marine Corps attack and utility helicopters; U.S. Navy surveillance aircraft and Eurofighter aircraft; navigation and positioning systems for the U.S. Air Force F-22, Joint U.S. Air Force-U.S. Navy unmanned combat aerial systems, Airbus A380, and military/commercial space applications; and fiber-optic acoustic systems for underwater surveillance such as for Virginia-class submarines.

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*Space Systems* – Space Systems products include visible, infrared, and radio frequency payloads and the associated ground processing for remote sensing applications, such as environmental monitoring, missile warning, and surveillance. Principal programs include the Space-Based Infrared Surveillance (SBIRS) program, payloads for classified programs, the Defense Meteorological Satellite Program (DMSP), the National Polar-Orbital Operational and Environmental Satellite Systems (NPOESS), and the Defense Support Program (DSP).

*Other* – Other product and service lines in the Electronic Systems segment include communications, homeland defense, postal automation, and logistics. It also includes Systems Development and Technology, which develops next generation technologies that support Electronic Systems' market areas and position the segment in key developing markets, such as chemical and biological defense, cyberspace and signals intelligence, electro-optics and infrared systems, coherent lidar (laser based radar) technologies, and C4ISR.

### **Ships**

The Ships segment combines two operating sectors, Newport News, headquartered in Newport News, Virginia, and Ship Systems, headquartered in Pascagoula, Mississippi, and includes the following products and services: Aircraft Carriers, Surface Combatants, Amphibious and Auxiliary, Submarines, Commercial and International, and Services and Other.

*Aircraft Carriers* – Newport News is the nation's sole designer, builder, and refueler of nuclear-powered aircraft carriers. The U.S. Navy's newest carrier, the *USS Ronald Reagan*, was christened on March 4, 2001, and commissioned into the U.S. Navy's fleet on July 12, 2003. The keel of the last carrier in the Nimitz class, the *USS George H. W. Bush*, was laid in 2003 with the christening scheduled to occur in 2006 and delivery to the U.S. Navy in 2008. Advanced design work on the new generation carrier, CVN 21, is currently underway with a construction contract anticipated in 2007. CVN 21 will incorporate transformational technologies that will result in manning reductions, improved war fighting capability, and a new nuclear propulsion plant design. The company also provides ongoing maintenance for the U.S. Navy aircraft carrier fleet through overhaul, refueling, and repair work. Currently, Newport News is overhauling and refueling the *USS Dwight D. Eisenhower* with re-delivery expected in 2004. Planning for the *USS Carl Vinson* refueling and overhaul is also underway. The *USS Carl Vinson* is expected to arrive at Newport News in 2005.

*Surface Combatants* – Ship Systems builds Surface Combatants, which includes: the design and construction of the Arleigh Burke DDG 51 Class Aegis guided missile destroyers; design of DD(X), the Navy's future transformational surface combatant class; and the Coast Guard's Deepwater Modernization Program. The latter two programs were awarded in 2002. Ship Systems is one of two prime contractors designing and building DDG 51 Class destroyers, which provide primary anti-aircraft and anti-ship missile protection for the U.S. Navy fleet. Seven Arleigh Burke Class Destroyers are currently under construction with an additional four ships in backlog. The DD(X) program is a \$2.9 billion development contract to develop and test eleven Engineering Development Models (EDMs) including an Integrated Electric Propulsion System (IPS), an all composite low signature deckhouse with embedded radar and communication apertures, a new stealthy hull form, and a new Peripheral Vertical missile Launching System (PVLS). The contract further provides for incorporating these advanced technologies into the design of the next generation destroyer, DD(X). These technologies are also to be incorporated into the next generation cruiser, CG(X), and many ships already in the fleet, as well as other future new ship classes. Construction of the first DD(X) is scheduled to begin in 2006. Ship Systems and Lockheed Martin are joint venture partners for the Coast Guard's Deepwater Modernization Program. Ship Systems has design and production responsibility for all surface ships, including three new classes of cutters. The program is a 20-year program with the surface ship content representing \$8.1 billion.

*Amphibious and Auxiliary* – Ship Systems is also responsible for Amphibious and Auxiliary programs, which include the design and construction of amphibious assault ships for the U.S. Navy, including the WASP LHD 1 Class, the

## **NORTHROP GRUMMAN CORPORATION**

San Antonio LPD 17 Class ships and the Bob Hope Fast Sealift Auxiliary. Ship Systems is the sole provider for the LHD class of large-deck, 40,500-ton multipurpose amphibious assault ships, which serve as the centerpiece of an Amphibious Ready Group. Currently, the LHD 8 is in the final stages of design and is a significant upgrade from the preceding seven sister ships. The design and production of the LHD 8 is a \$1.4 billion program with delivery scheduled for 2007. Ship Systems is also the sole provider of the LPD 17 class of ships, which function as amphibious transports. Ship Systems also builds Sealift ships for the Military Sealift Command. These very large ships are used for prepositioning U.S. military vehicles and equipment overseas.

*Submarines* – Newport News is one of only two companies capable of designing and building nuclear-powered submarines. In February 1997, the sector and Electric Boat Corporation (Electric Boat), a wholly owned subsidiary of General Dynamics Corporation, reached an agreement to cooperatively build the first four new nuclear attack submarines of the Virginia-class over the next 10 years. The current schedule calls for the delivery of the *USS Virginia* by Electric Boat in 2004 followed over the balance of the contract by the *USS Texas*, the *USS Hawaii*, and the *USS North Carolina*. Electric Boat and Newport News were awarded a construction contract in August 2003, which was subsequently modified in January 2004, for the second flight of six Virginia -class submarines.

*Commercial and International* – Ship Systems is under contract to produce five Polar Tankers, three ships of which have been delivered. These tankers each transport one million barrels of crude oil from Alaska to west coast refineries and are fully compliant with the Oil Pollution Act of 1990. The remaining two ships are expected to be delivered in 2004 and 2005.

*Services and Other* – Newport News and Ship Systems also provide after-market services, including on-going maintenance and repair work, for a wide array of naval and commercial vessels. The company has ship repair facilities in the U.S. Navy's largest homeports of Norfolk, Virginia, and San Diego, California.

### **Information Technology**

The Information Technology segment, headquartered in Herndon, Virginia, consists of four lines of business: Government Information Technology, Enterprise Information Technology, Technology Services, and Commercial Information Technology.

*Government Information Technology* – This business area covers a wide range of large-scale systems integration, solutions, and services programs for government customers across the Department of Defense, Federal civilian agencies, state and local, and national intelligence agencies. Such programs encompass C4ISR, public safety, infrastructure systems and services, applied sciences and technology, and training and simulation. Government Information Technology is also the lead business area for the company's Homeland Security (HLS) efforts. HLS solutions include emergency operations centers, identity management and identification/authentication, port and border security, training and exercises, cyber-warfare modeling, HLS requirements and optimization of systems, and consequence management.

C4ISR capabilities include mission planning and rehearsal, battle management command and control systems, tactical communications, satellite systems and applications, and wireless communications solutions. Public safety and citizen services information systems provides emergency response solutions, citizen security systems, transportation systems (traffic management), and a wide variety of business and government systems. Infrastructure systems and services provides enterprise communications and infrastructure systems, information technology (IT) outsourcing, network operations center IT services, logistics systems, mission support systems, commercial services, and information assurance to a broad range of customers, not only in the public and commercial sectors, but also internally to the company. In the applied sciences and technology market, products include laser and imaging systems, weapons of mass destruction threat reduction analysis and simulation, systems analysis and modeling, health and applied science systems, and high-performance computing. In the training and simulation market, the

## **NORTHROP GRUMMAN CORPORATION**

sector is a prime developer and operator of modeling, simulation and analysis systems, computer-driven war-gaming and training, flight simulations, knowledge management systems, and mission readiness exercises.

*Enterprise Information Technology* – Enterprise Information Technology provides advanced solutions and complex IT products and professional services to public sector and commercial customers alike, specifically in two core market segments: enterprise computing and multiservice networking and security.

*Technology Services* – Technology Services includes logistics and range support, training and simulation, and state and local information technology services. Contracts include support of systems, logistics support, facilities management services, flight systems and simulation services, mission integration and planning support, operation and support of simulation enhanced training programs, systems integration, information security, data center management, and systems engineering and networking.

*Commercial Information Technology* – Commercial Information Technology provides complete IT outsourcing services directed to the commercial market. This work includes desktop and server management, hardware and software maintenance, help desk support, systems administration, network design, systems modernization and integration, and facility management services.

### **Mission Systems**

The Mission Systems segment, headquartered in Reston, Virginia, is a leading global system integrator of complex, mission-enabling systems. The segment consists of four lines of business: Command, Control & Intelligence (C2I) Systems; Missile Systems; Federal & Civil Information Systems; and Technical and Management Services.

*Command, Control & Intelligence Systems* – C2I Systems provides a variety of command, control, communications, computers, and intelligence support to the various branches of the U.S. Department of Defense. Offerings include signals intelligence and exploitation systems, system engineering and integration, data collection and operations and maintenance, modeling and product generation, system simulation and integration and test, spacecraft C2 systems, payload control and terminal software, Army and tactical global combat service support, and legacy standard Army management information systems. In the platform integration and UAV market, the segment supports the division tactical UAV system, light and heavy joint service nuclear, biological and chemical reconnaissance systems, and tactical operation centers.

*Missile Systems* – Missile Systems supports the Integrated Missile Defense system and the Intercontinental Ballistic Missile (ICBM) Program. The Integrated Missile Defense system market includes shooters, sensors, battle management command and control communications, modeling and simulation, and test and evaluation. For this market, the segment provides war games, modeling and simulation, system test and integration, targets and countermeasures, missile system engineering, and trainers to the Missile Defense Agency, Boeing, and Lockheed Martin. As prime contractor for the recently awarded Kinetic Energy Interceptors (KEI) program, the segment is leading development and test activities focused on the boost phase element of the Missile Defense Agency's global layered missile defense system. As prime contractor for the ICBM Program Office, the segment offers ICBM domain knowledge, program management, systems engineering and integration, and sustainment and modernization services.

*Federal & Civil Information Systems* – Federal & Civil Information Systems provides information technology services to domestic and foreign government customers at the federal, state, and local levels. Products to these markets include network convergence solutions, enterprise-wide architecture, financial asset tracking, secure document technology, knowledge management, collaborative systems including advanced video conferencing, public health data systems, labor unemployment insurance systems, child welfare and support enforcement systems, transportation and airport security, statewide wireless communications systems, automated and criminal identification systems, and integrated justice information systems.



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*Technical and Management Services* – Technical and Management Services primarily supports the U.S. Departments of Defense, Labor, and Justice. Products and services offered include full life cycle design and information systems integration and operations, electromagnetic and infrared analysis, decision support with modeling tools, systems effectiveness evaluation, engineering prototypes and integration, simulation modeling for training resource allocation, multi-media training design and delivery, operational support of war fighting and peacekeeping (e.g., linguists and subject matter experts), base operating services, equipment maintenance, logistics and administrative support and freight forwarding services, biometrics, biological agent detection, maneuver and logistics training, force-on-force exercise development and control, force modernization and integration, new equipment training and fielding, educational and vocational training, residential living, placement and transition services, and web-based general education development training.

### **Integrated Systems**

The Integrated Systems segment, headquartered in El Segundo, California, designs, develops, produces, and supports fully missionized integrated systems and subsystems in the areas of battlespace awareness, command and control systems, and integrated combat systems. The segment is organized into the following product lines: Air Combat Systems (ACS), which includes Unmanned Systems; Airborne Early Warning and Electronics Warfare (AEW/EW) Systems; and Airborne Ground Surveillance and Battle Management (AGS/BM) Systems.

*Air Combat Systems* – The principal programs in ACS are subcontractor work on the F/A-18 and F-35 programs, and the Multi-Platform Radar Technology Insertion Program (MP-RTIP). For the F/A-18, ACS is responsible for approximately 40 percent of the aircraft, including the full integration of the center and aft fuselage and vertical tail sections and associated subsystems. For the F-35, ACS is responsible for the detailed design and integration of the center fuselage and weapon bay, a large part of systems engineering, mission system software, ground and flight test support, signature/low observables development, and support of modeling and simulation activities. ACS is the prime systems integration contractor for the MP-RTIP to upgrade current aircraft and unmanned vehicles with an advanced technology radar subsystem, which includes higher resolution and greater accuracy.

The principal programs in the ACS Unmanned Systems product line consist of UAVs and the J-UCAS. UAVs include the Global Hawk, a high altitude, long endurance unmanned aerial reconnaissance system, and the Fire Scout, a vertical takeoff and landing tactical UAV system in development and low-rate initial production. The purpose of the J-UCAS program is to demonstrate the technical feasibility, military utility, and operational value for a networked system of high performance and weaponized unmanned air vehicles to effectively and affordably prosecute 21<sup>st</sup> century combat missions.

*Airborne Early Warning and Electronic Warfare* – AEW/EW principal products include the E-2C (Hawkeye) and the EA-6B (Prowler) aircraft. The company is currently delivering E-2C aircraft under a multiyear contract with the U.S. Navy and has recently been awarded a follow-on contract for eight additional aircraft. The company is also developing the next generation capability including radar, mission computer, vehicle, and other system enhancements called the Advanced Hawkeye under a system development and demonstration contract with the U.S. Navy. The EA-6B is the armed services' only offensive tactical radar jamming aircraft. AEW/EW is currently developing the next generation mission system for this aircraft under the ICAP (Increased Capability) III contract currently in the test and evaluation phase. Low-rate initial production for ICAP III Kits has been authorized. In addition, the company has received funding to incorporate the ICAP III mission system into a F/A-18 platform designated the EA-18G. Integrated Systems is the principal subcontractor to Boeing for this program currently in the system development and demonstration phase.

*Airborne Ground Surveillance and Battle Management* – AGS/BM Systems is the prime contractor on the Joint Surveillance Target Attack Radar System (Joint STARS) program. Joint STARS detects, locates, classifies, tracks, and targets potentially hostile ground movement in all weather conditions. It is designed to operate around the

## **NORTHROP GRUMMAN CORPORATION**

clock in constant communication through secure data links with Air Force command posts, Army mobile ground stations, or centers for military analysis far from the point of conflict. Two aircraft remain in the delivery contract, with one scheduled for the first quarter of 2004 and the last in early 2005. As Joint STARS nears the end of its production, a follow-on system, the E-10A Multi-Sensor Command & Control Aircraft (MC2A), is in development and will include the MP-RTIP radar. AGS/BM Systems was selected as the prime contractor for the E-10A Weapon System Integration program by the U.S. Air Force in 2003. AGS/BM Systems is currently in competition for the major Battle Management Command & Control (BMC2) subsystem to be decided in the second half of 2004.

### **Space Technology**

The Space Technology sector, headquartered in Redondo Beach, California, develops a broad range of systems at the leading edge of space, defense, and electronics technology. The sector creates products primarily for the U.S. government that contribute significantly to the nation's security and leadership in science and technology. This business primarily consists of the following major business areas: Intelligence, Surveillance & Reconnaissance (ISR); Civil Space; Satellite Communications (SatCom); Missile & Space Defense; Software Defined Radios; and Technology.

*Intelligence, Surveillance & Reconnaissance* – In the ISR business area, the sector's capabilities give the nation's monitoring systems a global reach and enhance national security. Addressing requirements in space-based intelligence, surveillance, and reconnaissance systems, the sector provides mission and system engineering, satellite systems, and mission operations. Customers are predominantly restricted, as are the major programs. The Defense Support Program (DSP) is also part of this business area, and has been monitoring ballistic missile launches for the Air Force for decades.

*Civil Space* – The Civil Space business area produces spacecraft, instruments, and services for space science missions, earth observation systems, and environmental satellite systems. A variety of systems and services are provided, including mission and system engineering services, spacecraft and instrument systems, mission operations, and propulsion systems. Customers include the National Aeronautics and Space Administration (NASA), National Oceanic and Atmospheric Administration (NOAA), and the DOD. Major programs include National Polar-orbiting Operational Environmental Satellite System (NPOESS), the James Webb Space Telescope (JWST), the Earth Observing System (EOS), and the legacy space telescope program Chandra.

*Satellite Communications* – The SatCom business area includes complex satellite communication systems and broadband payloads. Key customers are satellite prime contractors in support of the DOD and other government agencies. Major programs include Advanced Extremely High Frequency (AEHF) payload, and communication payload for the legacy Milstar program, currently in operation.

*Missile & Space Defense* – Missile & Space Defense produces space, air, and ground-based systems that detect, track and destroy missiles and help to counter today's widely proliferating missile threats. Key capabilities and products include system integration, spacecraft, directed energy and kinetic energy weapons, and tactical lasers. The Missile Defense Agency (MDA) is the primary customer. Major programs include the Space Tracking and Surveillance System (STSS), Airborne Laser (ABL), and Mobile Tactical High Energy Laser (MTHL).

*Software Defined Radios* – In the Software Defined Radios business area, the sector has been pioneering radio technology and applying the results to advanced integrated Communications, Navigation and Identification (CNI) systems, radios, and avionics integration software. The sector's avionics systems represent the "eyes and ears" of the F/A-22 Raptor jet fighter and F-35 Joint Strike Fighter.

*Technology* – The Technology business area consists primarily of government funded research and development (R&D) contracts in support of the five business areas described above.

## **NORTHROP GRUMMAN CORPORATION**

### **BUSINESSES ACQUIRED**

The current composition of Northrop Grumman Corporation is the result of a series of strategic acquisitions, mergers, and divestitures.

In 2001, the company purchased Litton, the Electronics and Information Systems Group of Aerojet-General Corporation (EIS), and 80.7 percent of Newport News. On January 18, 2002, the company acquired the remaining shares of Newport News. The Litton business units' operating results are included from the acquisition date in the company's segment data as follows: Litton's advanced electronics business is included in Electronic Systems; Litton's information systems business is included in Information Technology; Litton's ship business is included in Ships. Litton's electronic components and materials business, Component Technologies (CT), is classified as discontinued operations. EIS was integrated into Electronic Systems, and Newport News is included in the Ships segment.

In December 2002, the company purchased 100 percent of the common stock of TRW valued at approximately \$12.5 billion, including the assumption of TRW's debt of \$4.8 billion. The company issued approximately 69.4 million shares of its common stock at an exchange ratio of .5357 for each TRW share, with cash paid in lieu of any fractional share of the company's stock, which otherwise would be issued to the TRW shareholders. These shares were valued at \$107.31 per share for purchase accounting purposes. In accordance with generally accepted accounting principles, this value was determined based on the average closing stock price of the company's common stock from October 15, 2002, through October 21, 2002. In connection with the acquisition of TRW, the company entered into a formal stipulation and consent decree with the United States Department of Justice that was filed in the U.S. District Court for the District of Columbia on December 11, 2002. Key provisions of the consent decree are intended to assure that the merger will not impede fair and open competition related to certain electronic satellite payloads. The consent decree does not require the divestiture of any businesses and permits the company to operate its business and those of TRW as planned. TRW's defense business units are operated as two separate sectors, Mission Systems and Space Technology.

The consolidated financial statements as of December 31, 2002, reflect preliminary estimates of the fair market value for purchased intangibles, retiree benefits assets and liabilities, and debt as well as preliminary estimates of adjustments necessary to conform TRW to the company's accounting policies. Auto was included in the total TRW valuation and was valued and recorded at its sale price which represents its fair market value. As of December 31, 2003, the company completed the fair market value and accounting conformance evaluation process for TRW and recorded an aggregate increase to goodwill of \$1.6 billion.

### **BUSINESSES SOLD AND DISCONTINUED OPERATIONS**

On February 28, 2003, the company sold Auto to The Blackstone Group for \$3.3 billion in cash, a \$600 million face value payment-in-kind note, initially valued at \$455 million, and a 19.6 percent interest in the new enterprise, initially valued at \$170 million. The cash received from the sale of Auto was adjusted from the sale agreement amount by cash sold with the business, preliminary purchase price adjustments, and an asset retained. The acquirer also assumed debt of approximately \$200 million. Cash proceeds from the sale were primarily used to reduce debt. The payment-in-kind note matures in 2018 and bears interest at an effective yield of 11.7 percent per annum. In January 2004, the restrictions on the investment in Auto were amended to provide the company more flexibility in monetization. In February 2004, the company's investment in Auto was diluted to 17.2 percent as a result of Auto's initial public offering.

The company has retained certain liabilities associated with the Auto business as well as the Aeronautical Systems business that TRW divested in 2002. Subsequent adjustment to or resolution of accruals recorded as of December 31, 2003, in connection with the divestitures of TRW's Auto and Aeronautical Systems businesses, will be charged to discontinued operations. There can be no assurance that such adjustments will not be material.

## **NORTHROP GRUMMAN CORPORATION**

During the third quarter of 2002, the company concluded that the CT businesses, which were acquired as part of the 2001 Litton acquisition, did not fit with the company's long-term plan and decided to sell the businesses. In October 2002, Northrop Grumman completed the sale of two Electronic Systems sector businesses, Electron Devices and Ruggedized Displays, for \$135 million. During 2003, the company sold several of the CT businesses: the VEAM business in the first quarter, Life Support during the third quarter, and Poly-Scientific during the fourth quarter. The company also sold its 51 percent interest in the operations of TRW Koyo Steering Systems Company in the fourth quarter of 2003. None of these sales, either individually or in the aggregate, had a material impact on the company's financial condition or results of operations.

As of December 31, 2003, three CT businesses remain to be sold whose assets and liabilities have been classified as held for sale. One of these businesses, Kester, was sold in February 2004. The sale of the remaining businesses classified as discontinued operations is not expected to have, either individually or in the aggregate, a material impact on the company's financial condition or results of operations.

In accordance with SFAS No. 144 – *Accounting for the Impairment or Disposal of Long-Lived Assets*, the results of operations of these businesses are reported as discontinued operations, net of applicable income taxes, for all periods presented. As such, discontinued operations includes the operating results for all sold companies up to the date of sale.

## **MANAGEMENT FINANCIAL MEASURES**

The company manages and assesses the performance of its business primarily through measures of acquisitions, sales, segment operating margin, and backlog.

*Acquisitions* – Contract acquisitions represent orders received during the period for which funding has been contractually obligated by the customer. Contract acquisitions tend to fluctuate from year to year and are determined by the size and timing of new and follow-on orders. In the year that a business is purchased, its existing funded order backlog as of the purchase date is reported as contract acquisitions.

*Sales* – Year-to-year sales vary less than contract acquisitions and reflect performance under new and ongoing contracts.

*Segment Operating Margin* – Segment operating margin reflects the performance of the segments on their contracts and programs. Excluded from this measure are certain costs not directly associated with contract performance, including the portion of pension expense/income that is not currently recognized under CAS, as well as the portion of corporate, legal, environmental, state income tax, other retiree benefits, and other expenses not considered allowable costs under CAS and not allocated to the segments.

Effective January 1, 2002, the company adopted Statement of Financial Accounting Standards (SFAS) No. 142 - *Goodwill and Other Intangible Assets*, which changes the accounting for goodwill from an amortization method to an impairment-only approach and eliminates amortization of goodwill. The segment operating results for 2001 have not been adjusted to exclude amortization of goodwill. A reconciliation of previously reported 2001 financial information adjusted to exclude goodwill amortization is presented in Note 1 to the Consolidated Financial Statements in Part II, Item 8.

*Backlog* – Funded backlog represents unfilled orders for which funding has been contractually obligated by the customer. Unfunded backlog represents firm orders for which funding is not contractually obligated by the customer.

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## SEGMENT OPERATING RESULTS

Certain prior year amounts in the tables within this section have been reclassified to conform to current year reporting.

## Electronic Systems

<i>\$ in millions</i>	2003	2002	2001
<b>Contract Acquisitions</b>			
Aerospace Systems	\$ 1,329	\$ 1,129	\$ 1,315
C4ISR & Naval Systems	1,252	1,808	1,100
Defensive Systems	1,062	830	793
Navigation Systems	824	741	1,352
Space Systems	414	615	231
Other	1,137	807	724
	<b>\$ 6,018</b>	<b>\$ 5,930</b>	<b>\$ 5,515</b>
<b>Sales and Service Revenue</b>			
Aerospace Systems	\$ 1,731	\$ 1,523	\$ 1,342
C4ISR & Naval Systems	1,297	1,214	1,040
Defensive Systems	919	780	693
Navigation Systems	756	668	591
Space Systems	514	437	245
Other	822	704	665
	<b>\$ 6,039</b>	<b>\$ 5,326</b>	<b>\$ 4,576</b>
<b>Segment Operating Margin</b>	<b>\$ 590</b>	<b>\$ 434</b>	<b>\$ 349</b>
<i>As a percentage of segment sales</i>	<b>9.8%</b>	<b>8.1%</b>	<b>7.6%</b>

## Contract Acquisitions

2003 – Electronic Systems segment acquisitions increased by \$88 million or 2 percent in 2003 as compared with 2002. Principal acquisitions during 2003 include \$224 million for the SBIRS High program by the Space Systems business area; \$187 million for the MESA 737 Turkey acquisition by the Aerospace Systems business area; \$181 million and \$144 million for the Trident SSGN and Virginia-class submarine programs, respectively, by the C4ISR & Naval Systems business area; and \$145 million for the MP-RTIP program included in the Other business area.

2002 – Electronic Systems segment acquisitions in 2002 were 8 percent higher than in 2001. Aerospace Systems acquisitions include funding in 2002 of \$116 million for the F-35, \$83 million for the Longbow missile multiyear contract, and \$82 million for the Brilliant Anti-Armor Tank (BAT) program. C4ISR & Naval Systems acquisitions reflect increased awards for international air defense systems and \$150 million of funding for the Trident program. Defensive Systems acquisitions include a \$165 million award for ALQ-135 electronic countermeasures for the Korea F-15. Space Systems acquisitions include \$335 million of additional funding on the SBIRS High program. Acquisitions reported in 2001 include opening backlog acquired in the Litton purchase of \$1.3 billion, comprised of \$820 million in Navigation Systems, \$210 million in C4ISR & Naval System, \$189 million in Defense Systems and \$118 million in Aerospace Systems.

## Sales and Service Revenue

2003 – Electronics Systems segment sales increased by \$713 million or 13 percent in 2003 as compared with 2002. The increase is primarily attributable to the \$208 million growth at Aerospace Systems due to increased volume on

## **NORTHROP GRUMMAN CORPORATION**

the F-35, F-16 Block 60, F/A-22, and avionics classified programs. Defensive Systems sales increased \$139 million in 2003 over 2002 primarily due to higher volume on the ALQ-135, Large Aircraft Infrared Countermeasures (LAIRCM), MH-53, and Lightning programs. The 2003 increase of \$118 million in the Other business area primarily reflects higher volume on the MP-RTIP program. In 2004, Electronic Systems sales are expected to increase at close to a double-digit percentage pace over 2003 sales.

*2002* – Electronic Systems segment sales increased by \$750 million or 16 percent in 2002 as compared with 2001. Growth in 2002 principally reflects a \$181 million increase at Aerospace Systems due to increased volume on the F-22, F-35, BAT, Firefinder, and Longbow missile programs. C4ISR & Naval Systems sales increased by \$174 million in 2002 principally due to higher volume on international programs. The Space Systems business area contributed an additional \$192 million of sales as a result of increased volume from SBIRS High.

### **Segment Operating Margin**

*2003* – Electronic Systems segment operating margin increased by \$156 million or 36 percent in 2003 as compared with 2002. The increase in operating margin in 2003 reflects increased sales volume in Aerospace Systems' F/A-22, F-35, and several classified programs as well as increased volume in the C4ISR & Naval Systems marine systems business. The Defensive Systems and Navigation Systems business areas also reported higher sales and improved operating performance. Operating margin for 2003 includes a \$40 million pre-tax charge for the F-16 Block 60 fixed-price development combat avionics program due to cost growth associated with developing and acquiring the advanced microelectronics necessary to meet production specifications and delivery rates. The contract, which is currently in the EMD and transition-to-production phases, is expected to be completed in 2007. Development work inherently has more uncertainty as to future events than production work and therefore more variability in estimates of costs to complete the work. As work progresses through the development stage into production, the risks associated with estimating the costs of development are reduced. In addition, successful performance of fixed-price development programs is subject to the company's ability to control cost growth in meeting production specifications and delivery rates. While management has used its best judgment to estimate costs, future events could result in either upward or downward adjustments to those estimates. For 2004, management expects operating margin of approximately 10 percent of segment revenue.

*2002* – Electronic Systems segment operating margin in 2002 was \$434 million compared with \$349 million in 2001. Operating margin for 2002 includes a \$65 million pre-tax charge for the F-16 Block 60 fixed-price development combat avionics program, offsetting margin improvements across the sector. The charge reflects increased projected costs, primarily for the program's electronic warfare suite. Operating margin for 2001 included goodwill amortization of \$80 million.

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## NORTHROP GRUMMAN CORPORATION

## Ships

<i>\$ in millions</i>	2003	2002	2001
<b>Contract Acquisitions</b>			
Aircraft Carriers	\$ 941	\$ 1,622	\$ 4,577
Surface Combatants	1,569	1,641	3,194
Amphibious and Auxiliary	1,301	1,184	2,301
Submarines	895	828	609
Commercial and International	31	(4)	837
Services and Other	193	94	216
Intrasegment Eliminations	(91)	(79)	(82)
	<b>\$ 4,839</b>	<b>\$ 5,286</b>	<b>\$ 11,652</b>
<b>Sales and Service Revenue</b>			
Aircraft Carriers	\$1,922	\$ 2,076	\$ 208
Surface Combatants	1,594	875	674
Amphibious and Auxiliary	1,069	845	522
Submarines	627	581	54
Commercial and International	123	224	396
Services and Other	163	194	89
Intrasegment Eliminations	(47)	(98)	(63)
	<b>\$ 5,451</b>	<b>\$ 4,697</b>	<b>\$ 1,880</b>
<b>Segment Operating Margin</b>	<b>\$ 295</b>	<b>\$ 306</b>	<b>\$ 19</b>
<i>As a percentage of segment sales</i>	<i>5.4%</i>	<i>6.5%</i>	<i>1.0%</i>

**Contract Acquisitions**

2003 – Ships segment acquisitions decreased by \$447 million or 8 percent in 2003 as compared with 2002, primarily due to lower incremental funding received in 2003 for aircraft carrier refueling work. The principal acquisitions in 2003 are \$1.2 billion for the LPD program in the Amphibious and Auxiliary business area, and \$877 million and \$531 million related to the DD(X) and DDG programs, respectively, in the Surface Combatants business area.

2002 – Ships segment acquisitions in 2002 include \$875 million of funding for the DD(X) program, included in the Surface Combatants business area, and \$590 million for LHD, included in the Amphibious and Auxiliary business area. Newport News acquisitions included \$1.6 billion of aircraft carrier funding and \$828 million of funding for the submarine program. The Commercial and International business area reflects a reduction in previous funding levels for the Polar Tanker program. Ships segment acquisitions in 2001 include backlog acquired in the Litton and Newport News transactions of \$10.5 billion.

**Sales and Service Revenue**

2003 – Ships segment sales increased by \$754 million or 16 percent in 2003 as compared with 2002. This growth reflects a \$719 million increase for the Surface Combatants business area, which is primarily related to the DD(X) and Deepwater programs. Amphibious and Auxiliary experienced an increase in sales during 2003 of \$224 million due to production ramp-up on LPD 18, LPD 19, and LHD. The \$154 million decrease in 2003 for Aircraft Carriers as compared to 2002 is largely due to the completion and delivery of the *USS Ronald Reagan*. In 2004, the Ships segment expects low single-digit sales percentage growth over 2003 sales, reflecting the deferral of the *USS Carl Vinson* refueling and overhaul from 2004 to 2005.

2002 – Ships segment sales increased substantially in 2002 as compared with 2001, principally due to inclusion for the full year 2002 of the Newport News and Ship Systems businesses acquired in 2001.

**NORTHROP GRUMMAN CORPORATION****Segment Operating Margin**

2003 – Ships segment operating margin decreased by \$11 million or 4 percent in 2003 as compared with 2002. The decrease reflects both a changing mix from production to development programs as well as a \$68 million pre-tax charge for the Polar Tanker program due to unusual weather delays and rework on the third tanker delivered in July 2003. The charge also includes increased estimates to complete the final two ships to reflect more modest improvements in labor productivity and higher overhead costs than previously expected. The fourth ship is approximately 91 percent complete as of December 31, 2003, and is scheduled for delivery in the second half of 2004. The fifth and last ship is approximately 46 percent complete as of December 31, 2003, and is scheduled for delivery in late 2005. For 2004, management expects operating margin as a percent of sales of between 6 and 6.5 percent.

2002 – Ships segment operating margin was \$306 million in 2002 compared with \$19 million in 2001. The increase is principally due to the Newport News and Litton acquisitions. Results in 2002 include a third-quarter pre-tax charge of \$87 million recorded upon completion of a comprehensive review of the estimated costs to complete the three remaining Polar Tanker ships. The increased estimate-to-complete reflects a reduced learning curve experience ship to ship as well as one-time schedule penalties. Also during the year, the company reached an agreement to sell the partially complete structures and material associated with its cancelled commercial cruise ship program to Norwegian Cruise Line and successfully concluded negotiations on the majority of the program's vendor terminations resulting in a favorable pre-tax adjustment of \$69 million recorded to reverse previously established reserves. Following American Classic Voyages Co.'s (AMCV) bankruptcy filing on October 19, 2001, Ships stopped work on Project America, an AMCV cruise ship program to build two 1,900-passenger cruise ships. This decision followed negotiations with the U.S. Maritime Administration, which had decided not to continue the guaranteed funding necessary to complete the construction of the ships. As a result, Ships recorded a pre-tax charge to operating margin totaling \$60 million in 2001. Ships also reported a downward operating margin adjustment of \$13 million for the Polar Tanker program in 2001. Operating margin for 2001 included goodwill amortization of \$31 million.

**Information Technology***\$ in millions*

	2003	2002	2001
<b>Contract Acquisitions</b>			
Government Information Technology	\$ 3,514	\$ 2,842	\$ 2,594
Enterprise Information Technology	872	766	848
Technology Services	703	673	687
Commercial Information Technology	347	200	241
Intrasegment Eliminations	(114)	(83)	(84)
	<b>\$ 5,322</b>	<b>\$ 4,398</b>	<b>\$ 4,286</b>
<b>Sales and Service Revenue</b>			
Government Information Technology	\$ 3,048	\$ 2,710	\$ 2,248
Enterprise Information Technology	857	750	829
Technology Services	693	657	571
Commercial Information Technology	270	216	230
Intrasegment Eliminations	(114)	(83)	(84)
	<b>\$ 4,754</b>	<b>\$ 4,250</b>	<b>\$ 3,794</b>
<b>Segment Operating Margin</b>	<b>\$ 281</b>	<b>\$ 250</b>	<b>\$ 174</b>
<i>As a percentage of segment sales</i>	<b>5.9%</b>	<b>5.9%</b>	<b>4.6%</b>



## **NORTHROP GRUMMAN CORPORATION**

### **Contract Acquisitions**

*2003* – Information Technology segment acquisitions increased by \$924 million or 21 percent in 2003 as compared with 2002, largely due to strong growth in the Government Information Technology business area. Principal acquisitions in 2003 in the Government Information Technology business area are \$104 million for Information Technology Support Services (ITSS), \$98 million for Voyager, and \$92 million for the Immigration and Naturalization Service (INS) Technology Enterprise Automation Management Support (TEAMS) program. The Technology Services business area received funding of \$255 million for the Joint Base Operations Support Contract (J-BOSC). The Commercial Information Technology business area recorded funding of \$120 million in connection with Vought.

*2002* – Information Technology acquisitions increased by 3 percent in 2002 over 2001. Government Information Technology secured a major contract with the INS to provide information technology infrastructure and support services, key elements in assisting the border enforcement and immigration benefits missions of the agency. The \$228 million INS contract positions the company to assist the new Department of Homeland Security (DHS) with its information technology needs. In 2002, Technology Services funding for the J-BOSC contract of \$268 million was received. Technology Services also received a \$100 million contract to provide electronic benefits transfer services to the state of Illinois, which positions the company as a key provider to state government. Information Technology acquisitions in 2001 include Litton opening backlog acquired of \$585 million.

### **Sales and Service Revenue**

*2003* – Information Technology segment sales increased by \$504 million or 12 percent in 2003 as compared with 2002. The higher sales are primarily attributable to a \$338 million increase at the Government Information Technology business area due to increased volume on the INS TEAMS, Global Transportation Network for the 21st Century (GTN 21), and Land Information Warfare Activity (LIWA) programs. Enterprise Information Technology sales were \$107 million higher than 2002 due, in part, to increased DHS purchases. For 2004, the company expects high single-digit percentage growth on comparative realigned 2003 sales. (See Realignment discussion contained in the “Summary Segment Financial Data” section contained in Part I, Item 1.)

*2002* – Information Technology sales increased by 12 percent in 2002 as compared with 2001. This increase principally results from inclusion of a full year of Litton operations in 2002.

### **Segment Operating Margin**

*2003* – Information Technology segment operating margin increased by \$31 million or 12 percent in 2003 as compared with 2002. The increase is primarily attributable to higher sales volume in the Government Information Technology business area. For 2004, management expects segment operating margin as a percent of segment sales, on a comparative realigned basis, to be nearly 6 percent.

*2002* – Information Technology segment operating margin in 2002 was \$250 million compared with \$174 million in 2001. Operating margin for 2002 includes a \$20 million favorable pre-tax adjustment resulting from the restructuring of a Technology Services contract and a \$16 million charge recorded for a contract with Oracle. Operating margin for 2001 included goodwill amortization of \$58 million.

[Table of Contents](#)**NORTHROP GRUMMAN CORPORATION****Mission Systems**

<i>\$ in millions</i>	2003	2002
<b>Contract Acquisitions</b>		
Command, Control & Intelligence Systems	\$1,967	\$ 669
Missile Systems	1,255	973
Federal & Civil Information Systems	646	758
Technical and Management Services	678	382
Intrasegment Eliminations	(37)	(34)
	\$ 4,509	\$2,748
<b>Sales and Service Revenue</b>		
Command, Control & Intelligence Systems	\$1,561	
Missile Systems	1,082	
Federal & Civil Information Systems	798	
Technical and Management Services	700	
Intrasegment Eliminations	(26)	
	\$ 4,115	
<b>Segment Operating Margin</b>		
<i>As a percentage of segment sales</i>	\$ 258	6.3%

**Contract Acquisitions**

2003 – Mission Systems acquisitions during 2003 reflect several new business awards for restricted programs in the Command, Control & Intelligence Systems business area and the Kinetic Energy Interceptor contract awarded to the Missile Systems business area. Acquisitions for these two business areas accounted for over \$3.2 billion or 71 percent of total 2003 acquisitions.

2002 – Acquisitions for 2002 represent backlog acquired as of the acquisition date of TRW.

**Sales and Service Revenue**

2003 – Approximately \$2.6 billion or 64 percent of 2003 sales were derived from the Command, Control & Intelligence Systems and Missile Systems business areas. The principal programs in these business areas during 2003 were restricted. Missile Systems sales for 2003 are principally due to such programs as Ground-based Midcourse and Joint National Integration Center. For 2004, management expects high single-digit percentage growth on comparative realigned 2003 sales. (See Realignment discussion contained in the “Summary Segment Financial Data” section contained in Part I, Item 1.)

**Segment Operating Margin**

2003 – Approximately \$175 million or 68 percent of 2003 operating margin was derived from the Command, Control & Intelligence Systems and Missile Systems business areas. For 2004, management expects operating margin as a percent of sales, on a comparative realigned basis, to be in the mid-6 percent range.

**NORTHROP GRUMMAN CORPORATION****Integrated Systems**

<i>\$ in millions</i>	2003	2002	2001
<b>Contract Acquisitions</b>			
Air Combat Systems	\$ 2,666	\$ 2,131	\$ 1,001
Airborne Early Warning/Electronic Warfare	1,051	832	789
Airborne Ground Surveillance/Battle Management	565	526	445
Intrasegment Eliminations	(3)	(1)	(2)
	<b>\$ 4,279</b>	<b>\$ 3,488</b>	<b>\$ 2,233</b>
<b>Sales and Service Revenue</b>			
Air Combat Systems	\$ 2,421	\$ 1,915	\$ 1,600
Airborne Early Warning/Electronic Warfare	841	759	740
Airborne Ground Surveillance/Battle Management	541	600	663
Intrasegment Eliminations	(3)	(1)	(2)
	<b>\$ 3,800</b>	<b>\$ 3,273</b>	<b>\$ 3,001</b>
<b>Segment Operating Margin</b>			
<i>As a percentage of segment sales</i>	<b>10.0%</b>	<b>10.1%</b>	<b>8.8%</b>

**Contract Acquisitions**

2003 – Integrated Systems segment acquisitions increased by \$791 million or 23 percent in 2003 as compared with 2002. The increase is mainly due to higher acquisitions for the F-35 and Global Hawk programs, both included in the Air Combat Systems business area. The principal acquisitions for Air Combat Systems during 2003 are \$777 million, \$697 million, and \$613 million for the F/A-18, Unmanned Systems, and F-35 programs, respectively. The principal acquisitions in the AEW/EW and AGS/BM business areas during 2003 are \$576 million and \$406 million for the E-2C and Joint STARS programs, respectively.

2002 – Integrated Systems acquisitions in 2002 were 56 percent higher than 2001. Funding in 2002 reflects \$784 million of funding for the F/A-18 contracts and \$271 million for the F-35 SDD contract. Air Combat Systems continued to record incremental B-2 bomber funding, which increased to \$388 million in 2002 from \$346 million in 2001, and included ongoing development work, spares, and other customer support for the operational aircraft program.

**Sales and Service Revenue**

2003 – Integrated Systems segment sales increased by \$527 million or 16 percent in 2003 as compared with 2002. Growth in 2003 principally reflects a \$506 million increase at Air Combat Systems due to increased volume on the F-35, Global Hawk and MP-RTIP programs, and \$82 million at AEW/EW related to the Advanced Hawkeye program. The sales decrease in 2003 of \$59 million at the AGS/BM business area is mainly due to fewer Joint STARS aircraft in production. For 2004, the company expects 15 to 20 percent growth on comparative realigned 2003 sales. (See Realignment discussion contained in the “Summary Segment Financial Data” section contained in Part I, Item 1.)

2002 – Integrated Systems segment sales increased 9 percent in 2002 over 2001 principally from a \$143 million and \$145 million increase in F-35 and Global Hawk sales, respectively.

**Segment Operating Margin**

2003 – Integrated Systems segment operating margin increased by \$49 million or 15 percent in 2003 as compared with 2002. The increase in operating margin in 2003 reflects increased sales volume on the F-35 and Global Hawk

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programs and improved operating margin rate on the E-2C program, partially offset by lower sales volume on the Joint STARS program. For 2004, operating margin as a percent of sales is expected to be in the mid-8 percent range reflecting a trend of continued ramp-up on lower margin development programs including F-35, Unmanned Vehicles, Advanced Hawkeye, and E-10.

2002 – Integrated Systems segment operating margin in 2002 was \$331 million compared with \$265 million in 2001. The 2002 results reflect improved performance on the B-2 and E-2C programs, as well as higher F-35 sales. Operating margin for 2001 included goodwill amortization of \$32 million.

**Space Technology**

<i>\$ in millions</i>	2003	2002
<b>Contract Acquisitions</b>		
Intelligence, Surveillance, & Reconnaissance	\$ 812	\$ 511
Civil Space	581	134
Satellite Communications	515	235
Missile & Space Defense	301	203
Software Defined Radios	587	162
Technology	277	63
	<b>\$3,073</b>	<b>\$1,308</b>
<b>Sales and Service Revenue</b>		
Intelligence, Surveillance, & Reconnaissance	\$ 838	
Civil Space	520	
Satellite Communications	467	
Missile & Space Defense	393	
Software Defined Radios	367	
Technology	238	
	<b>\$2,823</b>	
<b>Segment Operating Margin</b>		
<i>As a percentage of segment sales</i>	<b>\$ 193</b>	<b>6.8%</b>

**Contract Acquisitions**

2003 – Space Technology segment acquisitions during 2003 primarily reflect \$724 million in restricted programs in the Intelligence, Surveillance & Reconnaissance business area, \$502 million related to additional funding for the AEHF satellite in the Satellite Communications area, \$475 million related to NPOESS in the Civil Space business area, and \$195 million related to the F-22 program in the Software Defined Radios business area.

2002 – Acquisitions for 2002 represent backlog acquired as of the acquisition date of TRW.

**Sales and Service Revenue**

2003 – Restricted program sales totaled \$711 million or 85 percent of 2003 Intelligence, Surveillance & Reconnaissance sales. Approximately \$412 million or 79 percent of the 2003 Civil Space sales were due to the NPOESS program. Approximately \$440 million or 94 percent of the 2003 Satellite Communications sales was due to the AEHF program. Missile & Space Defense sales for 2003 include \$234 million and \$122 million related to the STSS Cycle I and ABL programs, respectively. The 2003 sales for the Software Defined Radios business area include \$135 million and \$127 million related to the F-35 and F-22 programs, respectively. For 2004, management expects mid-single digit percentage sales growth over 2003 sales.

**NORTHROP GRUMMAN CORPORATION****Segment Operating Margin**

2003 – Operating margin for the business areas within the Space Technology segment in 2003 ranged from 6.6 percent for Civil Space to 9.7 percent for Software Defined Radios. For 2004, management expects operating margin as a percent of sales to be in the high 6 percent range.

**NON-SEGMENT FACTORS AFFECTING OPERATING MARGIN**

The company's operations substantially changed as a result of the TRW acquisition on December 11, 2002. The company's 2002 income statement does not include TRW's post-acquisition results because they were not material. The 2002 results reflect the first full year of operations of Litton, EIS, and Newport News, which were acquired in 2001. These acquisitions have significantly increased the size of the company and produced one of the largest defense contractors in the nation.

The components of operating margin are as follows:

<i>\$ in millions</i>	2003	2002	2001
<b>Operating Margin</b>			
Electronic Systems	\$ 590	\$ 434	\$ 349
Ships	295	306	19
Information Technology	281	250	174
Mission Systems	258		
Integrated Systems	380	331	265
Space Technology	193		
Adjustments to Reconcile to Total Operating Margin			
Unallocated expenses	(141)	(105)	(134)
Pension (expense) income	(568)	90	335
Reversal of CAS pension expense included above	265	100	43
Reversal of royalty income included above	(15)	(15)	(18)
<b>Total operating margin</b>	<b>\$1,538</b>	<b>\$1,391</b>	<b>\$1,033</b>

Operating margin as a percentage of total revenue was 5.9 percent, 8.1 percent, and 7.9 percent for 2003, 2002, and 2001, respectively. The primary factors affecting operating margin during these periods were the business acquisitions and changes in pension amounts.

**Unallocated Expenses**

2003 – Unallocated expenses increased \$36 million in 2003, net of a \$17 million gain on the settlement of legal matters. The increase is due primarily to higher legal costs and increased estimates of unrecoverable costs. In 2003, the company settled two previously reserved civil False Claims Act cases, U.S. v. Newport News Shipbuilding, Inc. and U.S. Ex rel. Jordan, and recorded loss provisions for settlement offers on other legal matters, resulting in a net gain of \$17 million. The two settled cases required payments by the company of approximately \$80 million.

The \$60 million settlement amount allocated by the plaintiff to the Newport News Shipbuilding case was charged to an existing accrual established for the government's claim that Newport News had improperly charged certain independent research and development costs to its government contracts with respect to the years 1994 through 1999. The government filed a civil False Claims Act case against the company in February 2003 seeking single damages in excess of \$72 million, plus penalties, costs, and interest. The company accrued an amount for this matter determined in accordance with SFAS No. 5 – *Accounting for Contingencies*, after considering the facts and circumstances known to management at the time, including the potential for treble damages and penalties as

## **NORTHROP GRUMMAN CORPORATION**

provided in the False Claims Act. The accrual, when established, had no effect on the company's net income, as it was recorded as a liability on the balance sheet as part of the purchase accounting for Newport News, which was acquired in December 2001. The unused portion of the accrual of approximately \$120 million was reversed and, together with the loss provisions recorded for other legal matters, is included in the \$17 million net gain reported in "Unallocated expenses."

### **Pension (Expense) Income**

2003 – Operating margin in 2003 includes pension expense of \$568 million as compared with pension income in 2002 of \$90 million. The decrease reflects a higher number of plan participants from the acquisition of TRW as well as negative returns on plan assets of 10 percent and 4.9 percent in 2002 and 2001, respectively. Based on expected long-term returns available in the capital markets and lower long-term interest rates, the 2004 pension plan assumptions have been changed from the 2003 assumptions. The 2004 assumptions include an expected long-term rate of return on plan assets of 8.75 percent and a discount rate of 6.25 percent compared with the 2003 assumptions of 9 percent and 6.5 percent, respectively. In accordance with SFAS No. 87 – *Employers' Accounting for Pensions*, the balance sheet was adjusted at December 31, 2003, to reverse a significant portion of the additional minimum pension liability due to actual returns on pension plan assets in 2003 of over 20 percent. This nearly \$1 billion non-cash, after-tax increase in shareholders' equity did not impact earnings.

Beginning in July 2003, the pension benefits for most employees, principally those participating in Northrop Grumman and Litton heritage plans, were based upon new criteria, whereby employees earn age and service points over the employment period. Subsequent to the 2003 initial phase-in, other exempt and non-exempt plans will be conformed to the new model. No settlement or curtailments arose as a result of these changes. Union plans were not affected by these plan modifications.

Pension expense is included in the sectors' cost of sales to the extent that these costs are currently recognized under CAS. In order to reconcile from segment operating margin to total company operating margin, these amounts are reported under the caption "Reversal of CAS pension expense included above."

For 2004, subject to refinements for participant census data and pay-as-you-go plans, management expects pension expense determined in accordance with generally accepted accounting principles of approximately \$330 million. Pension expense recognized under CAS, which is generally recoverable under government contracts, is estimated to be \$305 million for 2004.

2002 – Operating margin in 2002 includes pension income of \$90 million compared with \$335 million in 2001. The lower pension income in 2002 is principally the result of negative asset returns in 2001 and 2000.

## **OTHER INCOME STATEMENT COMPONENTS**

### **Interest Income**

2003 – Interest income increased \$49 million in 2003 as compared to 2002. The increase principally reflects earnings from the note received in connection with the sale of Auto, interest earned on a tax refund, and interest earned on the temporary investment of excess cash.

2002 – Interest income in 2002 declined to \$11 million compared with \$33 million in 2001. Interest income in 2001 included interest earned on the note received in partial payment for the sale of Aerostructures. The note was collected in 2001. Interest income in 2002 and 2001 includes interest earned on the temporary investment of excess cash.

## NORTHROP GRUMMAN CORPORATION

### Interest Expense

2003 – Interest expense increased by \$75 million or 18 percent in 2003 as compared with 2002. The increase is principally the result of higher debt levels arising from the acquisition of TRW, net of the effect of the company's debt reduction plan, which was substantially completed in the second quarter of 2003. Dividends payable on mandatorily redeemable preferred stock are also treated as interest expense resulting from adoption of SFAS No. 150 – *Accounting for Certain Financial Instruments with Characteristics of both Liabilities and Equity*, which became effective for periods ending after June 15, 2003.

2002 – Interest expense for 2002 was \$422 million as compared with \$373 million in 2001. The 2002 increase as compared with 2001 reflects higher average debt levels resulting from the acquisitions completed in 2001.

### Income Taxes

2003 – The company's effective tax rate on income from continuing operations for 2003 was 29 percent compared to 31 percent during 2002. The lower rate in 2003 is primarily due to higher research tax credits. The effective tax rate for 2004 is expected to be between 34 and 35 percent.

2002 – The company's effective federal income tax rate on income from continuing operations was 31 percent in 2002 and 37 percent in 2001. The lower rate in 2002 reflects the elimination of goodwill amortization, most of which is non-deductible, upon adoption of SFAS No. 142 – *Goodwill and Other Intangible Assets*.

### Discontinued Operations

2003 – The company reported after-tax income from discontinued operations of \$35 million, net of a goodwill impairment charge of \$47 million, during 2003. The \$23 million after-tax gain from disposal of discontinued operations is primarily attributable to the sale of Life Support and Poly Scientific. The gain (loss) on disposal of discontinued operations includes any gain or loss from completed dispositions, as well as the estimated loss from those businesses expected to be sold at a loss, where the sale has not yet been completed. Gains realized on the sale of any discontinued businesses are reported in the period in which the divestiture is complete.

2002 – Income (loss) from discontinued operations in 2002 and 2001 includes the results of operations of the Electron Devices and Ruggedized Displays businesses, which were sold in 2002, and the Component Technologies businesses. Loss from discontinued operations in 2002 includes a goodwill impairment loss of \$186 million after tax.

### Cumulative Effect of Accounting Change

Effective January 1, 2002, the company adopted SFAS No. 142 – *Goodwill and Other Intangible Assets*, which implemented required disclosure provisions and eliminated the amortization of goodwill. During the second quarter of 2002, the company completed the first step of the required initial test for potential impairment of goodwill as of January 1, 2002. The company used a discounted cash flow approach, corroborated by comparative market multiples, where appropriate, to determine the fair value of its reporting units. The results indicated potential impairment only in the reporting units of the Component Technologies sector due to unfavorable market conditions. During the third quarter of 2002, the company completed the measurement of the Component Technologies goodwill impairment as of January 1, 2002, and recorded a noncash, after-tax charge of \$432 million, or \$3.67 per diluted share, which is reported as "Cumulative effect of accounting change." For additional information see Note 9 to the Consolidated Financial Statements contained in Part II, Item 8.

### BACKLOG

Total backlog at December 31, 2003, was approximately \$58.2 billion. Total backlog includes both funded backlog (unfilled orders for which funding is contractually obligated by the customer) and unfunded backlog (firm orders for which funding is not currently contractually obligated by the customer). Unfunded backlog excludes

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unexercised contract options and unfunded Indefinite Delivery/Indefinite Quantity (IDIQ) orders. Major awards in unfunded backlog include the Virginia-class submarines 2<sup>nd</sup> flight and DD(X) programs in the Ships segment, the Kinetic Energy Interceptor program in the Mission Systems segment, the F-35 and E-2 Advanced Hawkeye programs in the Integrated Systems segment, and the NPOESS program in the Space Technology segment.

The following table presents funded and unfunded backlog by segment at December 31, 2003.

<i>\$ in millions</i>	<b>Funded</b>	<b>Unfunded</b>	<b>Total Backlog</b>
Electronic Systems	<b>\$ 6,468</b>	<b>\$ 2,314</b>	<b>\$ 8,782</b>
Ships	<b>9,749</b>	<b>5,622</b>	<b>15,371</b>
Information Technology	<b>2,163</b>	<b>3,126</b>	<b>5,289</b>
Mission Systems	<b>3,142</b>	<b>6,884</b>	<b>10,026</b>
Integrated Systems	<b>4,217</b>	<b>5,408</b>	<b>9,625</b>
Space Technology	<b>1,558</b>	<b>7,934</b>	<b>9,492</b>
Intersegment Eliminations	<b>(431)</b>		<b>(431)</b>
<b>Total Segments</b>	<b>\$ 26,866</b>	<b>\$ 31,288</b>	<b>\$ 58,154</b>

Backlog is converted into the following years' sales as costs are incurred or deliveries are made. Approximately 65 percent of the 2003 year-end funded backlog is expected to be converted into sales in 2004. Total U.S. Government orders, including those made on behalf of foreign governments (FMS), comprised 87 percent, 84 percent, and 82 percent of the funded backlog at the end of 2003, 2002, and 2001, respectively. Total foreign customer orders, including FMS, accounted for 9 percent, 13 percent, and 13 percent of the funded backlog at the end of 2003, 2002, and 2001, respectively. Domestic commercial backlog represented 6 percent, 5 percent, and 7 percent of funded backlog at the end of 2003, 2002, and 2001, respectively.



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Funded backlog by business area with each segment is provided in the following table.

<b>Funded Backlog</b>	December 31		
	2003	2002	2001
<i>\$ in millions</i>			
<b>Electronic Systems</b>			
Aerospace Systems	\$ 2,072	\$ 2,474	\$ 2,868
C4ISR & Naval Systems	1,313	1,358	764
Defensive Systems	1,152	1,009	959
Navigation Systems	902	834	761
Space Systems	188	288	110
Other	841	526	423
	<b>6,468</b>	<b>6,489</b>	<b>5,885</b>
<b>Ships</b>			
Aircraft Carriers	2,934	3,915	4,369
Surface Combatants	3,261	3,286	2,520
Amphibious and Auxiliary	2,350	2,118	1,779
Submarines	1,070	802	555
Commercial and International	121	213	441
Services and Other	57	27	127
Intrasegment eliminations	(44)		(19)
	<b>9,749</b>	<b>10,361</b>	<b>9,772</b>
<b>Information Technology</b>			
Government Information Technology	1,508	1,042	910
Enterprise Information Technology	146	131	115
Technology Services	359	349	333
Commercial Information Technology	150	73	89
	<b>2,163</b>	<b>1,595</b>	<b>1,447</b>
<b>Mission Systems</b>			
Command, Control & Intelligence Systems	1,075	669	
Missile Systems	1,146	973	
Federal and Civil Information Systems	606	758	
Technical and Management Services	360	382	
Intrasegment eliminations	(45)	(34)	
	<b>3,142</b>	<b>2,748</b>	
<b>Integrated Systems</b>			
Air Combat Systems	2,225	1,980	1,764
Airborne Early Warning/Electronic Warfare	1,476	1,266	1,193
Airborne Ground Surveillance/Battle Management	516	492	566
	<b>4,217</b>	<b>3,738</b>	<b>3,523</b>
<b>Space Technology</b>			
Intelligence, Surveillance, & Reconnaissance	485	511	
Civil Space	195	134	
Satellite Communications	283	235	
Missile & Space Defense	111	203	
Software Defined Radios	382	162	
Technology	102	63	
	<b>1,558</b>	<b>1,308</b>	
Intersegment eliminations	(431)	(186)	(226)

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Total funded backlog	<b>\$26,866</b>	\$26,053	\$20,401
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**NORTHROP GRUMMAN CORPORATION**

**LIQUIDITY AND CAPITAL RESOURCES**

**Contractual Obligations**

The following table presents the company's contractual obligations as of December 31, 2003, and the estimated timing of future cash payments:

<i>\$ in millions</i>	<b>Total</b>	<b>2004</b>	<b>2005- 2006</b>	<b>2007- 2008</b>	<b>2009 and beyond</b>
Long-term debt	<b>\$ 5,771</b>	<b>\$ 461</b>	<b>\$ 1,244</b>	<b>\$ 181</b>	<b>\$ 3,885</b>
Operating leases	<b>1,761</b>	<b>347</b>	<b>529</b>	<b>355</b>	<b>530</b>
Purchase obligations <sup>(1)</sup>	<b>8,714</b>	<b>5,899</b>	<b>2,145</b>	<b>205</b>	<b>465</b>
Other long-term liabilities <sup>(2)</sup>	<b>770</b>	<b>78</b>	<b>409</b>	<b>97</b>	<b>186</b>
<b>Total contractual obligations</b>	<b>\$ 17,016</b>	<b>\$ 6,785</b>	<b>\$ 4,327</b>	<b>\$ 838</b>	<b>\$ 5,066</b>

(1) A "purchase obligation" is defined as an agreement to purchase goods or services that is enforceable and legally binding on the company and that specifies all significant terms, including: fixed or minimum quantities to be purchased; fixed, minimum or variable price provisions; and the approximate timing of the transaction. These amounts are primarily comprised of open purchase order commitments to vendors and subcontractors pertaining to funded contracts.

(2) Other long-term liabilities primarily consist of accrued workers' compensation, deferred compensation, and other miscellaneous liabilities.

The table above excludes estimated minimum funding requirements for retiree benefit plans as set forth by the Employee Retirement Income Security Act (ERISA), totaling approximately \$3.3 billion over the next five years: \$500 million in 2004, \$1.5 billion in 2005 and 2006, and \$1.3 billion in 2007 and 2008. The company also has payments due under plans that are not required to be funded in advance, but are pay-as-you-go. See further discussion contained in Note 15 to the Consolidated Financial Statements in Part II, Item 8.

Contractual obligations of discontinued operations have also been excluded from the table above. A discussion of discontinued operations can be found in Note 4 to the Consolidated Financial Statements in Part II, Item 8.

Further details regarding long-term debt and operating leases can be found in Notes 12 and 16 to the Consolidated Financial Statements in Part II, Item 8.

**NORTHROP GRUMMAN CORPORATION****Sources and Uses of Cash**

The following table provides an overview of the company's sources and uses of cash. The amounts from which the percentages are derived are reported in the Consolidated Statements of Cash Flows as follows: cash from customers and cash to employees and suppliers of services and materials are reported in "Operating Activities"; cash from buyers of assets, cash to sellers of assets, and cash to suppliers of facilities are reported in "Investing Activities"; and cash from and cash to lenders and shareholders are reported in "Financing Activities."

	Year ended December 31		
	2003	2002	2001
<b>Cash came from</b>			
Customers	85%	94%	75%
Buyers of assets/other	13	3	3
Lenders	2	3	18
Shareholders			4
	100%	100%	100%
<b>Cash went to</b>			
Employees and suppliers of services and materials	74%	89%	70%
Lenders	15	7	10
Suppliers of facilities/other	7	1	1
Sellers of assets	2	2	18
Shareholders	2	1	1
	100%	100%	100%

**Operating Activities**

*2003* – In 2003, cash provided by operating activities was \$798 million as compared with \$1.7 billion generated in 2002. In 2003, cash used in operations reflects \$1 billion of taxes paid upon completion of the B-2 EMD contract. The IRS is presently completing its audits of the B-2 program for the tax years ended December 31, 1997, through December 31, 2000. Upon completion of these audits, the IRS may adopt a position that the B-2 program was completed for tax purposes in a year prior to 2002, which would create the potential for additional interest expense. Although it is not possible to predict the outcome of the tax audits at this time, management believes that its tax accounting for the B-2 program reflects the appropriate timing of contract completion. Presently, the IRS has not commenced its audits for the three tax years ended December 31, 2003.

During 2003, the company also received \$178 million of federal and state tax refunds and made litigation settlement payments totaling \$206 million. At December 31, 2003, net working capital deficit (current assets less current liabilities) was \$616 million reflecting a lower cash balance, an increased current portion of long-term debt, and increased customer advances.

Cash provided by operations for 2004 is expected to total approximately \$1.5 billion. For 2004, cash generated from operations supplemented by borrowings under credit facilities are expected to be sufficient to service debt and contract obligations, finance capital expenditures, and continue paying dividends to the company's shareholders.

*2002* – In 2002, cash provided by operating activities was \$1.7 billion as compared with \$817 million generated in 2001. The increased level of cash provided in 2002 principally results from inclusion of the Litton and Newport News acquisitions for a full year, increased operating margin over 2001, and accelerated cash collections. Net working capital at December 31, 2002, includes amounts reported as assets and liabilities of businesses held for sale

## **NORTHROP GRUMMAN CORPORATION**

which encompasses the assets and liabilities of the Component Technologies sector and Auto. Excluding these items, net adjusted working capital deficit at December 31, 2002, was \$566 million, primarily due to increased current taxes payable and customer advances.

*2001* – The lower level of cash provided by operating activities in 2001 primarily reflected nonrecurring cash payments of approximately \$700 million related to the Litton, Newport News, and EIS acquisitions, including change in control payments to employees and funding of pension plans. In addition, the company reached a settlement agreement for antitrust and patent infringement lawsuits filed by Litton against Honeywell, Inc. Under the agreement, Honeywell agreed to pay the company equal cash payments of \$220 million in each of 2001 and 2002. The entire \$440 million balance due was recorded as a fair value purchase accounting adjustment to accounts receivable in connection with the accounting for the acquisition of Litton.

### ***Investing Activities***

*2003* – Cash provided by investing activities was \$2.9 billion in 2003. On February 28, 2003, the company sold Auto to The Blackstone Group for \$3.3 billion in cash, a \$600 million face value payment-in-kind note, initially valued at \$455 million, and a 19.6 percent interest in the new enterprise, valued at \$170 million. The cash received from the sale of Auto was adjusted from the sale agreement amount by cash sold with the business, preliminary purchase price adjustments, and an asset retained. Cash proceeds from the sale of Auto were primarily used to reduce debt. In January 2004, restrictions on the investment in Auto were amended to provide the company more flexibility in monetization.

The company has retained certain liabilities associated with the Auto business as well as the Aeronautical Systems business that TRW divested in 2002. The settlement of these liabilities is not expected to have a material effect on the company's financial position or results of operations.

Capital expenditures in 2003 were \$635 million, including \$47 million for capitalized software costs. Capital expenditure commitments at December 31, 2003, were approximately \$580 million, including \$2 million for environmental control and compliance purposes. Capital expenditures for 2004 are expected to be approximately \$800 million.

*2002* – Cash used in investing activities was \$118 million in 2002. In 2002, the company sold two businesses for cash of \$135 million, incurred \$55 million for transaction costs pertaining to the acquisition of TRW, and spent approximately \$166 million in cash to complete the Newport News acquisition. In 2002, the company acquired TRW in an all stock transaction. Capital expenditures in 2002 were \$521 million, including \$30 million for capitalized software costs.

*2001* – Cash used in investing activities was \$3.2 billion in 2001. In 2001, three businesses were acquired, two for cash and stock and one for cash, for a total cash expenditure of \$3.1 billion. Capital expenditures in 2001 were \$367 million, including \$47 million for capitalized software costs. In 2001, the company received \$148 million upon collection in full of the note received from the sale of Aerostructures.

### ***Financing Activities***

*2003* – Cash used in financing activities was \$4.7 billion in 2003. In March 2003, the company's wholly owned subsidiary, Northrop Grumman Space & Mission Systems Corp. (formerly TRW Inc.), commenced offers to purchase any or all of certain designated outstanding Northrop Grumman Space & Mission Systems Corp. debt securities in a debt reduction plan substantially completed in the second quarter of 2003. In the first phase, approximately \$2.4 billion in aggregate principal amount of outstanding debt securities was tendered and accepted for purchase, for a total purchase price of approximately \$2.9 billion (including accrued and unpaid interest on the securities). In the second phase, the company purchased on the open market \$658 million in aggregate principal

## **NORTHROP GRUMMAN CORPORATION**

amount for a total purchase price of \$795 million (including accrued and unpaid interest on the securities) of Northrop Grumman Space & Mission Systems Corp. debt securities. Cash proceeds from the sale of Auto were used to complete these transactions, which contributed to the reduction of long-term debt to \$5.9 billion at December 31, 2003, from the \$9.6 billion reported at December 31, 2002.

In the third quarter of 2003, the company approved a share repurchase program of up to \$700 million of its outstanding common stock. Share purchases will take place at management's discretion from time to time, depending on market conditions, in the open market and in privately negotiated transactions through the end of 2004. As of December 31, 2003, the company had repurchased over 2.2 million shares for approximately \$200 million. The company expects a portion of its 2004 cash flow will be focused on completing the repurchase program.

The company redeemed all outstanding shares of TRW Automotive Inc. Series A Convertible Preferred Stock and Series B Preferred Stock for \$117 million in 2003.

*2002* – Cash of \$623 million was used in financing activities in 2002. The use of cash in 2002 results from principal payments of long-term debt of \$500 million and dividends paid to shareholders of \$205 million.

*2001* – Cash provided by financing activities was \$2.5 billion in 2001. In February 2001, Northrop Systems issued \$1.5 billion of indebtedness pursuant to its senior debt indenture consisting of \$750 million of 7.125 percent notes due 2011 and \$750 million of 7.75 percent debentures due 2031. In 2001, the company also issued 9.2 million shares of common stock and 6.9 million equity security units, generating cash proceeds of \$1.45 billion. The cash proceeds were used primarily to reduce existing debt.

*Credit Facilities* – In connection with the closing of the Litton acquisition, the company entered into unsecured senior credit facilities with lenders which initially provided for borrowings of up to \$5 billion (the "Credit Facilities") and replaced the company's previous credit agreement. The Credit Facilities consisted of a \$2.5 billion 364-day revolving credit facility and a \$2.5 billion five-year revolving credit facility. The 364-day facility was terminated by the company in December 2001. At December 31, 2003, \$2.5 billion was available under the five-year revolving credit facility. Borrowings under the Credit Facilities, together with the proceeds of the February 2001 issuance of notes and debentures, were used to finance the Litton acquisition and to pay related expenses, to retire and refinance a portion of the Litton debt, and to finance continuing operations. Borrowings under the Credit Facilities bear interest at various rates, including adjusted London Interbank Offered Rate (LIBOR), or an alternate base rate plus, in each case, an incremental margin based on the company's credit rating. The Credit Facilities also provide for a facility fee on the daily aggregate amount of commitments under the revolving facilities (whether or not utilized). The facility fee is also based on the company's credit rating level.

*Mandatorily Redeemable Series B Convertible Preferred Stock* – In connection with the Litton acquisition, the company issued 3.5 million shares of mandatorily redeemable Series B Convertible Preferred Stock in April 2001. Each share of Series B preferred stock has a liquidation value of \$100 per share. The liquidation value, plus accrued but unpaid dividends, is payable on April 4, 2021, the mandatory redemption date. The company has the option to redeem all, but not less than all, of the shares of Series B preferred stock at any time after seven years from the date of issuance for a number of shares of the company's common stock equal to the liquidation value plus accrued and unpaid dividends divided by the current market price of common stock determined in relation to the date of redemption. Each share of preferred stock is convertible, at any time, at the option of the holder into the right to receive shares of the company's common stock. Initially, each share is convertible into .911 shares of common stock, subject to adjustment. Holders of preferred stock are entitled to cumulative annual cash dividends of \$7 per share, payable quarterly. In any liquidation of the company, each share of preferred stock is entitled to a liquidation preference before any distribution may be made on the company's common stock or any series of

## **NORTHROP GRUMMAN CORPORATION**

capital stock that is junior to the Series B preferred stock. In the event of a fundamental change in control of the company, holders of Series B preferred stock also have specified exchange rights into common stock of the company or into specified securities or property of another entity participating in the change in control transaction.

*Equity Security Units* – In November 2001, the company issued 6.9 million equity security units. Each equity security unit, issued at \$100 per unit, initially consists of a contract to purchase shares of Northrop Grumman common stock on November 16, 2004, and a \$100 senior note due 2006. The senior notes due 2006 are reported as long-term debt. The senior notes initially bear interest at 5.25 percent per annum, and each equity security unit also pays a contract adjustment payment of 2.0 percent per annum, for a combined yield on the equity security unit of 7.25 percent per annum. Each purchase contract, which is part of the equity security units, will obligate the holder thereof to purchase on November 16, 2004, for \$100, the following number of shares of the company's common stock based on the average closing price of the company's common stock over the 20 day trading period ending on the third trading day immediately preceding November 16, 2004: (i) 0.9262 shares if the average closing price equals or exceeds \$107.97, (ii) a number of shares having a value equal to \$100.00 if the average closing price is less than \$107.97 but greater than \$88.50 and (iii) 1.1299 shares if the average closing price is less than or equal to \$88.50. Prior to November 16, 2004, holders of equity security units have the opportunity to participate in a remarketing of the senior note component.

### ***Other Sources and Uses of Capital***

*Additional Capital* – To provide for long-term liquidity, the company believes it can obtain additional capital from such sources as: the public or private capital markets, the further sale of assets, sale and leaseback of operating assets, and leasing rather than purchasing new assets. Cash on hand at the beginning of the year plus cash generated from operations and cash available under credit lines are expected to be sufficient in 2004 to service debt, finance capital expansion projects, pay federal income taxes, and continue paying dividends to shareholders. The company will continue to provide the productive capacity to perform its existing contracts, prepare for future contracts, and conduct R&D in the pursuit of developing opportunities. While these expenditures tend to limit short-term liquidity, they are made with the intention of improving the long-term growth and profitability of the company.

*Financial Arrangements* – In the ordinary course of business, the company uses standby letters of credit issued by commercial banks and surety bonds issued by insurance companies principally to guarantee performance on certain contracts and to support the company's self-insured workers' compensation plans. At December 31, 2003, there were \$619 million of stand-by letters of credit outstanding and \$584 million of surety bonds outstanding.

*Other Agreements* – In July and August of 2003, Ship Systems executed agreements with the states of Mississippi and Louisiana, respectively, wherein Ship Systems will lease facility improvements and equipment from these states in exchange for certain commitments by Ship Systems. Under the Mississippi agreement, Ship Systems is required to match the state's funding with expenditures in the amount of \$121 million and create 667 new full time jobs in Mississippi by December 2007. Under the Louisiana agreement, Ship Systems is required to match the state's funding with expenditures in the amount of \$56 million by December 2007, and employ a minimum of 5,200 full-time employees in 16 of the 32 fiscal quarters beginning January 1, 2003, and ending December 31, 2010. Failure by Ship Systems to meet these commitments would result in reimbursement by Ship Systems to Mississippi and Louisiana in accordance with the respective agreements.

## **CRITICAL ACCOUNTING POLICIES, ESTIMATES, AND JUDGMENTS**

The company's established policies are outlined in Note 1 to the Consolidated Financial Statements (contained in Part II, Item 8 of this Form 10-K). The preparation of these financial statements requires management to make estimates and judgments that affect the reported amounts of assets, liabilities, revenue, and expenses as well as the

## **NORTHROP GRUMMAN CORPORATION**

disclosure of contingent assets and liabilities. As part of its oversight responsibilities, management evaluates the propriety of its estimates, judgments, and accounting methods as new events occur. Management believes that its policies, judgments, and assessments have been consistently applied in a manner that provides the reader of the company's financial statements a current, accurate, and complete presentation of information in accordance with accounting principles generally accepted in the United States. Management periodically reviews the company's critical accounting estimates with the audit committee of its board of directors.

Principal accounting practices that involve a higher degree of judgment or complexity are outlined below:

### **Revenue Recognition**

As a defense contractor engaging in long-term contracts, the company extensively utilizes the cost-to-cost and the units-of-delivery measures of the percentage-of-completion method of accounting. Application of this accounting method requires the use of estimates of costs to be incurred for the design, manufacture, and delivery of aircraft carriers, submarines, aircraft and subassemblies, radars, intricate components and systems for space communications, as well as the engineering, development, and integration of software systems and other highly technical products. Such costs are typically incurred over a period of several years, and estimation of these costs requires the use of judgment. The cost estimation process is based upon the professional knowledge and experience of the company's engineers, program managers, and financial professionals. Factors that are considered in estimating the work to be completed and ultimate contract recovery include the availability and productivity of labor, the nature and complexity of the work to be performed, the effect of change orders, the availability of materials, the effect of any delays in performance, availability and timing of funding from the customer, and the recoverability of any claims included in the estimates to complete. A significant change in an estimate on one or more programs could have a material effect on the company's results of operations. Contract cost estimates are updated at least annually and more frequently in certain circumstances. Cost and revenue estimates for each significant contract are reviewed and reassessed quarterly. Sales under cost-reimbursement contracts are recorded as costs are incurred. Certain contracts contain profit incentives based upon performance relative to predetermined targets that may occur during or subsequent to delivery of the product. Incentives that can be reasonably estimated are recorded over the performance period of the contract. Incentives that cannot be reasonably estimated are recorded when awarded. Certain contracts contain provisions for the redetermination of price based upon future economic conditions. Contract change orders and claims are included in sales when they can be reasonably estimated and realization is probable.

### **Purchase Accounting and Goodwill**

The purchase price of an acquired business is allocated to the underlying tangible and intangible assets acquired and liabilities assumed based upon their respective fair market values, with the excess recorded as goodwill. Such fair market value assessments require judgments and estimates that can be affected by contract performance and other factors over time that may cause final amounts to differ from original estimates.

The company evaluates the recovery of recorded goodwill amounts annually, or when evidence of potential impairment exists. In order to test for potential impairment, the company uses a discounted cash flow analysis, corroborated by comparative market multiples, where appropriate. The principal factors used in the discounted cash flow analysis requiring judgment are the weighted average cost of capital and the terminal value growth rate assumptions. Differences in these assumptions, within a range considered by management to be reasonable, applied to the 2003 annual impairment test, would not have had a significant impact to the Consolidated Financial Statements.

The company has established certain accruals in connection with indemnities and other contingencies arising from its acquisitions and divestitures. These accruals and subsequent adjustments have been recorded during the



## **NORTHROP GRUMMAN CORPORATION**

purchase price allocation period. The accruals were determined based upon the terms of the purchase agreements and, in most cases, involve a significant degree of judgment. Management has recorded these accruals in accordance with its interpretation of the terms of the purchase agreements, known facts, and an estimation of probable future events based on management's experience and consultation with outside experts. Changes in facts and interpretation or anticipated future events may have a significant impact on the company's financial condition or results of operations.

### **Litigation, Commitments, and Contingencies**

The company is subject to a range of claims, lawsuits, environmental and income tax matters, and administrative proceedings that arise in the ordinary course of business. Estimating liabilities and costs associated with these matters requires judgment and assessment based upon professional knowledge and experience of management and its legal counsel. In accordance with SFAS No. 5 – *Accounting for Contingencies*, amounts are recorded as charges to earnings when management, after taking into consideration the facts and circumstances of each matter, including any settlement offers, has determined that it is probable that a liability has been incurred and the amount of the loss can be reasonably estimated. The ultimate resolution of any such exposure to the company may vary from earlier estimates as further facts and circumstances become known.

The company is subject to the environmental laws and regulations of the jurisdictions in which it conducts operations. The company records an accrual to provide for the costs of expected environmental obligations when management becomes aware that an expenditure will be required. Factors which could result in changes to the company's environmental accruals and reasonably possible range of loss include: modification of planned remedial actions, increase or decrease in the estimated time required to remediate, discovery of more extensive contamination than anticipated, changes in laws and regulations affecting remediation requirements, and improvements in remediation technology. The company believes it complies with environmental laws applicable to its operations. The company does not believe that continued compliance with these environmental laws will have a material adverse effect on its financial condition or results of operations. However, a significant change in laws, the discovery of previously unknown contamination, and other factors could result in expenditures that are materially greater than currently estimated.

### **Retirement Benefits**

Assumptions used in determining projected benefit obligations and the fair values of plan assets for the company's pension plans and other post-retirement benefits plans are regularly evaluated by management in consultation with outside actuaries who are relied upon as experts. In the event that the company determines that changes in the assumptions are warranted, future pension and post-retirement benefit expenses could increase or decrease. The principal assumptions that have a significant impact on the financial condition and operating results of the company are the discount rate, the expected long-term rate of return on plan assets, and the health care cost trend rates.

The discount rate represents the interest rate that should be used to determine the present value of future cash flows currently expected to be required to settle the pension and post-retirement benefit obligations. The discount rate is generally based on the yield on high-quality corporate fixed-income investments. At the end of each year, the appropriate discount rate is determined based on consultation with outside actuaries, consideration of survey results, the Moody's Aa corporate bond rate, and the results of a hypothetical long-term bond portfolio matching the expected cash inflows with the expected benefit payments. Taking into consideration the factors noted above, the company lowered the discount rate to 6.25 percent at December 31, 2003, from 6.5 percent at December 31, 2002.

The expected long-term rate of return on plan assets represents the average rate of earnings expected on the funds invested to provide for anticipated benefit payments. For 2003, the company assumed an expected long-term rate

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of return on plan assets of 9 percent. On average, the actual return on plan assets over the long-term has exceeded 9 percent; however, for 2004, the expected long-term rate of return assumption was lowered from 9 percent to 8.75 percent, reflecting the generally expected moderation of long-term rates of return in the financial markets.

The health care cost trend rates represent the annual rate of change in the cost of health care benefits based on estimates of health care inflation, changes in health care utilization or delivery patterns, technological advances, and changes in the health status of the plan participants.

Differences in the discount rate, expected long-term rate of return on plan assets, and the health care cost trend rates within reasonably likely ranges would have had the following impact on 2003 results:

<i>\$ in millions</i>	<b>.25 Percentage Point Increase</b>	<b>.25 Percentage Point Decrease</b>
Increase (decrease) to pension expense resulting from		
Change in discount rate	\$ (36)	\$ 37
Change in long-term rate of return on plan assets	(34)	34

<i>\$ in millions</i>	<b>1 Percentage Point Increase</b>	<b>1 Percentage Point Decrease</b>
Increase (decrease) from change in health care cost trend rates to		
Postretirement benefit expense	\$ 26	\$ (22)
Postretirement benefit liability	286	(242)

**OTHER MATTERS**

**New Accounting Pronouncements**

Several new accounting pronouncements were issued by the Financial Accounting Standards Board (FASB), which became effective during the periods presented.

In June 2001, the FASB issued SFAS No. 141 – *Business Combinations* and SFAS No. 142 – *Goodwill and Other Intangible Assets*. SFAS No. 141 requires the purchase method of accounting for business combinations initiated after June 30, 2001, and eliminates the pooling-of-interests method. Adoption of SFAS No. 141 did not have a significant effect on the company's financial position, results of operations, or cash flows. SFAS No. 142 changed the accounting for goodwill from an amortization method to an impairment-only approach. Upon adoption of this statement, amortization of goodwill, including goodwill recorded in past business combinations, ceased and an initial impairment assessment of goodwill was performed. Annual impairment tests are required thereafter. The company adopted SFAS No. 142 on January 1, 2002, and recorded an initial goodwill impairment charge of \$432 million, which is reported under the income statement caption "Cumulative Effect of Accounting Change."

No other new pronouncement effective during the periods presented had a significant effect on the company's financial position or results of operations. Other new pronouncements issued by the FASB and not effective until after December 31, 2003, are not expected to have a significant effect on the company's financial position or results of operations. Further details are contained in Note 2 to the Consolidated Financial Statements located in Part II, Item 8.

**Off-Balance Sheet Arrangements**

As of December 31, 2003, the company had no significant off-balance sheet arrangements.

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**FORWARD LOOKING STATEMENTS AND IMPORTANT FACTORS**

Certain statements and assumptions throughout this report contain or are based on “forward-looking” information (that Northrop Grumman believes to be within the definition in the Private Securities Litigation Reform Act of 1995) and involve risks and uncertainties, and include, among others, statements in the future tense, and all statements accompanied by terms such as “believe,” “project,” “expect,” “estimate,” “assume,” “intend,” “anticipate,” and variations thereof and similar terms. This information reflects the company’s best estimates when made, but the company expressly disclaims any duty to update this information if new data becomes available or estimates change after the date of this report. These forward-looking statements should, therefore, be considered in light of various important factors that could cause actual results to differ materially from estimates or projections including, without limitation:

- The company depends on a limited number of customers. The company is heavily dependent on government contracts, many of which are only partially funded. The termination or failure to fund one or more significant contracts could have a negative impact on operations. The company is a supplier, either directly or as a subcontractor or team member, to the U.S. Government and its agencies as well as foreign governments and agencies. These contracts are subject to each customer’s political and budgetary constraints, changes in short-range and long-range plans, the timing of contract awards, the congressional budget authorization and appropriation processes, the government’s ability to terminate contracts for convenience or for default, as well as other risks such as contractor suspension or debarment in the event of certain violations of legal and regulatory requirements.
- Many of the company’s contracts are fixed-price contracts. While firm, fixed-price contracts allow the company to benefit from cost savings, they also expose the company to the risk of cost overruns. If the company’s initial estimates used for calculating contract prices are incorrect, the company can incur losses on those contracts. In addition, some of the company’s contracts have provisions relating to cost controls and audit rights, and if the company fails to meet the terms specified in those contracts, then the company may not realize their full benefits. The company’s ability to manage costs on these contracts may affect its financial condition. Lower earnings caused by cost overruns would have an adverse effect on the company’s financial results. In addition, in those instances where the company has entered into contracts for fixed-price development programs, the company’s successful performance of such programs is subject to its ability to control cost growth in meeting production specifications and delivery rates.
- The company is subject to significant competition. The company’s markets include defense and commercial areas where it competes with companies of substantial size and resources. The company’s success or failure in winning new contracts or follow-on orders for its existing or future products may cause material fluctuations in the company’s future revenues and operating results.
- The company’s operations may be subject to events that cause adverse effects on its ability to meet contract obligations within anticipated cost and time constraints. The company may encounter internal problems and delays in delivery as a result of issues with respect to design, technology, licensing and patent rights, labor, or materials and components that prevent the company from achieving contract requirements. The company may be affected by delivery or performance issues with key suppliers and subcontractors, as well as other factors inherent in the company’s businesses that may cause operating results to be adversely affected. Operating results are also dependent on successful negotiation of collective bargaining agreements. Changes in inventory requirements or other production cost increases may also have a negative impact on the company’s operating results.
- If the company does not perform its plans as intended, or if the company encounters unforeseen problems, or problems subsequently develop, the company’s operating results may be adversely affected. Among the factors that may be involved would be unforeseen costs and expenses, and diversion of management focus in responding to unforeseen liabilities.

## NORTHROP GRUMMAN CORPORATION

- The company relies on continuous innovation. The company is dependent upon its ability to anticipate changing needs for defense products, military and civilian electronic systems and support, naval vessels, space technologies, and information technology. The company's success is dependent on designing new products that will respond to such requirements within customers' price limitations.
- The company faces significant challenges in the international marketplace. The company's international business is subject to changes in import and export policies, technology transfer restrictions, limitations imposed by United States law that are not applicable to foreign competitors, and other legal, financial, and governmental risks.
- The company assumes that any divestiture of non-core businesses and assets will be completed successfully. The company's performance may be affected by its inability to successfully dispose of assets and businesses that do not fit with, or are no longer appropriate to, the company's strategic plan. If any sales of such businesses or assets can be made only at a loss, the company's earnings will be reduced.
- The company is subject to environmental litigation and other litigation, which, if not resolved within the company's expectation, could reduce future operating results.
- The company's pension (expense) income may fluctuate significantly. Pension (expense) income is based on assumptions of future market performance, and actual performance may differ. If an event requires the company to reestimate its pension (expense) income during the year, its reported earnings could vary significantly.
- The company's tax filings are regularly examined by federal and state taxing authorities. Results of these examinations can result in tax deficiencies, cumulative interest payments, fines, and penalties. Such assessments could negatively affect the company's results of operations, financial condition, and/or cash flow.

The company intends that all forward-looking statements it makes will be subject to safe harbor protection of the federal securities laws as found in Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934.

Accordingly, you should not rely on the accuracy of predictions contained in forward-looking statements. These statements speak only as of the date when they are made. The company cannot undertake any obligation to update its forward-looking statements to reflect events, circumstances, changes in expectations, or the occurrence of unanticipated events after the date of those statements. Moreover, in the future, the company, through its senior management, may make forward-looking statements about the matters described in this document or other matters concerning the company.

### **Item 7A. Quantitative and Qualitative Disclosures about Market Risk**

*Interest Rates* - The company is exposed to market risk, primarily related to interest rates and foreign currency exchange rates. Financial instruments subject to interest rate risk include fixed-rate long-term debt obligations, variable-rate short-term debt outstanding under the credit agreement, short-term investments, and long-term notes receivable. At December 31, 2003, substantially all borrowings were fixed-rate long-term debt obligations of which a significant portion are not callable until maturity. The company's sensitivity to a 1 percent change in interest rates is tied to its \$2.5 billion credit agreement, which has no balance outstanding at December 31, 2003. The company may enter into interest rate swap agreements to manage its exposure to interest rate fluctuations. At December 31, 2003, no interest rate swap agreements were in effect.

*Foreign Currency* - The company enters into foreign currency forward contracts to manage foreign currency exchange rate risk related to receipts from customers and payments to suppliers denominated in foreign currencies. At December 31, 2003, the amount of foreign currency forward contracts outstanding was not material. The company does not consider the market risk exposure relating to foreign currency exchange to be material.

**NORTHROP GRUMMAN CORPORATION**

*Derivatives* - The company does not hold or issue derivative financial instruments for trading purposes. Standby letters of credit are sometimes used by the company to guarantee future performance on its contracts. All letters of credit are short-term and denominated in U.S. dollars to avoid market risk exposures.

*RFMD and Celera* - In connection with the TRW acquisition, the company acquired investments in RF Micro Devices, Inc. (RFMD) and Applera Corporation-Celera Genomics Group (Celera), two publicly traded companies. These investments had been monetized through the execution of forward share sale agreements. The company also acquired certain hedges designed to protect the forecasted cash flows resulting from the future sale of shares in these investments. These hedges also mitigate any downside risk of loss and provide for additional gain depending on market conditions at maturity.

The investments in RFMD and Celera and the related hedge portion of the forward share sale agreements are carried at their respective fair market values. As of December 31, 2003, all but 1.3 million RFMD shares have been delivered and all Celera shares have been delivered. As the value of the investments and the hedge were equivalent during the period that the shares were held by the company, no gain or loss was realized. The fair value of the remaining RFMD shares at December 31, 2003, excluding the effect of the forward share sale agreements, was approximately \$13 million. In February 2004, the remaining RFMD shares were delivered and no gain or loss was realized.

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## NORTHROP GRUMMAN CORPORATION

## Item 8: Financial Statements and Supplementary Data

## CONSOLIDATED STATEMENTS OF FINANCIAL POSITION

	December 31	
<i>\$ in millions</i>	2003	2002
<b>Assets:</b>		
<b>Current Assets</b>		
Cash and cash equivalents	\$ 342	\$ 1,412
Accounts receivable, net	3,198	2,949
Inventoried costs	1,147	1,091
Deferred income taxes	770	662
Prepaid expenses and other current assets	167	160
Assets of businesses held for sale	121	9,621
Total current assets	5,745	15,895
<b>Property, Plant, and Equipment</b>		
Land and land improvements	499	350
Buildings	1,655	1,538
Machinery and other equipment	3,393	2,948
Leasehold improvements	233	160
	5,780	4,996
Accumulated depreciation	(1,744)	(1,391)
Net property, plant, and equipment	4,036	3,605
<b>Other Assets</b>		
Goodwill	17,333	15,657
Other purchased intangible assets, net of accumulated amortization of \$987 in 2003 and \$760 in 2002	1,710	2,553
Prepaid retiree benefits cost and intangible pension asset	2,988	3,618
Deferred income taxes		174
Other assets	1,197	824
Total other assets	23,228	22,826
<b>Total assets</b>	<b>\$ 33,009</b>	<b>\$ 42,326</b>

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## NORTHROP GRUMMAN CORPORATION

	December 31	
<i>\$ in millions</i>	2003	2002
<b>Liabilities and Shareholders' Equity:</b>		
<b>Current Liabilities</b>		
Notes payable to banks	\$ 10	\$ 22
Current portion of long-term debt	461	203
Trade accounts payable	1,491	1,427
Accrued employees' compensation	995	1,018
Advances on contracts	1,285	1,066
Contract loss provisions	364	453
Income taxes payable	356	1,237
Other current liabilities	1,299	1,414
Liabilities of businesses held for sale	100	4,593
Total current liabilities	6,361	11,433
Long-term debt	5,410	9,398
Mandatorily redeemable preferred stock	350	350
Accrued retiree benefits	3,811	5,942
Deferred income taxes	509	
Other long-term liabilities	770	742
Minority interest	13	139
<b>Shareholders' Equity</b>		
Common stock, 800,000,000 shares authorized; issued and outstanding: 2003—181,108,105; 2002—182,602,390	12,433	12,511
Retained earnings	3,431	2,870
Unearned compensation	(6)	(11)
Accumulated other comprehensive loss	(73)	(1,048)
Total shareholders' equity	15,785	14,322
<b>Total liabilities and shareholders' equity</b>	<b>\$ 33,009</b>	<b>\$ 42,326</b>

The accompanying notes are an integral part of these consolidated financial statements.

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**CONSOLIDATED STATEMENTS OF INCOME**

	Year ended December 31		
	2003	2002	2001
<i>\$ in millions, except per share</i>			
<b>Sales and Service Revenue</b>			
Product sales	<b>\$18,350</b>	\$ 13,638	\$ 10,118
Service revenue	<b>7,856</b>	3,568	2,894
<b>Total revenue</b>	<b>26,206</b>	17,206	13,012
<b>Cost of Sales and Service</b>			
Cost of product sales	<b>14,641</b>	10,842	8,146
Cost of service revenue	<b>7,681</b>	3,262	2,561
Administrative and general expenses	<b>2,346</b>	1,711	1,272
<b>Operating margin</b>	<b>1,538</b>	1,391	1,033
<b>Other Income (Expense)</b>			
Interest income	<b>60</b>	11	33
Interest expense	<b>(497)</b>	(422)	(373)
Other, net	<b>30</b>	29	34
<b>Income from continuing operations before income taxes and cumulative effect of accounting change</b>	<b>1,131</b>	1,009	727
<b>Federal and foreign income taxes</b>	<b>323</b>	312	268
<b>Income from continuing operations before cumulative effect of accounting change</b>	<b>808</b>	697	459
<b>Income (loss) from discontinued operations, net of federal income taxes</b>	<b>35</b>	(181)	(32)
<b>Gain (loss) on disposal of discontinued operations, net of federal income taxes</b>	<b>23</b>	(20)	
<b>Income before cumulative effect of accounting change</b>	<b>866</b>	496	427
<b>Cumulative effect of accounting change</b>		(432)	
<b>Net income</b>	<b>\$ 866</b>	\$ 64	\$ 427
<b>Basic Earnings (Loss) Per Share</b>			
Continuing operations	<b>\$ 4.36</b>	\$ 5.82	\$ 5.22
Discontinued operations	<b>.19</b>	(1.57)	(.38)
Disposal of discontinued operations	<b>.13</b>	(.17)	
<b>Before cumulative effect of accounting change</b>	<b>4.68</b>	4.08	4.84
<b>Cumulative effect of accounting change</b>		(3.73)	
<b>Basic earnings per share</b>	<b>\$ 4.68</b>	\$ .35	\$ 4.84
<b>Diluted Earnings (Loss) Per Share</b>			
Continuing operations	<b>\$ 4.32</b>	\$ 5.72	\$ 5.17
Discontinued operations	<b>.19</b>	(1.54)	(.37)
Disposal of discontinued operations	<b>.13</b>	(.17)	
<b>Before cumulative effect of accounting change</b>	<b>4.64</b>	4.01	4.80
<b>Cumulative effect of accounting change</b>		(3.67)	
<b>Diluted earnings per share</b>	<b>\$ 4.64</b>	\$ .34	\$ 4.80

The accompanying notes are an integral part of these consolidated financial statements.



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## NORTHROP GRUMMAN CORPORATION

## CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)

<i>\$ in millions</i>	Year ended December 31		
	2003	2002	2001
Net income	\$ 866	\$ 64	\$ 427
Other Comprehensive Income (Loss)			
Change in cumulative translation adjustment	10	(1)	(3)
Unrealized gain on marketable securities, before tax	1		
Minimum pension liability adjustment, before tax	1,645	(1,699)	(41)
Income tax (expense) benefit	(681)	705	14
Other comprehensive income (loss), net of tax	975	(995)	(30)
Comprehensive income (loss)	\$1,841	\$ (931)	\$ 397

*The accompanying notes are an integral part of these consolidated financial statements.*

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## NORTHROP GRUMMAN CORPORATION

## CONSOLIDATED STATEMENTS OF CASH FLOWS

	Year ended December 31		
<i>\$ in millions</i>	2003	2002	2001
<b>Operating Activities</b>			
Sources of Cash—Continuing Operations			
Cash Received from Customers			
Progress payments	\$ 8,575	\$ 5,748	\$ 3,102
Other collections	17,742	11,669	10,705
Proceeds from litigation settlement		220	220
Income tax refunds received	178	74	23
Interest received	17	69	17
Other cash receipts	64	34	24
Cash provided by operating activities	26,576	17,814	14,091
Uses of Cash—Continuing Operations			
Cash paid to suppliers and employees			
Interest paid	23,820	15,661	12,833
Income taxes paid	593	334	333
Payments for litigation settlements	1,152	149	126
Other cash payments	206		
Other cash payments	35	17	7
Cash used in operating activities	25,806	16,161	13,299
Cash provided by continuing operations	770	1,653	792
Cash provided by discontinued operations	28	36	25
Net cash provided by operating activities	798	1,689	817
<b>Investing Activities</b>			
Proceeds from sale of businesses, net of cash divested			
Payments for businesses purchased, net of cash acquired	3,614	135	18
Additions to property, plant, and equipment	(66)	181	(3,061)
Proceeds from sale of property, plant, and equipment	(635)	(521)	(367)
Proceeds from sale of investment	86	45	86
Collection of note receivable		29	
Other investing activities			148
Discontinued operations	(45)	30	(2)
Discontinued operations	(73)	(17)	(26)
Net cash provided by (used in) investing activities	2,881	(118)	(3,204)
<b>Financing Activities</b>			
Borrowings under lines of credit			
Repayment of borrowings under lines of credit	758	504	1,173
Principal payments of long-term debt	(770)	(501)	(1,306)
Dividends paid	(3,805)	(500)	(119)
Common stock repurchases	(305)	(205)	(158)
Redemption of minority interest	(200)		
Proceeds from issuance of stock	(117)		
Proceeds from issuance of long-term debt	33	76	825
Proceeds from issuance of equity security units			1,491
Other financing activities			690
Discontinued operations			(64)
Discontinued operations	(343)	3	
Net cash (used in) provided by financing activities	(4,749)	(623)	2,532
(Decrease) increase in cash and cash equivalents	(1,070)	948	145
Cash and cash equivalents, beginning of year	1,412	464	319

Cash and cash equivalents, end of year

\$ 342

\$ 1,412

\$ 464

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## NORTHROP GRUMMAN CORPORATION

	Year ended December 31		
<i>\$ in millions</i>	2003	2002	2001
<b>Reconciliation of Income from Continuing Operations before Cumulative Effect of Accounting Change to Net Cash Provided by Operating Activities</b>			
Income from continuing operations before cumulative effect of accounting change	\$ 808	\$ 697	\$ 459
Adjustments to reconcile to net cash provided by operating activities			
Depreciation	455	332	246
Amortization of intangible assets	227	164	330
Common stock issued to employees	84	67	46
Loss (gain) on disposals of property, plant, and equipment	20	(4)	(6)
Amortization of long-term debt premium	(47)	(2)	
Decrease (increase) in			
Accounts receivable	(5,385)	(771)	1,252
Inventoried costs	(54)	(211)	(15)
Prepaid expenses and other current assets	6	38	18
Increase (decrease) in			
Progress payments	5,264	1,109	(649)
Accounts payable and accruals	(325)	(142)	(672)
Provisions for contract losses	(24)	(135)	(65)
Deferred income taxes	1,022	(1,513)	167
Income taxes payable	(960)	1,049	(9)
Retiree benefits	(374)	943	(344)
Other noncash transactions	53	32	34
Cash provided by continuing operations	770	1,653	792
Cash provided by discontinued operations	28	36	25
Net cash provided by operating activities	\$ 798	\$ 1,689	\$ 817
<b>Non-Cash Investing and Financing Activities</b>			
Sale of Business			
Note receivable, net of discount	\$ 455		
Investment in unconsolidated affiliate	170		
Purchase of Businesses			
Fair value of assets acquired	\$ 73	\$20,206	\$11,957
Cash paid, net of cash acquired	(66)	181	(3,061)
Noncash stock compensation		(151)	
Common stock issued		(7,753)	(2,405)
Mandatorily redeemable preferred stock issued			(350)
Liabilities assumed	\$ 7	\$ 12,483	\$ 6,141
Other Non-Cash Activity			
Conversion of debt to equity		\$ 3	

The accompanying notes are an integral part of these consolidated financial statements.

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## NORTHROP GRUMMAN CORPORATION

CONSOLIDATED STATEMENTS OF CHANGES  
IN SHAREHOLDERS' EQUITY

	Year ended December 31		
	2003	2002	2001
<i>\$ in millions, except per share</i>			
<b>Paid-in Capital</b>			
At beginning of year	\$ 12,511	\$ 4,451	\$ 1,200
Stock issued in purchase of businesses		7,753	2,405
Stock issued in public offering			784
Common stock repurchased	(200)		
Equity security units issuance fees and forward contract fees			(56)
Employee stock awards and options	122	307	118
At end of year	12,433	12,511	4,451
<b>Retained Earnings</b>			
At beginning of year	2,870	3,011	2,742
Net income	866	64	427
Cash dividends	(305)	(205)	(158)
At end of year	3,431	2,870	3,011
<b>Unearned Compensation</b>			
At beginning of year	(11)	(18)	
Issuance of unvested stock options			(24)
Amortization of unearned compensation	5	7	6
At end of year	(6)	(11)	(18)
<b>Accumulated Other Comprehensive Loss</b>			
At beginning of year	(1,048)	(53)	(23)
Change in cumulative translation adjustment	10	(1)	(3)
Change in unrealized gain on marketable securities, net of tax	1		
Change in additional minimum pension liability, net of tax	964	(994)	(27)
At end of year	(73)	(1,048)	(53)
Total shareholders' equity	\$ 15,785	\$ 14,322	\$ 7,391
Cash dividends per share	\$ 1.60	\$ 1.60	\$ 1.60

The accompanying notes are an integral part of these consolidated financial statements.

**NORTHROP GRUMMAN CORPORATION**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

**1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES**

*Principles of Consolidation and Significant Accounting Estimates* – The consolidated financial statements include the accounts of the company and its subsidiaries. All material intercompany accounts, transactions, and profits are eliminated in consolidation.

The unaudited quarterly information in Note 18 is labeled using a calendar convention; that is, first quarter is consistently labeled as ended on March 31, second quarter as ended on June 30, and third quarter as ended on September 30. It is our long-standing practice to establish actual interim closing dates using a “fiscal” calendar, which requires our businesses to close their books on a Friday, in order to normalize the potentially disruptive effects of quarterly closings on business processes. The effects of this practice only exist within a reporting year. The fiscal closing calendar from 1998 through 2008 is available on our website, [www.northropgrumman.com](http://www.northropgrumman.com) on the investor relations page under Financial Reports.

The company’s financial statements are in conformity with accounting principles generally accepted in the United States. The preparation thereof requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingencies at the date of the financial statements as well as the reported amounts of revenues and expenses during the reporting period. Estimates have been prepared on the basis of the most current and best available information and actual results could differ materially from those estimates.

*Nature of Operations* – Northrop Grumman provides technologically advanced, innovative products, services and solutions in defense and commercial electronics, nuclear and non-nuclear shipbuilding, information technology, mission systems, systems integration, and space technology. As prime contractor, principal subcontractor, partner, or preferred supplier, Northrop Grumman participates in many high-priority defense and commercial technology programs in the United States and abroad. The majority of the company’s products and services are ultimately sold to the U. S. Government, and the company is therefore affected by, among other things, the federal budget process.

*Revenue Recognition* – As a defense contractor engaging in long-term contracts, the company extensively utilizes the cost-to-cost and the units-of-delivery measures of the percentage-of-completion method of accounting. Sales under cost-reimbursement contracts and construction-type contracts that provide for delivery at a low volume per year or a small number of units after a lengthy period of time over which a significant amount of costs have been incurred are accounted for using the cost-to-cost measure of the percentage-of-completion method of accounting. Under this method, sales, including estimated earned fees or profits, are recorded as costs are incurred. For most contracts, sales are calculated based on the percentage that total costs incurred bear to total estimated costs. For certain contracts with large up-front purchases of material, sales are calculated based on the percentage that direct labor costs incurred bear to total estimated direct labor costs. Sales under construction-type contracts that provide for delivery at a high volume per year are accounted for using the units-of-delivery measure of the percentage-of-completion method of accounting. Under this method, sales are recognized as deliveries are made and are computed on the basis of the estimated final average unit cost plus profit. Revenue on service contracts is recognized as the services are performed.

Certain contracts contain provisions for price redetermination or for cost and/or performance incentives. Such redetermined amounts or incentives are included in sales when the amounts can reasonably be determined. Amounts representing contract change orders, claims, or limitations in funding are included in sales only when they can be reliably estimated and realization is probable. In the period in which it is determined that a loss will result from the performance of a contract, the entire amount of the estimated ultimate loss is charged against income. Loss provisions are first offset against costs that are included in assets, with any remaining amount reflected in liabilities. Other changes in estimates of sales, costs, and profits are recognized using the cumulative catch-up

## **NORTHROP GRUMMAN CORPORATION**

method of accounting. This method recognizes in the current period the cumulative effect of the changes on current and prior periods. Hence, the effect of the changes on future periods of contract performance is recognized as if the revised estimates had been the original estimates. A significant change in an estimate on one or more programs could have a material effect on the company's results of operations.

*Research and Development* – Research and development expense totaled \$3.1 billion, \$1.3 billion, and \$1.2 billion during 2003, 2002, and 2001 of which \$2.7 billion, \$922 million, and \$847 million were sponsored by the customer, respectively. Customer-sponsored research and development costs (direct and indirect costs incurred pursuant to contractual arrangements) are accounted for like other contracts.

*Noncontract Research and Development* – This category includes independent research and development costs and company-sponsored research and development costs (direct and indirect costs not recoverable under contractual arrangements). Independent research and development (IR&D) costs are included in administrative and general expenses (indirect costs allocable to U. S. Government contracts) whereas company-sponsored research and development costs are not allocable to U. S. Government contracts and are therefore charged against income as incurred.

*Product Warranty Costs* – The company provides certain product warranties that require repair or replacement of non-conforming items for a specified period of time. Most of the company's product warranties are provided under government contracts, the costs of which are generally recoverable from the customer.

*Environmental Costs* – Environmental liabilities are accrued when the company determines it is responsible for remediation costs and such amounts are reasonably estimable. When only a range of amounts is established and no amount within the range is more probable than another, the minimum amount in the range is recorded. Environmental liabilities are recorded on an undiscounted basis. At sites involving multiple parties, the company accrues environmental liabilities based upon its expected share of liability, taking into account the financial viability of other jointly liable parties. Environmental expenditures are expensed or capitalized as appropriate. Capitalized expenditures relate to long-lived improvements in currently operating facilities. The company does not anticipate and record insurance recoveries before collection is probable. At December 31, 2003 and 2002, the company did not accrue any assets related to insurance reimbursements or recoveries.

*Foreign Currency Forward Contracts* – The company enters into foreign currency forward contracts to manage foreign currency exchange risk related to receipts from customers and payments to suppliers denominated in foreign currencies. Gains and losses from such transactions are included as contract costs. At December 31, 2003, the amount of foreign currency forward contracts outstanding was not material.

*Interest Rate Swap Agreements* – The company may enter into interest rate swap agreements to offset the variable-rate characteristic of certain variable-rate term loans which may be outstanding from time to time under the company's Credit Facilities (see Note 12). The company may also enter into interest rate swap agreements to benefit from floating interest rates as an offset to the fixed-rate characteristic of certain of its long-term debt. No interest rate swap agreements were in effect during 2003, 2002, or 2001.

*Income Taxes* – Provisions for federal, foreign, state, and local income taxes are calculated on reported financial statement pre-tax income based on current tax law and also include the cumulative effect of any changes in tax rates from those used previously in determining deferred tax assets and liabilities. Such provisions differ from the amounts currently payable because certain items of income and expense are recognized in different time periods for financial reporting purposes than for income tax purposes. The company accounts for certain contracts in process using different methods of accounting for financial reporting purposes and for tax reporting and thus provides deferred taxes on the difference between the financial and taxable income reported during the performance of such contracts. State and local income and franchise tax provisions are included in administrative and general expenses.

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*Cash and Cash Equivalents* – Cash and cash equivalents include interest-earning debt instruments that mature in three months or less from the date purchased.

*Accounts Receivable* – Accounts receivable include amounts billed and currently due from customers, amounts currently due but unbilled (primarily related to contracts accounted for under the cost-to-cost measure of the percentage-of-completion method of accounting), certain estimated contract changes, claims in negotiation that are probable of recovery, and amounts retained by the customer pending contract completion.

*Inventoried Costs* – Inventoried costs primarily relate to work in process under fixed-price contracts (excluding those included in unbilled accounts receivable as previously described). They represent accumulated contract costs less the portion of such costs allocated to delivered items. Accumulated contract costs include direct production costs, factory and engineering overhead, production tooling costs, and, for government contracts, allowable administrative and general expenses. General corporate expenses and IR&D allocable to commercial contracts are charged against income as incurred. Inventoried costs are classified as a current asset and include amounts related to contracts having production cycles longer than one year. Product inventory primarily consists of raw materials and is stated at the lower of cost or market, generally using the average cost method.

*Depreciable Properties* – Property, plant, and equipment owned by the company are depreciated over the estimated useful lives of individual assets. Capital leases are amortized over the estimated useful lives of individual assets. Costs incurred for computer software developed or obtained for internal use are capitalized and classified in machinery and other equipment. Capitalized software costs are amortized over no more than three years. Most of these assets are depreciated using declining-balance methods, with the remainder using the straight-line method, with the following lives:

	Years
Land improvements	2-40
Buildings	2-45
Machinery and other equipment	2-25
Leasehold improvements	Length of lease

*Goodwill and Other Purchased Intangible Assets* – Effective January 1, 2002, the company adopted Statement of Financial Accounting Standards (SFAS) No. 142 – *Goodwill and Other Intangible Assets*, which changed the accounting for goodwill and “indefinite lived” intangibles from an amortization method to an impairment-only approach. Accordingly, amortization of goodwill, including goodwill recorded in past business combinations, ceased on December 31, 2001. Following is a reconciliation of previously reported 2001 financial information adjusted to exclude goodwill amortization:

	Year ended December 31 2001		
	Net Income	Basic Earnings Per share	Diluted Earnings Per share
<i>\$ in millions, except per share data</i>			
As reported for 2001	\$ 427	\$ 4.84	\$ 4.80
Total goodwill amortization, net of tax	218	2.58	2.55
As adjusted for 2001	\$ 645	\$ 7.42	\$ 7.35

Beginning in 2002, impairment tests are performed at least annually, and more often as circumstances require. When it is determined that an impairment has occurred, an appropriate charge to operations is recorded.



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Goodwill and other purchased intangible assets balances are included in the identifiable assets of the business segment to which they have been assigned. Any goodwill impairment, as well as the amortization of other purchased intangible assets, is charged against the respective business segment operating margin.

*Forward Share Sale Agreements* – The company hedges certain equity investments in publicly traded companies. These instruments protect the forecasted cash flows resulting from the contractual sale of shares in certain of the company's investments in unconsolidated affiliates. These instruments are accounted for in accordance with SFAS No. 133 – *Accounting for Derivative Instruments and Hedging Activities*, as amended. The investments and the related hedge instruments are carried at fair market value. Changes in fair market value of the investments, including the shares monetized, are recorded in the other comprehensive income (loss) component of shareholders' equity. Any gains or losses reported in other comprehensive income (loss) are reclassified to income at the maturity of these agreements.

*Foreign Currency Translation* – For operations outside the U. S. that prepare financial statements in currencies other than the U. S. dollar, results of operations and cash flows are translated at average exchange rates during the period, and assets and liabilities are generally translated at end-of-period exchange rates. Translation adjustments are included as a separate component of accumulated other comprehensive income (loss) in shareholders' equity.

*Preferred Share Purchase Rights* – In the third quarter of 2003, the company amended its Preferred Share Purchase Rights Plan. The Plan expired on December 31, 2003.

*Stock Compensation Plans* – The company applies Accounting Principles Board Opinion 25 – *Accounting for Stock Issued to Employees* and related interpretations in accounting for awards made under stock compensation plans. When stock options are exercised, the cash proceeds received by the company are recorded as an increase to paid-in capital. No compensation expense is recognized in connection with the stock options. Compensation expense for restricted performance stock rights and restricted stock rights is estimated and accrued over the vesting period.

Had compensation expense been determined based on the fair value at the grant dates for stock option awards, consistent with the method of SFAS No. 123 – *Accounting for Stock Based Compensation*, net income, basic earnings per share, and diluted earnings per share would have been as shown in the table below. These amounts were determined using weighted-average per share fair values for market options granted in 2003, 2002, and 2001 of \$32, \$39, and \$26, respectively. The fair value of each option grant was estimated on the date of grant using the Black-Scholes option-pricing model based on an expected life of six years and for 2003, 2002, and 2001, respectively, the following additional assumptions – dividend yield: 1.7 percent, 1.4 percent, and 2.0 percent; expected volatility: 35 percent, 35 percent, and 33 percent; and risk-free interest rate: 3.6 percent, 3.5 percent, and 4.7 percent.

	Year ended December 31		
<i>\$ in millions, except per share</i>	2003	2002	2001
Net income as reported	\$ 866	\$ 64	\$ 427
Stock based compensation, net of tax, included in net income as reported	64	45	17
Stock based compensation, net of tax, that would have been included in net income, if the fair value method had been applied to all awards	(82)	(65)	(24)
Pro-forma net income using the fair value method	\$ 848	\$ 44	\$ 420
<b>Basic Earnings Per Share</b>			
As reported	\$4.68	\$.35	\$ 4.84
Pro-forma	\$4.58	\$.17	\$4.76
<b>Diluted Earnings Per Share</b>			
As reported	\$4.64	\$.34	\$ 4.80
Pro-forma	\$4.54	\$.17	\$ 4.71

## NORTHROP GRUMMAN CORPORATION

*Financial Statement Reclassification* – Certain amounts in the prior year financial statements and related notes have been reclassified to conform to the 2003 presentation.

### 2. NEW ACCOUNTING STANDARDS

In December 2003, the Financial Accounting Standards Board (FASB) revised SFAS No. 132 – *Employers' Disclosures about Pensions and Other Postretirement Benefits*. The revisions to SFAS No. 132 retain the disclosure requirements contained in the original SFAS No. 132 but require additional disclosures describing the types of plan assets, investment strategy, measurement dates, plan obligations, cash flows, and net periodic benefit cost of defined benefit pension plans and other defined benefit postretirement plans. The required disclosures have been included in Note 15.

In May 2003, the FASB issued SFAS No. 150 – *Accounting for Certain Financial Instruments with Characteristics of both Liabilities and Equity*. It requires an issuer to classify certain financial instruments as liabilities and assets in defined circumstances. The provisions of SFAS No. 150, which also include a number of new disclosure requirements, are effective for instruments entered into or modified after May 31, 2003, and pre-existing instruments as of the beginning of the first interim period that commenced after June 15, 2003. This statement was adopted July 1, 2003, and did not have a significant effect on the company's financial position or results of operations.

In May 2003, the Emerging Issues Task Force (EITF) clarified certain provisions of EITF Issue 00-21 – *Revenue Arrangements with Multiple Deliverables*, which provides guidance on revenue recognition in certain arrangements with multiple deliverables. The guidance in this issue is effective for revenue arrangements entered into in fiscal periods beginning after June 15, 2003. Adoption of EITF 00-21 did not have a significant effect on the company's financial position or results of operations.

In April 2003, the FASB issued SFAS No. 149 – *Amendment of Statement 133 on Derivative Instruments and Hedging Activities*, which clarifies and amends certain definitions and characteristics of derivative instruments contained in SFAS No. 133 – *Accounting for Derivative Instruments and Hedging Activities*, FASB Interpretation No. 45, *Guarantor's Accounting and Disclosure Requirements for Guarantees, Including Indirect Guarantees of Indebtedness of Others* and other existing pronouncements. This statement is primarily effective for contracts entered into or modified after June 30, 2003, and for hedging relationships designated after June 30, 2003. Adoption of this statement did not have a significant effect on the company's financial position or results of operations.

In January 2003, the FASB issued FASB Interpretation No. (FIN) 46 – *Consolidation of Variable Interest Entities* (FIN 46). In December 2003, FIN 46 was replaced by FASB interpretation No. 46(R) *Consolidation of Variable Interest Entities*. FIN 46(R) clarifies the application of Accounting Research Bulletin No. 51 – *Consolidated Financial Statements*, to certain entities in which equity investors do not have the characteristics of a controlling financial interest or do not have sufficient equity at risk for the entity to finance its activities without additional subordinated financial support from other parties. FIN 46(R) requires an enterprise to consolidate a variable interest entity if that enterprise will absorb a majority of the entity's expected losses, is entitled to receive a majority of the entity's expected residual returns, or both. FIN 46(R) is effective for entities being evaluated under FIN 46(R) for consolidation no later than the end of the first reporting period that ends after March 15, 2004. Management does not believe the adoption of FIN 46(R) will have a material impact on the company's financial position or results of operations.

In November 2002, the FASB issued FIN 45 – *Guarantor's Accounting and Disclosure Requirements for Guarantees, Including Indirect Guarantees of Indebtedness of Others*. This interpretation elaborates on the disclosures to be made by a guarantor in its interim and annual financial statements about its obligations under certain guarantees that it has issued. It also clarifies that a guarantor is required to recognize, at the inception of a guarantee, a liability for the

## **NORTHROP GRUMMAN CORPORATION**

fair value of the obligation undertaken by issuing the guarantee. This interpretation was adopted on January 1, 2003, and did not have a significant effect on the company's financial position or results of operations.

In June 2002, the FASB issued SFAS No. 146 – *Accounting for Costs Associated with Exit or Disposal Activities*, which requires a liability for a cost associated with an exit or disposal activity to be recognized and measured at its fair value in the period in which the liability is incurred. This statement was adopted January 1, 2003, and did not have a significant effect on the company's financial position or results of operations.

In August 2001, the FASB issued SFAS No. 143 – *Accounting for Asset Retirement Obligations*. SFAS No. 143 addresses financial accounting and reporting for obligations associated with the retirement of tangible long-lived assets and the associated asset retirement costs. This statement became effective for financial statements issued for fiscal years beginning after June 15, 2002. This statement was adopted January 1, 2003, and did not have a significant effect on the company's financial position or results of operations.

### **3. BUSINESSES ACQUIRED**

In December 2002, the company purchased 100 percent of the common stock of TRW Inc. (TRW). The company issued 69.4 million shares of its common stock at an exchange ratio of .5357 for each TRW share, with cash paid in lieu of any fractional shares of the company's stock, which otherwise would be issued to the TRW shareholders. These shares were valued at \$107.31 per share for purchase accounting purposes. In accordance with generally accepted accounting principles, this value was determined based on the average closing stock price of the company's common stock from October 15, 2002, through October 21, 2002. In connection with the acquisition of TRW, the company entered into a formal stipulation and consent decree with the United States Department of Justice that was filed in the U.S. District Court for the District of Columbia on December 11, 2002. Key provisions of the consent decree are intended to assure that the merger will not impede fair and open competition related to certain electronic satellite payloads. The consent decree does not require the divestiture of any businesses and will permit the company to operate its businesses and those of TRW as planned. TRW's defense business units are operated as two separate sectors, Mission Systems and Space Technology.

The acquisition of TRW, which was valued at approximately \$12.5 billion, including the assumption of TRW's debt of \$4.8 billion, was accounted for using the purchase method of accounting. Under the purchase method of accounting, the purchase price is allocated to the underlying tangible and intangible assets acquired and liabilities assumed based on their respective fair market values, with the excess recorded as goodwill. The financial statements as of December 31, 2002, reflect preliminary estimates of the fair market value for purchased intangibles, retiree benefits assets and liabilities, and debt as well as preliminary estimates of adjustments necessary to conform TRW to the company's accounting policies. TRW's automotive operations (Auto) were included in the total TRW valuation and were valued and recorded at its sale price which represents its fair market value. As of December 31, 2003, the company completed the fair market value and accounting conformance evaluation process for TRW and recorded an aggregate increase to goodwill of \$1.6 billion.

In 2001, the company purchased Litton Industries, Inc. (Litton), the Electronics and Information Systems Group of Aerojet-General Corporation (EIS), and 80.7 percent of Newport News Shipbuilding Inc. (Newport News). On January 18, 2002, the company acquired the remaining shares of Newport News. The Litton business units operating results are included from the acquisition date in the company's segment data as follows: Litton's advanced electronics business is included in Electronic Systems; Litton's information systems business is included in Information Technology; and Litton's ship business is included in Ships. Litton's electronic components and materials business, Component Technologies, is classified as discontinued operations. EIS was integrated into Electronic Systems and Newport News is included in the Ships segment.

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In 2001, the company accrued \$119 million in restructuring costs related to the acquisition of Litton. These costs included \$29 million to exit a business, \$31 million to close down redundant facilities, and \$59 million to terminate and relocate employees. Of the total amount accrued, \$5 million was charged to expense and \$114 million was accounted for as purchase accounting adjustments related to the acquisition of Litton. For the period from April 2, 2001, to December 31, 2001, the company utilized \$25 million of the balance sheet accrual. In 2002, the company accrued an additional \$13 million of costs to close down redundant facilities related to this acquisition, utilized \$57 million, and reversed \$1 million to income as it was no longer required. During 2003, the company utilized \$17 million of the balance sheet accrual, accrued an additional \$1 million, and reversed \$5 million to income as it was no longer required. At December 31, 2003, \$28 million of accrued restructuring costs remained, including \$17 million in other current liabilities and \$11 million in other long-term liabilities.

### **4. BUSINESSES SOLD AND DISCONTINUED OPERATIONS**

On February 28, 2003, the company sold Auto to The Blackstone Group for \$3.3 billion in cash, a \$600 million face value payment-in-kind note, initially valued at \$455 million, and a 19.6 percent interest in the new enterprise, initially valued at \$170 million. The cash received from the sale of Auto was adjusted from the sale agreement amount by cash sold with the business, preliminary purchase price adjustments, and an asset retained. The acquirer also assumed debt of approximately \$200 million. Cash proceeds from the sale were primarily used to reduce debt. The payment-in-kind note matures in 2018 and bears interest at an effective yield of 11.7 percent per annum. In January 2004, restrictions on the investment in Auto were amended to provide the company more flexibility in monetization. In February 2004, the company's investment in Auto was diluted to 17.2 percent as a result of Auto's initial public offering.

During the third quarter of 2002, the company concluded that the Component Technologies (CT) businesses, which were acquired as part of the 2001 Litton acquisition, did not fit with the company's long-term plan and decided to sell the businesses. During 2003, the company sold several of the CT business units: the VEAM business units; Life Support; and Poly-Scientific. The company also sold its 51 percent interest in the operations of TRW Koyo Steering Systems Company. None of these sales, either individually or in the aggregate, had a material impact on the company's financial condition or results of operations.

As of December 31, 2003, three CT businesses remained to be sold whose assets and liabilities have been classified as held for sale. One of these businesses, Kester, was sold in February 2004. The sale of Kester and the remaining businesses classified as discontinued operations is not expected to have, either individually or in the aggregate, a material impact on the company's financial condition or results of operations.

In October 2002, Northrop Grumman completed the sale of two Electronic Systems sector businesses, Electron Devices and Ruggedized Displays, for \$135 million.

In accordance with SFAS No. 144 – *Accounting for the Impairment or Disposal of Long-Lived Assets*, the results of operations of these businesses are reported as discontinued operations, net of applicable income taxes, for all periods presented. As such, discontinued operations includes the operating results for all sold companies up to the date of sale.

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Operating results of the discontinued businesses were as follows for the years ended December 31:

<i>\$ in millions</i>	2003	2002	2001
Sales	\$2,480	\$ 631	\$546
Income (loss) from discontinued operations	\$ 60	\$ (180)	\$ (28)
Income tax expense	(25)	(1)	(4)
Income (loss) from discontinued operations, net of federal income taxes	\$ 35	\$ (181)	\$ (32)
Gain (loss) on disposal of discontinued operations	\$ 66	\$ (9)	
Income tax expense	(43)	(11)	
Gain (loss) on disposal of discontinued operations, net of federal income taxes	\$ 23	\$ (20)	

Tax rates on discontinued operations vary from the company's effective tax rate due to the non-deductibility of goodwill for tax purposes.

The major classes of assets and liabilities for these discontinued businesses were as follows at December 31:

<i>\$ in millions</i>	2003	2002
Current assets	\$ 47	\$2,161
Net property, plant, and equipment	51	2,799
Goodwill		4,117
Other assets	23	544
Total assets	\$121	\$9,621
Accounts payable and other current liabilities	\$ 89	\$2,661
Long-term debt		229
Other long-term liabilities	11	1,703
Total liabilities	\$ 100	\$ 4,593

**5. SEGMENT INFORMATION**

**Organization, Products, and Services**

The company operates in seven business sectors: Electronic Systems, Newport News, Ship Systems, Information Technology, Mission Systems, Integrated Systems, and Space Technology. For financial reporting purposes, the Electronic Systems, Information Technology, Mission Systems, Integrated Systems, and Space Technology sectors are each reportable segments. In accordance with the provisions of SFAS No. 131 – *Disclosures about Segments of an Enterprise and Related Information*, Newport News and Ship Systems results are aggregated and reported as the Ships segment.

*Electronic Systems* – Electronic Systems is a leading designer, developer, and manufacturer of a wide variety of advanced defense electronics and systems. Electronic Systems provides airborne radar systems, secondary surveillance systems, inertial navigation systems and sensors, electronic warfare systems, precision weapons, air traffic control systems, air defense systems, communications systems, space systems, marine systems, oceanic and naval systems, integrated avionics systems, and automation and information systems. Headquartered in Baltimore, Maryland, the sector includes the Aerospace Systems; Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance (C 4ISR) & Naval Systems; Defensive Systems; Navigation Systems; and Space Systems divisions. Operations not included in these divisions are reported as "Other." Key products include fire control radars for the F-16 fighter aircraft, the F-22 air dominance fighter, the F-35 joint strike fighter, and the Longbow Apache helicopter; the Airborne Warning and Control System (AWACS) airborne early

## **NORTHROP GRUMMAN CORPORATION**

warning radar; Joint Surveillance Target Attack Radar System (Joint STARS) air-to-ground surveillance radar sensor; Longbow Hellfire missile; tactical military radars, countrywide air defense systems, airborne electronic countermeasures systems, sophisticated undersea warfare systems, and naval propulsion and power generation systems. Electronic Systems has 129 locations worldwide, 63 international offices and approximately 23,600 employees.

*Newport News* – Newport News' primary business is the design, construction, repair, maintenance, overhaul, life-cycle support, and refueling of nuclear-powered aircraft carriers and the design, life-cycle support, and construction of nuclear-powered submarines for the U.S. Navy. Newport News is the nation's sole designer, builder, and refueler of nuclear-powered aircraft carriers and one of only two companies capable of designing and building nuclear-powered submarines. Major programs are the CVN 21 (next generation aircraft carrier), the Nimitz-class nuclear powered aircraft carriers, and the Virginia-class submarine program. The sector also provides after-market services for a wide array of naval and commercial vessels. Headquartered in Newport News, Virginia, the sector has approximately 19,000 employees.

*Ship Systems* – Ship Systems is one of the nation's leading full service systems providers for the design, engineering, construction, and life cycle support of major surface ships for the U.S. Navy, U.S. Coast Guard and international navies, and for commercial vessels of all types. Major programs for the U.S. Navy include the Wasp LHD 1 Class and San Antonio LPD 17 Class amphibious assault ships, the Arleigh Burke DDG 51, and next generation DD(X) destroyers. The company is also a partner in the Coast Guard's Deepwater modernization program and produces double-hulled crude oil tankers. Ship Systems is headquartered in Pascagoula, Mississippi, with primary operations in Pascagoula, Mississippi; New Orleans, Louisiana; Gulfport, Mississippi; and Tallulah, Louisiana, as well as in fleet support offices in the U.S. and Japan. Ship Systems has approximately 19,000 employees.

*Information Technology* – Information Technology is a premier provider of advanced information technology (IT) solutions, engineering, and business services for government and commercial customers. The segment consists of four lines of business: Government Information Technology, Enterprise Information Technology, Technology Services, and Commercial Information Technology. Government Information Technology covers a wide range of large-scale systems integration, solutions, and services programs. This work is performed for government customers at the Department of Defense, federal, state, and local levels, and covers C4ISR, training and simulation, science and technology, and information systems markets. Enterprise Information Technology focuses on the delivery and integration of commercially available computers, networks, hardware, software, and peripherals to government and commercial customers. Technology Services includes base and range support, training and simulation, information systems, and state and local information technology services. Commercial Information Technology provides complete IT outsourcing services directed at the commercial market. In addition, the sector provides information technology services internally to all Northrop Grumman sectors. Headquartered in Herndon, Virginia, the sector employs approximately 22,200 professionals located in 197 sites worldwide.

*Mission Systems* – Mission Systems is a leading global system integrator of complex, mission-enabling systems for government, military, and business clients. The organization's technology leadership spans four business areas: Command, Control & Intelligence Systems, Missile Systems, Federal and Civil Information Systems, and Technical and Management Services. Products and services are focused on the fields of command and control, strategic missiles, missile and air defense, airborne reconnaissance, unmanned aerial vehicles, intelligence management and processing, electro-magnetic and infrared analysis, and decision support systems. Headquartered in Reston, Virginia, Mission Systems has approximately 15,600 employees in more than 145 locations around the world.

*Integrated Systems* – Integrated Systems is a leader in the design, development, and production of airborne early warning, electronic warfare and surveillance, and battlefield management systems. Integrated Systems includes the Air Combat Systems, Airborne Early Warning & Electronic Warfare Systems, and Airborne Ground Surveillance

## NORTHROP GRUMMAN CORPORATION

& Battle Management Systems business areas. Integrated Systems is the prime contractor for the Joint STARS advanced airborne targeting and battle management system, Global Hawk, and the B-2 Spirit stealth bomber. The sector has principal roles in the F/A-18 Hornet strike fighter and F-35 joint strike fighter programs. Integrated Systems is upgrading the EA-6B Prowler electronic countermeasures aircraft and produces the E-2C Hawkeye early warning aircraft. Headquartered in El Segundo, California, the sector has approximately 13,400 employees.

*Space Technology* – Space Technology develops a broad range of systems at the leading edge of space, defense, and electronics technology. The sector creates products primarily for the U.S. Government that contribute significantly to the nation's security and leadership in science and technology. Its business areas focus on the design and manufacture of spacecraft systems and subsystems, electronic systems, including national defense space systems, space science instruments, environmental monitoring space systems, advanced avionics systems, and high energy laser systems. Headquartered in Redondo Beach, California, Space Technology has approximately 8,900 employees in 15 locations around the world.

### Summary Segment Financial Information

In the following table of segment and major customer data, revenue from the United States Government includes revenue from contracts for which Northrop Grumman is the prime contractor as well as those for which the company is a subcontractor and the ultimate customer is the U.S. Government. The company's discontinued operations are excluded from all of the data elements in this table, except for assets by segment. The 2002 income statement does not include TRW's post-acquisition results as they were not material.

*Adjustments to reconcile to total operating margin* – Pension expense is included in the segments' cost of sales to the extent that these costs are currently recognized under government Cost Accounting Standards (CAS). In order to reconcile from segment operating margin to total company operating margin, these amounts are reported under the caption "Reversal of CAS pension expense included above." Total pension income or expense accounted for under accounting principles generally accepted in the United States is reported separately as a reconciling item under the caption "Pension (expense) income." The reconciling item captioned "Unallocated expenses" includes the portion of corporate, legal, environmental, state income tax, other retiree benefits expenses, and other expenses not considered allowable under CAS and not allocated to the segments.

*Foreign Sales* – Foreign sales amounted to approximately \$1.6 billion, \$1.3 billion, and \$1.3 billion during 2003, 2002, and 2001, respectively. All of the company's segments engage in international business, for which the company retains a large number of sales representatives and consultants who are not employees of the company. Foreign sales by their very nature are subject to greater variability in risk than the company's domestic sales, particularly to the U.S. Government. International sales and services subject the company to numerous stringent U.S. and foreign laws and regulations, including, without limitation, regulations relating to import-export control, repatriation of earnings, exchange controls, the Foreign Corrupt Practices Act, and the anti-boycott provisions of the U.S. Export Administration Act. Failure by the company or its sales representatives or consultants to comply with these laws and regulations could result in administrative, civil, or criminal liabilities and could in the extreme case result in suspension or debarment from government contracts or suspension of the company's export privileges, which could have material adverse consequences.

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## RESULTS OF OPERATIONS BY SEGMENT AND MAJOR CUSTOMER

	Year ended December 31		
	2003	2002	2001
<i>\$ in millions</i>			
<b>Sales and Service Revenue</b>			
<b>Electronic Systems</b>			
United States Government	\$ 3,481	\$ 2,959	\$ 2,824
Other customers	2,199	2,114	1,586
Intersegment sales	359	253	166
	6,039	5,326	4,576
<b>Ships</b>			
United States Government	5,276	4,445	1,487
Other customers	174	251	392
Intersegment sales	1	1	1
	5,451	4,697	1,880
<b>Information Technology</b>			
United States Government	4,155	3,707	3,237
Other customers	455	473	496
Intersegment sales	144	70	61
	4,754	4,250	3,794
<b>Mission Systems</b>			
United States Government	3,502		
Other customers	418		
Intersegment sales	195		
	4,115		
<b>Integrated Systems</b>			
United States Government	3,590	3,096	2,869
Other customers	181	161	121
Intersegment sales	29	16	11
	3,800	3,273	3,001
<b>Space Technology</b>			
United States Government	2,718		
Other customers	57		
Intersegment sales	48		
	2,823		
Intersegment eliminations	(776)	(340)	(239)
Total revenue	\$26,206	\$17,206	\$13,012
<b>Operating Margin</b>			
Electronic Systems	\$ 590	\$ 434	\$ 349
Ships	295	306	19
Information Technology	281	250	174
Mission Systems	258		
Integrated Systems	380	331	265
Space Technology	193		
Total segment operating margin	1,997	1,321	807

Adjustments to Reconcile to Total Operating Margin			
Unallocated expenses	(141)	(105)	(134)
Pension (expense) income	(568)	90	335
Reversal of CAS pension expense included above	265	100	43
Reversal of royalty income included above	(15)	(15)	(18)
<hr/>			
Total operating margin	\$ 1,538	\$ 1,391	\$ 1,033
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## NORTHROP GRUMMAN CORPORATION

	December 31		
<i>\$ in millions</i>	2003	2002	2001
<b>Assets</b>			
Electronic Systems	\$ 5,660	\$ 5,442	\$ 5,761
Ships	6,482	6,532	6,040
Information Technology	2,120	2,182	2,102
Mission Systems	6,467	4,759	
Integrated Systems	2,244	2,173	2,088
Space Technology	4,717	4,889	
Segment assets	27,690	25,977	15,991
General corporate	5,198	6,728	3,620
Assets of businesses held for sale	121	9,621	1,207
Total assets	\$ 33,009	\$ 42,326	\$ 20,818

	Year ended December 31		
<i>\$ in millions</i>	2003	2002	2001
<b>Capital Expenditures</b>			
Electronic Systems	\$ 173	\$ 263	\$ 195
Ships	136	76	44
Information Technology	30	45	46
Mission Systems	28		
Integrated Systems	158	134	79
Space Technology	105		
General Corporate	5	3	3
Total capital expenditures	\$ 635	\$ 521	\$ 367

<b>Depreciation and Amortization</b>			
Electronic Systems	\$ 229	\$ 229	\$ 301
Ships	142	147	82
Information Technology	47	44	90
Mission Systems	60		
Integrated Systems	86	78	102
Space Technology	115		
General Corporate	3	1	1
Total depreciation and amortization	\$ 682	\$ 499	\$ 576

**NORTHROP GRUMMAN CORPORATION**

**6. EARNINGS PER SHARE**

*Basic Earnings Per Share* – Basic earnings per share from continuing operations before cumulative effect of accounting change are calculated by dividing income available to common shareholders from continuing operations before cumulative effect of accounting change by the weighted-average number of shares of common stock outstanding during each period.

*Diluted Earnings Per Share* – Diluted earnings per share from continuing operations before cumulative effect of accounting change reflect the dilutive effect of stock options and other stock awards granted to employees under stock-based compensation plans and the dilutive effect of the equity security units, as applicable. Shares issuable pursuant to mandatorily redeemable preferred stock are not included in the diluted earnings per share calculations because their effect is anti-dilutive for all periods presented.

*Effects of SFAS No. 150* – Through June 30, 2003, income available to common shareholders from continuing operations before cumulative effect of accounting change is calculated by reducing income from continuing operations before cumulative effect of accounting change by the amount of dividends accrued on mandatorily redeemable preferred stock. Effective July 1, 2003, the company adopted SFAS No. 150 – *Accounting for Certain Financial Instruments with Characteristics of both Liabilities and Equity*. Following adoption of this standard, mandatorily redeemable preferred stock is reported as a long-term liability in the accompanying Consolidated Statements of Financial Position. In addition, the \$12 million of dividends accrued on mandatorily redeemable preferred stock for the second half of 2003 are recorded as interest expense in the accompanying Consolidated Statements of Income and are therefore already deducted from income from continuing operations before cumulative effect of accounting change. This change has had no effect on the earnings per share calculation. This standard is required to be adopted on a prospective basis, and accordingly, no restatement of prior periods has been made.

*Share Repurchase Program* – In the third quarter of 2003 the company approved a share repurchase program of up to \$700 million of its outstanding common stock. Share purchases will take place at management's discretion from time to time, depending on market conditions, in the open market, and in privately negotiated transactions through the end of 2004. As of December 31, 2003, the company had repurchased over 2.2 million shares for approximately \$200 million.

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Basic and diluted earnings per share from continuing operations before cumulative effect of accounting change are calculated as follows for the years ended December 31:

<i>\$ in millions, except per share</i>	2003	2002	2001
<b>Basic Earnings per Share</b>			
Income from continuing operations before cumulative effect of accounting change	\$ 808	\$ 697	\$ 459
Less dividends on mandatorily redeemable preferred stock	12	25	18
Income available to common shareholders from continuing operations before cumulative effect of accounting change	\$ 796	\$ 672	\$ 441
Weighted-average common shares outstanding, in millions	182.63	115.53	84.46
<b>Basic earnings per share from continuing operations before cumulative effect of accounting change</b>	<b>\$ 4.36</b>	<b>\$ 5.82</b>	<b>\$ 5.22</b>
<b>Diluted Earnings per Share</b>			
Income from continuing operations before cumulative effect of accounting change	\$ 808	\$ 697	\$ 459
Less dividends on mandatorily redeemable preferred stock	12	25	18
Income available to common shareholders from continuing operations before cumulative effect of accounting change	\$ 796	\$ 672	\$ 441
Weighted-average common shares outstanding, in millions	182.63	115.53	84.46
Dilutive effect of stock options, awards, and equity security units, in millions	1.55	1.90	.80
Weighted-average diluted shares outstanding, in millions	184.18	117.43	85.26
<b>Diluted earnings per share from continuing operations before cumulative effect of accounting change</b>	<b>\$ 4.32</b>	<b>\$ 5.72</b>	<b>\$ 5.17</b>

**7. ACCOUNTS RECEIVABLE, NET**

Unbilled amounts represent sales for which billings have not been presented to customers at year-end, including differences between actual and estimated overhead and margin rates. These amounts are usually billed and collected within one year. Progress payments are received on a number of fixed-price contracts accounted for using the cost-to-cost measure of the percentage-of-completion method.

Accounts receivable at December 31, 2003, are expected to be collected in 2004 except for approximately \$145 million due in 2005 and \$58 million due in 2006 and later.

Allowances for doubtful amounts mainly represent estimates of overhead type costs which may not be successfully negotiated and collected.

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Accounts receivable were composed of the following at December 31:

<i>\$ in millions</i>	2003	2002
<b>Due from U.S. Government, Long-Term Contracts</b>		
Current accounts		
Billed	\$ 1,088	\$ 963
Unbilled	20,808	15,710
Progress payments received	(19,752)	(14,451)
	2,144	2,222
<b>Due from Other Customers, Long-Term Contracts</b>		
Current accounts		
Billed	170	210
Unbilled	1,783	1,596
Progress payments received	(1,366)	(1,470)
	587	336
Total due, long-term contracts	2,731	2,558
<b>Trade and Other Accounts Receivable</b>		
Due from U.S. Government	432	426
Due from other customers	278	255
Total due, trade and other	710	681
	3,441	3,239
Allowances for doubtful amounts	(243)	(290)
Total accounts receivable, net	\$ 3,198	\$ 2,949

**8. INVENTORIED COSTS**

Inventoried costs relate to long-term contracts in process and include expenditures for raw materials and work in process. The ratio of inventoried administrative and general expenses to total inventoried costs is estimated to be the same as the ratio of total administrative and general expenses incurred to total contract costs incurred. According to the provisions of U. S. Government contracts, the customer asserts title to, or a security interest in, substantially all inventories related to such contracts. Product inventory primarily consists of raw materials and is stated at the lower of cost or market, generally using the average cost method.

Inventoried costs were composed of the following at December 31:

<i>\$ in millions</i>	2003	2002
Production costs of contracts in process	\$ 1,645	\$ 1,553
Administrative and general expenses	239	204
	1,884	1,757
Progress payments received	(1,003)	(988)
	881	769
Product inventory	266	322
Total inventoried costs	\$ 1,147	\$ 1,091

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## 9. GOODWILL AND OTHER PURCHASED INTANGIBLE ASSETS

**Goodwill**

Effective January 1, 2002, the company adopted SFAS No. 142 – *Goodwill and Other Intangible Assets*, which changes the accounting for goodwill from an amortization method to an impairment-only approach. In accordance with the statement, amortization of goodwill, including goodwill recorded in past business combinations, ceased December 31, 2001. Impairment tests are performed at least annually and more often as circumstances require. Goodwill and other purchased intangible assets balances are included in the identifiable assets of the segment to which they have been assigned. Any goodwill impairment, as well as the amortization of other purchased intangible assets, is charged against the respective segment’s operating margin. The annual impairment test for all sectors except Mission Systems and Space Technology was performed as of April 30, 2003, with no indication of impairment. The impairment test for Mission Systems and Space Technology was performed as of November 30, 2003, with no indication of impairment. A goodwill impairment charge of \$47 million related to the Component Technologies businesses was recorded in 2003 and is included in “Income (loss) from discontinued operations” in the Consolidated Statements of Income. In performing the goodwill impairment tests, the company uses a discounted cash flow approach corroborated by comparative market multiples, where appropriate, to determine the fair value of reporting units.

The changes in the carrying amounts of goodwill for the years ended December 31, 2003 and 2002, are summarized below.

<i>\$ in millions</i>	Electronic Systems	Ships	Information Technology	Mission Systems	Integrated Systems	Space Technology	Component Technologies	Total
Balance as of January 1, 2002 (including discontinued operations)	\$ 2,590	\$ 3,308	\$ 1,109		\$ 938		\$ 723	\$ 8,668
Goodwill acquired		322		\$ 3,705		\$ 3,705		7,732
Cumulative effect of accounting change							(432)	(432)
Goodwill impairment loss included in loss from discontinued operations							(186)	(186)
Goodwill transferred to assets of businesses held for sale	(42)						(112)	(154)
Fair value adjustments to net assets acquired	9	5	8				7	29
Balance as of December 31, 2002	2,557	3,635	1,117	3,705	938	3,705		15,657
Goodwill acquired			11	39				50
Fair value adjustments to net assets acquired	42		(6)	1,893		(303)		1,626
<b>Balance as of December 31, 2003</b>	<b>\$ 2,599</b>	<b>\$ 3,635</b>	<b>\$ 1,122</b>	<b>\$ 5,637</b>	<b>\$ 938</b>	<b>\$ 3,402</b>		<b>\$ 17,333</b>

The results of the initial impairment test as of January 1, 2002, indicated potential impairment in the reporting units of the Component Technologies sector due to unfavorable market conditions. As a result, the company recorded a non-cash charge of \$432 million in 2002 reported under the caption “Cumulative effect of accounting change,” in the Consolidated Statements of Income in addition to an impairment charge included in loss from discontinued operations of \$186 million.

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**Purchased Intangible Assets**

During the second quarter of 2002, the company completed its evaluation of the fair value of the purchased intangible assets associated with the acquisition of Newport News in 2001, which resulted in a value of \$768 million and a weighted-average useful life of 47 years. In connection with the acquisition of TRW, the company allocated \$416 million of the purchase price as purchased intangible assets with a weighted-average life of 8 years. The table below summarizes the company's aggregate purchased intangible assets as of December 31, 2003 and 2002.

<i>\$ in millions</i>	December 31, 2003			December 31, 2002		
	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount
Contract and program intangibles	\$ 2,587	\$ (934)	\$ 1,653	\$ 3,253	\$ (714)	\$ 2,539
Other purchased intangibles	110	(53)	57	60	(46)	14
<b>Total</b>	<b>\$ 2,697</b>	<b>\$ (987)</b>	<b>\$ 1,710</b>	<b>\$ 3,313</b>	<b>\$ (760)</b>	<b>\$ 2,553</b>

All of the company's purchased intangible assets are subject to amortization and are being amortized on a straight-line basis over an aggregate weighted-average period of 22 years. Aggregate amortization expense during 2003, 2002, and 2001 was \$239 million, \$178 million, and \$139 million, including amortization expense reported in discontinued operations of \$12 million, \$14 million, and \$11 million, respectively.

The table below shows expected amortization for purchased intangibles as of December 31, 2003, for the next five years:

*\$ in millions*

Year ending December 31	
2004	\$226
2005	217
2006	129
2007	116
2008	108

**10. FAIR VALUE OF FINANCIAL INSTRUMENTS**

Carrying amounts and the related estimated fair values of the company's financial instruments at December 31 are as follows:

<i>\$ in millions</i>	2003		2002	
	Carrying Amount	Fair Value	Carrying Amount	Fair Value
Cash and cash equivalents	\$ 342	\$ 342	\$ 1,412	\$ 1,412
Investment in Auto, at cost	170			
Note receivable	499	482		
Short-term notes payable	10	10	22	22
Long-term debt	5,871	6,508	9,601	10,179
Mandatorily redeemable preferred stock	350	436	350	432
Forward share sale agreements				
Liability portion	(13)	(13)	(228)	(237)
Hedge portion	13	13	205	205



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*Short-Term Instruments* – For cash and cash equivalents and amounts borrowed under the company’s short-term credit lines, the carrying amounts approximate fair value, due to the short-term nature of these items.

*Investment in Auto* – The company’s investment in Auto represents the company’s equity interest in TRW Automotive Holdings, Inc., received upon the completion of the sale of Auto, and is carried at cost in “Other assets” in the accompanying Consolidated Statements of Financial Position. It is not practical to determine a fair value of this equity interest as of December 31, 2003, as the common stock did not trade publicly at that time. On February 2, 2004, TRW Automotive Holdings, Inc., completed its initial public offering, and the stock began trading publicly on the New York Stock Exchange (trading symbol TRW) on February 3, 2004. Using the February 3, 2004, closing price of \$27.10, the fair market value of the company’s 17 million shares, if the shares were not restricted, was approximately \$461 million. The company’s equity ownership position following the initial public offering was 17.2 percent.

*Note Receivable* – The note receivable, which is classified in “Other assets” in the accompanying Consolidated Statements of Financial Position, is the payment-in-kind note issued by TRW Automotive Intermediate Holdings, Inc., received upon the completion of the sale of Auto. The note matures in 2018 and bears interest at an effective yield of 11.7 percent per annum. Terms of the note preclude resale prior to February 28, 2004, and allow for resale under certain conditions subsequent to that date. Since there is no quoted market price available for this note, the fair value was assessed taking into consideration the market price of the public debt of the issuer’s operating subsidiary, structural characteristics of the note, and potential redemption dates.

*Long-Term Debt* – The fair value of the long-term debt was calculated based on interest rates available for debt with terms and due dates similar to the company’s existing debt arrangements.

*Mandatorily Redeemable Preferred Stock* – The fair value of the mandatorily redeemable preferred stock was calculated based on the closing market price quoted on the New York Stock Exchange (trading symbol NOC-pb) at December 31, 2003, and 2002, respectively.

*Forward Share Sale Agreements* – In connection with the TRW acquisition, the company acquired investments in RF Micro Devices, Inc. (RFMD) and Applera Corporation-Celera Genomics Group (Celera), two publicly traded companies. These investments had been monetized through the execution of forward share sale agreements. The company also acquired certain hedges designed to protect the forecasted cash flows resulting from the future sale of shares in these investments. These hedges also mitigate any downside risk of loss and provide for additional gain depending on market conditions at maturity. The investments in RFMD and Celera and the related hedge portion of the forward share sale agreements were carried at their respective fair market values. As of December 31, 2003, all but 1.3 million RFMD shares have been delivered and all Celera shares have been delivered. As the value of the investments and the hedge were equivalent during the period that the shares were held by the company, no gain or loss was realized. The fair value of the remaining RFMD shares at December 31, 2003, excluding the effect of the forward share sale agreements, was approximately \$13 million. In February 2004, the remaining RFMD shares were delivered and no gain or loss was realized.

*Derivatives* – The company makes limited use of derivative financial instruments and does not hold or issue them for trading purposes. The company has from time to time entered into interest rate swap agreements to mitigate interest rate risk. No interest rate swap agreements were in effect at December 31, 2003 and 2002.

*Foreign Currency* – The company enters into foreign currency forward contracts to manage foreign currency exchange risk related to receipts from customers and payments to suppliers denominated in foreign currencies. Gains and losses from such transactions are included as contract costs. At December 31, 2003 and 2002, the amount of foreign currency forward contracts outstanding was not material.

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**11. INCOME TAXES**

Income tax expense, both federal and foreign, consisted of the following for the years ended December 31:

<i>\$ in millions</i>	<b>2003</b>	2002	2001
<b>Income Taxes on Continuing Operations</b>			
Current Payable (Refundable)			
Federal income taxes	\$(155)	\$1,017	\$ 45
Foreign income taxes	18	16	10
	<b>(137)</b>	1,033	55
Change in deferred federal and foreign income taxes	<b>460</b>	(721)	213
<b>Total income taxes on continuing operations</b>	<b>\$ 323</b>	\$ 312	\$268

Income tax expense differs from the amount computed by multiplying the statutory federal income tax rate times the income from continuing operations before income taxes and cumulative effect of accounting change due to the following for the years ended December 31:

<i>\$ in millions</i>	<b>2003</b>	2002	2001
Income tax expense on continuing operations at statutory rate	<b>\$ 396</b>	\$353	\$ 245
Goodwill amortization			58
Extraterritorial income exclusion/foreign sales corporation	<b>(11)</b>	(10)	(15)
Research tax credit	<b>(51)</b>	(5)	
Other, net	<b>(11)</b>	(26)	(20)
<b>Total federal and foreign income taxes</b>	<b>\$323</b>	\$312	\$268

*Deferred income taxes* – Deferred income taxes reflect the net tax effects of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and tax purposes. Such amounts are classified as current or noncurrent assets or liabilities based upon the balance sheet classification of the related assets and liabilities. The company's principal temporary differences arise from the recognition of income from long-term contracts and retiree benefit plan income/expense under different methods for financial reporting purposes and tax purposes.

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The tax effects of significant temporary differences and carryforwards that gave rise to year-end deferred federal and state tax balances, as presented in the Consolidated Statements of Financial Position, are as follows at December 31:

<i>\$ in millions</i>	2003	2002
<b>Deferred Tax Assets</b>		
Retirement benefit plan expense	\$ 547	\$ 978
Provision for estimated expenses		542
Contract accounting differences	459	442
Total tax credits and carryforwards		
Net operating loss	17	
Capital loss	1,200	
Foreign income tax credit	214	7
Other credits	9	29
Other	206	167
Gross deferred tax assets	2,652	2,165
Less valuation allowance	(1,407)	
Net deferred tax assets	1,245	2,165
<b>Deferred Tax Liabilities</b>		
Provision for estimated expenses	40	
Purchased intangibles	134	608
Depreciation and amortization	520	354
Goodwill amortization	290	367
Gross deferred tax liabilities	984	1,329
Net deferred tax assets	\$ 261	\$ 836

Net deferred tax assets (liabilities) as presented in the Consolidated Statements of Financial Position are as follows at December 31:

<i>\$ in millions</i>	2003	2002
Net current deferred tax assets	\$ 770	\$ 662
Net non-current deferred tax assets		174
Net non-current deferred tax liabilities	(509)	
Net deferred tax assets	\$ 261	\$ 836

The company intends to reinvest undistributed earnings of certain non-U.S. subsidiaries, thereby indefinitely postponing their remittance. Accordingly, deferred income taxes have not been provided for accumulated undistributed earnings of \$80 million at December 31, 2003. Should these earnings be distributed in the form of dividends or otherwise, the distributions would be subject to U.S. federal income tax at the statutory rate of 35 percent, less foreign tax credits applicable to distributions, if any. In addition, such distributions would be subject to withholding taxes in the various tax jurisdictions.

*Tax Carryforwards* – The company has foreign income tax credit carryforward items of \$214 million at December 31, 2003, to offset future federal income tax liabilities, against which a valuation allowance of \$207

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million has been recorded. Of the foreign income tax credit carryforward, \$207 million arose from the sale of discontinued operations and will expire in 2004 through 2008. In addition, the company has a capital loss carryforward of \$1.2 billion (tax effected) at December 31, 2003, against which a full valuation allowance of \$1.2 billion has been recorded. The capital loss carryforward arose from the sale of discontinued operations and will expire in 2008. Future reductions to the valuation allowance resulting from the recognition of tax benefits, if any, will reduce goodwill. The company has a \$9 million research and development tax credit carryforward item at December 31, 2003, which will expire in 2017 through 2022.

### 12. NOTES PAYABLE TO BANKS AND LONG-TERM DEBT

The company has available short-term credit lines in the form of money market facilities with several banks. The amount and conditions for borrowing under these credit lines depend on the availability and terms prevailing in the marketplace. No fees or compensating balances are required for these credit facilities.

*TRW Debt Reduction* – In connection with the acquisition of TRW, the company assumed various notes and debentures amounting to approximately \$4.8 billion. In March 2003, the company's wholly owned subsidiary, Northrop Grumman Space & Mission Systems Corp. (formerly TRW Inc.), commenced offers to purchase any or all of certain designated outstanding debt securities in a debt reduction plan substantially completed in the second quarter of 2003. In the first phase, approximately \$2.4 billion in aggregate principal amount of outstanding debt securities were tendered and accepted for purchase, for a total purchase price of approximately \$2.9 billion (including accrued and unpaid interest on the securities). In the second phase, the company purchased on the open market \$658 million in aggregate principal amount for a total purchase price of \$795 million (including accrued and unpaid interest on the securities). Cash proceeds from the sale of Auto were used to complete these transactions, which contributed to the reduction of total long-term debt to \$5.9 billion at December 31, 2003, from \$9.6 billion at December 31, 2002.

*Notes and Debentures* – In February 2001, Northrop Systems issued \$1.5 billion of indebtedness pursuant to its senior debt indenture consisting of \$750 million of 7.125 percent notes due 2011 and \$750 million of 7.75 percent debentures due 2031.

*Credit Facilities* – In connection with the closing of the Litton acquisition, the company entered into unsecured senior credit facilities with lenders, which initially provided for borrowings of up to \$5 billion (Credit Facilities) and replaced the company's previous credit agreement. The Credit Facilities consisted of a \$2.5 billion 364-day revolving credit facility and a \$2.5 billion five-year revolving credit facility. The 364-day revolving credit facility was terminated by the company in December 2001. At December 31, 2003, \$2.5 billion was available under the five-year revolving credit facility. Borrowings under the Credit Facilities, together with the proceeds of the February 2001 issuance of notes and debentures, were used to finance the Litton acquisition and to pay related expenses, to retire and refinance a portion of the Litton debt, and to finance continuing operations. Borrowings under the Credit Facilities bear interest at various rates, including adjusted London Interbank Offered Rate (LIBOR), or an alternate base rate plus, in each case, an incremental margin based on the company's credit rating. The Credit Facilities also provide for a facility fee on the daily aggregate amount of commitments under the revolving facilities (whether or not utilized). The facility fee is also based on the company's credit rating level. The company's credit agreements contain various restrictive covenants relating to the payment of dividends, acquisition of the company's stock, minimum fixed charges, aggregate indebtedness for borrowed money, interest coverage, as well as customary covenants, representations and warranties, funding conditions and events of default. Under the most restrictive provisions of the Credit Facilities, the estimated amount available for common stock dividends, while maintaining financial agreement covenant compliance, was \$208 million at December 31, 2003.

*Equity Security Units* – In November 2001, the company issued 6.9 million equity security units. Each equity security unit, issued at \$100 per unit, initially consists of a contract to purchase shares of Northrop Grumman

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common stock on November 16, 2004, and a \$100 senior note due 2006. The senior notes due 2006 are reported as long-term debt. The senior notes initially bear interest at 5.25 percent per annum, and each equity security unit also pays a contract adjustment payment of 2.0 percent per annum, for a combined yield on the equity security unit of 7.25 percent per annum. Each purchase contract, which is part of the equity security units, will obligate the holder thereof to purchase on November 16, 2004, for \$100, the following number of shares of the company's common stock based on the average closing price of the company's common stock over the 20-day trading period ending on the third trading day immediately preceding November 16, 2004: (i) 0.9262 shares if the average closing price equals or exceeds \$107.97, (ii) a number of shares having a value equal to \$100 if the average closing price is less than \$107.97 but greater than \$88.50 and (iii) 1.1299 shares if the average closing price is less than or equal to \$88.50. Prior to November 16, 2004, holders of equity security units have the opportunity to participate in a remarketing of the senior note component.

Long-term debt at December 31 consisted of the following:

<i>\$ in millions</i>	2003	2002
Notes and debentures due 2004 to 2036, rates from 6.05% to 9.375%	\$ 5,090	\$ 8,772
Equity security unit notes due 2006, 7.25%	690	690
Other indebtedness due 2004 to 2024, rates from 7.0% to 8.5%	91	139
Total long-term debt	5,871	9,601
Less current portion	461	203
Long-term debt, net of current portion	\$ 5,410	\$ 9,398

Indentures underlying long-term debt issued by the company or its subsidiaries contain various restrictions with respect to the issuer, including one or more restrictions relating to limitations on liens, sale and leaseback arrangements, and funded debt of subsidiaries.

Maturities of long-term debt as of December 31, 2003, are as follows:

<i>\$ in millions</i>	
2004	\$ 461
2005	33
2006	1,211
2007	73
2008	108
Thereafter	3,885
Total principal payments	5,771
Premium on long-term debt, net of discount	100
Total long-term debt	\$5,871

The premium on long-term debt primarily represents non-cash fair market value adjustments resulting from the acquisitions of Litton and TRW.

**13. MINORITY INTEREST**

Upon the acquisition of TRW on December 11, 2002, TRW Automotive Inc. (TAI) became a subsidiary of Northrop Grumman Corporation. As of December 31, 2002, TAI had outstanding 100,000 shares of Series A Convertible Preferred Stock (TAI Series A) and 30,000 shares of Series B Preferred Stock (TAI Series B), of which

## **NORTHROP GRUMMAN CORPORATION**

14,000 shares were owned by Northrop Grumman. All of the outstanding TAI Series A and TAI Series B shares were redeemed in 2003 for \$117 million.

### **14. MANDATORILY REDEEMABLE SERIES B CONVERTIBLE PREFERRED STOCK**

The company issued 3.5 million shares of mandatorily redeemable Series B Convertible Preferred Stock in April 2001. Each share of Series B preferred stock has a liquidation value of \$100 per share. The liquidation value, plus accrued but unpaid dividends, is payable on April 4, 2021, the mandatory redemption date. The company has the option to redeem all but not less than all of the shares of Series B preferred stock at any time after seven years from the date of issuance for a number of shares of the company's common stock equal to the liquidation value plus accrued and unpaid dividends divided by the current market price of common stock determined in relation to the date of redemption. Under this option, were the redemption to have taken place at December 31, 2003, each share would have been converted into 1.064 shares of common stock. Each share of preferred stock is convertible, at any time, at the option of the holder into the right to receive shares of the company's common stock. Initially, each share was convertible into .911 shares of common stock, subject to adjustment in the event of certain dividends and distributions, a merger, consolidation or sale of substantially all of the company's assets, a liquidation or distribution, and certain other events. Were the conversion to have taken place at December 31, 2003, each share would have been converted into .911 shares of common stock. Holders of preferred stock are entitled to cumulative annual cash dividends of \$7 per share, payable quarterly. In any liquidation of the company, each share of preferred stock is entitled to a liquidation preference before any distribution may be made on the company's common stock or any series of capital stock that is junior to the Series B preferred stock. In the event of a change in control of the company, holders of Series B preferred stock also have specified exchange rights into common stock of the company or into specified securities or property of another entity participating in the change in control transaction.

Effective July 1, 2003, the company adopted SFAS No. 150 – *Accounting for Certain Financial Instruments with Characteristics of both Liabilities and Equity*. Following adoption of the standard, mandatorily redeemable preferred stock is reported as a long-term liability in the Consolidated Statements of Financial Position. As of December 31, 2003, 10 million preferred stock shares are authorized and 3.5 million shares are issued and outstanding.

### **15. RETIREMENT BENEFITS**

#### **Plan Descriptions**

*Pension Benefits* – The company sponsors several defined benefit pension plans covering over 90 percent of its employees. Pension benefits for most employees are based on the employee's years of service and compensation. It is the policy of the company to fund at least the minimum amount required for all qualified plans, using actuarial cost methods and assumptions acceptable under U. S. Government regulations, by making payments into benefit trusts separate from the company. Starting in July 2003, the pension benefit for most employees is based upon new criteria, whereby employees earn age and service points over their employment period. Subsequent to the 2003 initial phase-in, other exempt and non-exempt plans will be conformed to the new model. No settlement or curtailments arose as a result of these changes. Union plans will not be affected by these plan modifications. Nine of the company's 21 qualified plans, which cover approximately 60 percent of all employees, were in a legally defined full-funding limitation status at December 31, 2003.

The company and subsidiaries also sponsor defined contribution plans in which most employees are eligible to participate. Company contributions for most plans are based on a cash matching of employee contributions up to 4 percent of compensation.

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*Medical and Life Benefits* – The company and its subsidiaries provide certain health care and life insurance benefits for retired employees. Certain employees achieve eligibility to participate in these contributory plans upon retirement from active service and if they meet specified age and years of service requirements. Election to participate must be made at the date of retirement. Qualifying dependents are also eligible for medical coverage. Approximately 60 percent of the company’s current retirees participate in the medical plans. The company reserves the right to amend or terminate the plans at any time. Premiums charged retirees for medical coverage are based on years of service and are adjusted annually for changes in the cost of the plans as determined by an independent actuary. In addition to this medical inflation cost-sharing feature, the plans also have provisions for deductibles, copayments, coinsurance percentages, out-of-pocket limits, schedule of reasonable fees, managed care providers, maintenance of benefits with other plans, Medicare carve-out, and a maximum lifetime benefit of from \$250,000 to \$1,000,000 per covered individual. It is the policy of the company to fund the maximum amount deductible for income tax purposes utilizing the Voluntary Employees’ Beneficiary Association (VEBA) trust established for the Northrop Retiree Health Care Plan for Retired Employees for payment of benefits.

The Medicare Prescription Drug, Improvement, and Modernization Act of 2003 expanded Medicare by introducing a prescription drug benefit as well as a federal subsidy to sponsors of retiree health care benefit plans. The company sponsors retiree health care benefit plans for certain of its locations and expects that this legislation may eventually reduce the company’s costs for some of these programs under the federal subsidy. Because of various uncertainties related to this legislation, the company has elected to defer financial recognition of this legislation until the FASB issues final accounting guidance, as permitted under FASB Staff Position (FSP) 106-1 – *Accounting and Disclosure Requirements Related to the New Medicare Prescription Drug Law*, which was issued by the FASB on January 12, 2004.

**Summary Plan Results**

The cost to the company of these plans in each of the last three years is shown in the following table.

<i>\$ in millions</i>	<b>Pension Benefits</b>			<b>Medical and Life Benefits</b>		
	<b>2003</b>	<b>2002</b>	<b>2001</b>	<b>2003</b>	<b>2002</b>	<b>2001</b>
<b>Components of Net Periodic Benefit Cost (Income)</b>						
Service cost	\$ 491	\$ 303	\$ 205	\$ 52	\$ 34	\$ 25
Interest cost	1,022	859	770	176	128	99
Expected return on plan assets	(1,195)	(1,289)	(1,273)	(39)	(29)	(35)
Amortization of						
Prior service costs	55	51	52		1	
Transition assets, net		(34)	(39)			
Net loss (gain) from previous years	196	14	(52)	15	1	(11)
Settlement cost (income)	4	2			(3)	
Special termination benefits cost				4		
<b>Net periodic benefit cost (income)</b>	<b>573</b>	<b>(94)</b>	<b>(337)</b>	<b>208</b>	<b>132</b>	<b>78</b>
Less net periodic benefit cost (income) from discontinued operations	5	(4)	(2)			
<b>Net periodic benefit cost (income) from continuing operations</b>	<b>\$ 568</b>	<b>\$ (90)</b>	<b>\$ (335)</b>	<b>\$ 208</b>	<b>\$ 132</b>	<b>\$ 78</b>
<b>Defined contribution plans cost</b>	<b>\$ 204</b>	<b>\$ 148</b>	<b>\$ 120</b>			

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The following tables set forth the funded status and amounts recognized in the Consolidated Statements of Financial Position for the company's defined-benefit pension and retiree health care and life insurance benefit plans. Pension benefits data includes the qualified plans as well as 24 unfunded non-qualified plans for benefits provided to directors, officers, and employees either beyond those provided by, or payable under, the company's qualified plans. The company uses a December 31 measurement date for most of its plans.

<i>\$ in millions</i>	Pension Benefits		Medical and Life Benefits	
	2003	2002	2003	2002
<b>Change in Benefit Obligation</b>				
Benefit obligation at beginning of year	\$ 21,524	\$ 12,404	\$ 3,809	\$ 1,813
Service cost	491	303	52	34
Interest cost	1,022	859	176	128
Plan participants' contributions	24	14	63	50
Special termination benefits			4	
Plan amendments	50	34	(3)	262
Actuarial loss (gain)	205	230	124	(3)
Divestitures	(5,216)	(10)	(978)	
Acquisitions/transfers	(90)	8,450	(17)	1,700
Settlements	(47)			
Benefits paid	(1,091)	(760)	(244)	(175)
Benefit obligation at end of year	16,872	21,524	2,986	3,809
<b>Change in Plan Assets</b>				
Fair value of plan assets at beginning of year	18,532	13,889	561	488
Actual gain (loss) on plan assets	3,023	(1,355)	131	(81)
Employer contributions	329	115	177	95
Plan participants' contributions	24	14	63	50
Divestitures	(4,808)	(9)		
Acquisitions/transfers	24	6,638		184
Settlements	(48)			
Benefits paid	(1,091)	(760)	(244)	(175)
Fair value of plan assets at end of year	15,985	18,532	688	561
Funded status	(887)	(2,992)	(2,298)	(3,248)
Unrecognized prior service cost	289	293	3	6
Unrecognized net loss	1,799	3,622	397	380
Net asset (liability) recognized	\$ 1,201	\$ 923	\$ (1,898)	\$ (2,862)
<b>Amounts Recognized in the Statements of Financial Position</b>				
Prepaid benefit cost	\$ 2,918	\$ 3,224	\$ 44	\$ 43
Accrued benefit liability	(1,869)	(4,015)	(1,942)	(1,927)
Accrued benefit liability included in liabilities of businesses held for sale		(408)		(978)
Intangible asset	26	351		
Accumulated other comprehensive loss	126	1,771		
Net asset (liability) recognized	\$ 1,201	\$ 923	\$ (1,898)	\$ (2,862)



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The accumulated benefit obligation for all defined benefit pension plans was \$15.4 billion and \$19.8 billion at December 31, 2003 and 2002, respectively.

Amounts for pension plans with accumulated benefit obligations in excess of plan assets are as follows at December 31:

<i>\$ in millions</i>	2003	2002
Projected benefit obligation	\$ 4,617	\$ 19,344
Accumulated benefit obligation	3,782	17,649
Fair value of plan assets	2,667	15,922

**Plan Assumptions**

On a weighted-average basis, the following assumptions were used to determine the benefit obligations and the net periodic benefit cost:

	Pension Benefits		Medical and Life Benefits	
	2003	2002	2003	2002
<b>Assumptions Used to Determine Benefit Obligation at December 31</b>				
Discount rate	6.25%	6.50%	6.25%	6.50%
Rate of compensation increase	4.00%	4.00%		
<b>Assumptions Used to Determine Benefit Cost for the Year Ended December 31</b>				
Discount rate	6.50%	7.00%	6.50%	7.00%
Expected long-term return on plan assets	9.00%	9.50%	6.00%	6.00%
Rate of compensation increase	4.00%	4.50%		

These assumptions also were used in retiree health care and life insurance benefit calculations with one modification. Since, unlike the pension trust, the earnings of the VEBA trust are taxable, the above long-term rate of return on plan assets was reduced accordingly to an after-tax rate.

Through consultation with investment advisors, expected long-term returns for each of the plans' strategic asset classes were developed. Several factors were considered, including survey of investment managers' expectations, current market data such as yields/price-earnings ratios, and historical market returns over long periods. Using policy target allocation percentages and the asset class expected returns, a weighted-average expected return was calculated.

Health care cost trend rate assumptions used to determine the expected cost of retiree health care plans are as follows:

	2003	2002
Health care cost trend rate assumed for next year	9.00%	10.00%
Rate to which the cost trend rate is assumed to decline (the ultimate trend rate)	5.00%	5.00%
Year that the rate reaches the ultimate trend rate	2008	2008

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Assumed health care trend rates have a significant effect on the amounts reported for the health care plans. A one-percentage-point change in health care cost trend rates would have the following effects:

<i>\$ in millions</i>	<b>1-Percentage- Point Increase</b>	<b>1-Percentage- Point Decrease</b>
Increase (decrease) from change in health care cost trend rates to		
Postretirement benefit expense	\$ 26	\$ (22)
Postretirement benefit liability	286	(242)

**Plan Assets and Investment Policy**

Weighted-average asset allocations at December 31 by asset category are as follows:

	<b>Pension Plan Assets</b>		<b>Medical and Life Benefits Plan Assets</b>	
	<b>2003</b>	2002	<b>2003</b>	2002
Equity securities	<b>64%</b>	57%	<b>78%</b>	84%
Debt securities	<b>28</b>	33	<b>22</b>	16
Real estate	<b>2</b>	2		
Other	<b>6</b>	8		
<b>Total</b>	<b>100%</b>	100%	<b>100%</b>	100%

Plan assets are invested in various asset classes that are expected to produce a sufficient level of diversification and investment return over the long term. The investment goals are (1) to exceed the assumed actuarial rate of return over the long term within reasonable and prudent levels of risk, and (2) to preserve the real purchasing power of assets to meet future obligations. Liability studies are conducted on a regular basis to provide guidance in setting investment goals with an objective to balance risk. Risk targets are established and monitored against acceptable ranges.

All investment policies and procedures are designed to ensure that the plans' investments are in compliance with the Employee Retirement Income Security Act. Guidelines are established defining permitted investments within each asset class. Derivatives are used for transitioning assets, asset class rebalancing, managing currency risk, and for fixed income management. Other uses of derivatives, including for speculation, are prohibited.

Equity securities held by pension plans include Northrop Grumman Corporation common stock in the amounts of \$664 million (4 percent of total plan assets) and \$1,052 million (8 percent of total plan assets) at December 31, 2003, and 2002, respectively. Equity securities in the VEBA trust include Northrop Grumman Corporation common stock in the amounts of \$9.7 million (2 percent of total plan assets) at December 31, 2003, and none in 2002.

In 2004, the company expects to contribute approximately \$345 million to its pension plans and approximately \$176 million to its other postretirement benefit plans.

**NORTHROP GRUMMAN CORPORATION****Benefit Payments**

The following table reflects estimated benefit payments, based upon the same assumptions used to measure the benefit obligation, and include expected future employee service, as of December 31, 2003:

<i>\$ in millions</i>	<b>Pension Benefits</b>	<b>Medical and Life Benefits</b>
2004	\$ 1,050	\$ 189
2005	1,079	198
2006	1,116	206
2007	1,158	214
2008	1,207	223
2009 through 2013	6,805	1,277

**16. LITIGATION, COMMITMENTS, AND CONTINGENCIES**

*Litigation* – The company is subject to a range of claims, lawsuits, environmental and income tax matters, and administrative proceedings that arise in the ordinary course of business. Estimating liabilities and costs associated with these matters requires judgment and assessment based upon professional knowledge and experience of management and its internal and external legal counsel. In accordance with SFAS No. 5 – *Accounting for Contingencies*, amounts are recorded as charges to earnings when management, after taking into consideration the facts and circumstances of each matter, including any settlement offers, has determined that it is probable that a liability has been incurred and the amount of the loss can be reasonably estimated. The ultimate resolution of any exposure to the company may vary from earlier estimates as further facts and circumstances become known. Based upon available information, it is the company's expectation that known legal actions are either without merit or will have no material adverse effect on the company's results of operations or financial position. For newly acquired businesses, management applies judgment in estimating the fair value of liabilities assumed, including those related to claims, lawsuits, environmental matters, and administrative proceedings, as part of its purchase accounting determinations. While the company cannot predict the ultimate outcome of these matters, resolution of one or more of these matters individually or in the aggregate is not expected to have a material effect on the company's financial position or results of operations, but resolution of these matters may have a material effect on cash flows.

The company, as a government contractor, is from time to time subject to U. S. Government investigations relating to its operations. Government contractors that are found to have violated the False Claims Act, or are indicted or convicted for violations of other federal laws, or are considered not to be responsible contractors may be suspended or debarred from government contracting for some period of time. Such convictions could also result in fines. Given the company's dependence on government contracting, suspension or debarment could have a material adverse effect on the company.

In 2003, the company settled two previously reserved civil False Claims Act cases, U.S. v. Newport News Shipbuilding, Inc. and U.S. ex rel. Jordan, and recorded loss provisions for settlement offers on other legal matters, resulting in a net gain of \$17 million. The two settled cases required payments by the company of approximately \$80 million.

In August 1992, in U.S. ex rel. Rex Robinson v. Northrop Grumman Corporation, the United States District Court for the Northern District of Illinois unsealed a complaint brought by four individuals in the name of the United States of America. The action was filed on August 10, 1989, seeking damages under the qui tam provision of the civil False Claims Act. On July 28, 1992, the government declined to intervene in this action. Plaintiffs amended their damage claim and now seek compensatory damages of approximately \$369 million, which could be

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trebled under the False Claims Act, together with statutory penalties of up to \$39 million, pre-judgment interest, loss of use of money and other unspecified damages for expenses, attorney fees, and costs. The individual relators also seek damages in their individual capacities for alleged retaliation. In 2001, the Civil Division of the U.S. Attorney's Office filed a motion to intervene in the action, which motion was granted on October 12, 2001. The company denies the allegations and continues to vigorously defend the action.

The IRS is presently completing its audits of the B-2 program for the tax years ended December 31, 1997, to December 31, 2000. Upon completion of these audits, the IRS may adopt a position that the B-2 program was completed in a year prior to 2002, which would create the potential for additional interest expense. Although it is not possible to predict the outcome of the tax audits at this time, management believes that its tax accounting for the B-2 program reflects the appropriate timing of contract completion.

*Environmental Matters* – In accordance with company policy on environmental remediation, the estimated cost to complete remediation has been accrued where it is probable that the company will incur such costs in the future, to address environmental impacts of current or formerly owned operating facilities or at sites it has been named a Potentially Responsible Party (PRP) by the Environmental Protection Agency or similarly designated by other environmental agencies. To assess the potential impact on the company's consolidated financial statements, management estimates the total reasonably possible remediation costs that could be incurred by the company, taking into account currently available facts on each site as well as the current state of technology and prior experience in remediating contaminated sites. These estimates are reviewed periodically and adjusted to reflect changes in facts and technical and legal circumstances. Management estimates that at December 31, 2003, the range of reasonably possible future costs for environmental remediation is \$251 million to \$366 million, of which \$271 million has been accrued. Factors which could result in changes to the company's environmental reserves and reasonably possible range of loss include: modification of planned remedial actions, increase or decrease in the estimated time required to remediate, discovery of more extensive contamination than anticipated, changes in laws and regulations affecting remediation requirements, and improvements in remediation technology. Should other PRP's not pay their allocable share of remediation costs, the company may have to incur costs in addition to those already estimated and accrued. Although management cannot predict whether new information gained as projects progress will materially affect the estimated liability accrued, management does not anticipate that future remediation expenditures will have a material adverse effect on the company's results of operations, financial position, or cash flows.

*Indemnifications* – The company has retained certain liabilities associated with the Auto business as well as the Aeronautical Systems business that TRW divested in 2002. Subsequent adjustments to accruals recorded as of December 31, 2003, in connection with the divestitures of TRW's Auto and Aeronautical Systems businesses, if any, will be charged to discontinued operations. There can be no assurance that such adjustments will not be material.

*Other agreements* – In July and August of 2003, Ship Systems executed agreements with the states of Mississippi and Louisiana, respectively, wherein Ship Systems will lease facility improvements and equipment from these states in exchange for certain commitments by Ship Systems. Under the Mississippi agreement, Ship Systems is required to match the state's funding with expenditures in the amount of \$121 million and create 667 new full-time jobs in Mississippi by December 2007. Under the Louisiana agreement, Ship Systems is required to match the state's funding with expenditures in the amount of \$56 million by December 2007, and employ a minimum of 5,200 full-time employees in 16 of the 32 fiscal quarters beginning January 1, 2003, and ending December 31, 2010. Failure by Ship Systems to meet these commitments would result in reimbursement by Ship Systems to Mississippi and Louisiana in accordance with the respective agreements.

*Financial Arrangements* – In the ordinary course of business, the company uses standby letters of credit issued by commercial banks and surety bonds issued by insurance companies principally to guarantee the performance on

## **NORTHROP GRUMMAN CORPORATION**

certain contracts and to support the company's self-insured workers' compensation plans. At December 31, 2003, there were \$619 million of stand-by letters of credit outstanding and \$584 million of surety bonds outstanding. For all years presented, the company had no material related party transactions.

*Operating Leases* – Rental expense for operating leases, excluding discontinued operations, was \$463 million in 2003, \$303 million in 2002, and \$214 million in 2001. These amounts are net of sublease rental income of \$8 million in 2003, \$5 million in 2002, and \$3 million in 2001. Minimum rental commitments under long-term noncancellable operating leases as of December 31, 2003, total \$1.8 billion, which are payable as follows: 2004 - \$347 million; 2005 - \$297 million; 2006 - \$232 million; 2007 - \$196 million; 2008 - \$159 million; and thereafter - \$530 million. In addition, the company has contracts for future sublease income totaling \$18 million.

### **17. STOCK COMPENSATION PLANS**

At December 31, 2003, Northrop Grumman had three stock-based compensation plans: the 2001 Long-Term Incentive Stock Plan (2001 LTISP), and the 1993 Long-Term Incentive Stock Plan (1993 LTISP), both applicable to employees, and the 1995 Stock Option Plan for Non-Employee Directors (SOPND). All of these plans are approved by the company's shareholders.

*Employee Plans* – The 2001 LTISP and the 1993 LTISP permit grants to key employees of three general types of stock incentive awards: stock options, stock appreciation rights (SARs), and stock awards. Each stock option grant is made with an exercise price either at the closing price of the stock on the date of grant (market options) or at a premium over the closing price of the stock on the date of grant (premium options). Options generally vest in 25 percent increments one, two, three, and four years from the grant date under the 2001 LTISP and two, three, four, and five years from the grant date under the 1993 LTISP. Under both plans, options expire ten years after the grant date. No SARs have been granted under either of the LTISP's. Stock awards, in the form of restricted performance stock rights and restricted stock rights, are granted to key employees without payment to the company. Under the 2001 LTISP, recipients of restricted performance stock rights earn shares of stock based on an economic value added (EVA) metric over a three-year performance period with distributions made entirely at the end of the third year. Under the 1993 LTISP, recipients of restricted performance stock rights earn shares of stock based on a total-shareholder-return measure of performance over a five-year performance period with interim distributions three and four years after grant. If at the end of the applicable performance period objectives have not been met, unearned rights up to 100 percent of the original grant for five elected officers and the three next highest compensated employees, and up to 70 percent of the original grant for all other recipients, will be forfeited. Restricted stock rights issued under either plan vest annually, generally over three years. Termination of employment can result in forfeiture of some or all of the benefits extended under the plan. At December 31, 2003, approximately 16 million shares were available for future grants under the 2001 LTISP.

*Nonemployee Plan* – The SOPND permits grants of stock options to nonemployee directors. Each grant of a stock option is made at the closing market price on the date of the grant, is immediately exercisable, and expires ten years after the grant date. At December 31, 2003, 189,000 shares were available for future grants under the SOPND.

*Stock Awards* – Compensation expense for restricted performance stock rights is estimated and recognized over the vesting period. The fixed 30 percent minimum distribution portion is measured at the grant date fair value and the variable portion is adjusted to the fair value at the end of each accounting period. Compensation expense for restricted stock rights is measured at the grant date fair value and recognized over the vesting period. Restricted performance stock rights and restricted stock rights were granted with weighted-average grant-date fair values per share as follows: 2003 - 1,147,300 at \$94; 2002 - 846,145 at \$114; and 2001 - 812,730 at \$81.

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**NORTHROP GRUMMAN CORPORATION**

*Option Conversions* – In connection with the acquisition of Litton, the company converted Litton stock options to company stock options. For Litton options only, a reduction of shareholders' equity was recorded and is being amortized as compensation expense through 2005. Acquired TRW options were converted to the company's options and fully vested on the date of acquisition.

*Compensation Expense* – Total stock-based compensation expense was \$99 million in 2003, \$69 million in 2002, and \$27 million in 2001.

Stock option activity for the last three years is summarized below:

	Shares Under Option	Weighted- Average Exercise Prices	Options Exercisable	Weighted- Average Exercise Prices
<b>Outstanding at January 1, 2001</b>	4,674,273	\$ 78	2,277,341	\$ 71
Granted, market options	2,128,810	81		
Options converted upon acquisition of Litton	1,110,485	57		
Cancelled	(215,531)	85		
Exercised	(985,424)	61		
<b>Outstanding at December 31, 2001</b>	6,712,613	78	2,173,779	79
Granted, market options	2,255,063	114		
Options converted upon acquisition of TRW	5,810,231	92		
Cancelled	(199,759)	78		
Exercised	(1,184,350)	76		
<b>Outstanding at December 31, 2002</b>	13,393,798	90	8,531,746	89
Granted, market options	2,665,489	94		
Cancelled	(228,441)	85		
Exercised	(470,829)	66		
<b>Outstanding at December 31, 2003</b>	<b>15,360,017</b>	<b>92</b>	<b>9,883,528</b>	<b>90</b>

At December 31, 2003, the following stock options were outstanding:

Range of Exercise Prices	Options Outstanding			Options Exercisable	
	Number Outstanding	Weighted- Average Remaining Contractual Life	Weighted- Average Exercise Prices	Number Exercisable	Weighted- Average Exercise Prices
\$ 28 to 78	4,070,442	6.4 years	\$ 71	2,839,109	\$ 70
79 to 93	3,298,035	4.8 years	88	3,123,862	88
94 to 99	4,076,140	7.7 years	96	1,488,062	99
100 to 128	3,915,400	7.3 years	112	2,432,495	110
	<b>15,360,017</b>		<b>92</b>	<b>9,883,528</b>	<b>90</b>

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## NORTHROP GRUMMAN CORPORATION

## 18. UNAUDITED SELECTED QUARTERLY DATA

Unaudited quarterly financial results are set forth in the following tables together with dividend and common stock price data. The company's common stock is traded on the New York Stock Exchange and Pacific Exchanges (trading symbol NOC).

2003 Quarters <i>\$ in millions, except per share</i>	For the Quarter Ended			
	Dec. 31	Sep. 30	Jun. 30	Mar. 31
Total revenue	\$ 7,094	\$ 6,619	\$ 6,627	\$ 5,866
Operating margin	388	431	391	328
Income from continuing operations before cumulative effect of accounting change	203	224	207	174
Net income	224	184	205	253
Basic earnings per share from continuing operations before cumulative effect of accounting change	1.12	1.22	1.10	.92
Basic earnings per share	1.23	1.00	1.09	1.35
Diluted earnings per share from continuing operations before cumulative effect of accounting change	1.11	1.21	1.09	0.91
Diluted earnings per share	1.22	1.00	1.08	1.34
Dividends per common share	.40	.40	.40	.40
Dividends per mandatorily redeemable preferred share	1.75	1.75	1.75	1.75
<i>Stock price per share:</i>				
High	95.63	97.34	92.60	101.10
Low	84.45	83.00	79.71	78.27

*Significant Events* – In the fourth quarter of 2003, the company recorded a pre-tax charge of \$40 million for the F-16 Block 60 combat avionics program. In the third quarter of 2003, the company recorded an after-tax loss from discontinued operations of \$46 million, including a goodwill impairment charge of \$47 million. Also in the third quarter, the company settled two civil False Claim Act cases (Newport Shipbuilding, Inc. and Jordan), reversed the unused portion of a reserve, and recorded loss provisions for settlement offers on other legal matters, which resulted in a net gain of \$17 million. In the second quarter of 2003, the company recorded a pre-tax charge of \$68 million for the Polar Tanker program. In the first quarter of 2003, the company recorded a \$26 million tax credit for additional research tax credits. In 2003, the company sold several of the businesses reported in discontinued operations: Poly-Scientific and the company's 51 percent interest in the operations of TRW Koyo Steering Systems Company in the fourth quarter; Life Support during the third quarter; Auto and the VEAM business units in the first quarter. With the exception of Auto, none of these sales, either individually or in the aggregate, had a material impact on the company's results of operations. For additional information concerning the sale of Auto (see Note 4).

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## NORTHROP GRUMMAN CORPORATION

## 2002 Quarters

	For the Quarter Ended			
<i>\$ in millions, except per share</i>	Dec. 31	Sep. 30	Jun. 30	Mar. 31
Total revenue	\$ 4,830	\$ 4,214	\$ 4,231	\$ 3,931
Operating margin	411	313	354	313
Income from continuing operations before cumulative effect of accounting change	226	141	181	149
Net income (loss)	224	(59)	182	(283)
Basic earnings per share from continuing operations before cumulative effect of accounting change	1.76	1.19	1.55	1.29
Basic earnings (loss) per share	1.75	(.58)	1.56	(2.59)
Diluted earnings per share from continuing operations before cumulative effect of accounting change	1.73	1.17	1.52	1.27
Diluted earnings (loss) per share	1.72	(.56)	1.53	(2.56)
Dividends per common share	.40	.40	.40	.40
Dividends per mandatorily redeemable preferred share	1.75	1.75	1.75	1.75
<i>Stock price per share:</i>				
High	125.50	129.83	135.00	118.89
Low	87.20	93.31	111.30	95.50

*Significant Events* – In the fourth quarter of 2002, the company acquired TRW and entered into a transaction to sell Auto. The Electron Devices and Ruggedized Displays businesses were sold in October 2002. In the third quarter of 2002, the company recorded a pre-tax charge of \$65 million for the F-16 Block 60 combat avionics program, recorded a pre-tax charge of \$87 million for the Polar Tanker program, recorded a pre-tax adjustment of \$69 million to reverse previously established reserves for the cruise ship program, and recorded a \$20 million favorable pre-tax adjustment from restructuring an Information Technology contract. Also in the third quarter, the company recorded an after-tax loss from discontinued operations of \$178 million, including a goodwill impairment loss of \$186 million. In the second quarter, the company recorded a \$16 million charge related to a contract with Oracle. In the first quarter, the company completed its acquisition of Newport News. The first quarter results include a \$432 million charge to record the cumulative effect of an accounting change upon adoption of SFAS No. 142 – *Goodwill and Other Intangible Assets* (see Note 9).



**NORTHROP GRUMMAN CORPORATION**

**MANAGEMENT'S STATEMENT OF FINANCIAL RESPONSIBILITY**

The management of Northrop Grumman Corporation prepared and is responsible for the consolidated financial statements and all related financial information contained in this Annual Report. The consolidated financial statements, which include amounts based on estimates and judgments, have been prepared in accordance with accounting principles generally accepted in the United States.

In recognition of its responsibility for the integrity and objectivity of data in the consolidated financial statements, Northrop Grumman maintains a system of internal accounting controls designed to provide reasonable assurance that assets are safeguarded and transactions are properly executed and recorded. The system includes policies and procedures, examinations by an internal audit staff, and officer review.

Northrop Grumman is dedicated to the highest standards of business conduct. This dedication is reflected in written policy statements covering, among other subjects, environmental protection, potentially conflicting outside interests of employees, compliance with regulations and laws, ethical business practices, and adherence to the highest standards of conduct and practices in transactions and relationships with customers, including the U.S. Government. Ongoing education and communication programs and review activities are designed to create a strong compliance culture—one that encourages employees to raise their policy questions and concerns and that forbids retribution for doing so.

Northrop Grumman's consolidated financial statements have been audited by Deloitte & Touche LLP. Their audit was conducted in accordance with auditing standards generally accepted in the United States of America. Their report for 2003 appears herein.

The Audit Committee of the Board of Directors periodically meets with and reviews the activities of the independent auditors, internal auditors, and management. Both the independent auditors and the internal auditors have unrestricted access to members of the Audit Committee, with or without management representatives present.

Ronald D. Sugar  
Chairman, Chief Executive Officer and President

Charles H. Noski  
Corporate Vice President and Chief Financial Officer

March 9, 2004

**NORTHROP GRUMMAN CORPORATION**

**INDEPENDENT AUDITORS' REPORT**

Board of Directors and Shareholders of  
Northrop Grumman Corporation  
Los Angeles, California

We have audited the accompanying consolidated statements of financial position of Northrop Grumman Corporation and subsidiaries as of December 31, 2003 and 2002, and the related consolidated statements of income, comprehensive income (loss), changes in shareholders' equity, and cash flows for each of the three years in the period ended December 31, 2003. Our audits also included the financial statement schedule listed in the Index at Item 15. These financial statements and the financial statement schedule are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements and the financial statement schedule based on our audits.

We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, such consolidated financial statements present fairly, in all material respects, the financial position of Northrop Grumman Corporation and subsidiaries at December 31, 2003 and 2002, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2003, in conformity with accounting principles generally accepted in the United States of America. Also, in our opinion, such financial statement schedule, when considered in relation to the basic consolidated financial statements taken as a whole, presents fairly in all material respects the information set forth therein.

As discussed in Note 1 to the consolidated financial statements, the Company changed its method of accounting for goodwill and other intangible assets effective January 1, 2002, to conform to Statement of Financial Accounting Standards No. 142 – *Goodwill and Other Intangible Assets*.

/s/ DELOITTE & TOUCHE LLP

Deloitte & Touche LLP  
Los Angeles, California  
March 9, 2004

**NORTHROP GRUMMAN CORPORATION**

**Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure**

No information is required in response to this item.

**Item 9A. Controls and Procedures**

The registrant's principal executive officer (Chairman, Chief Executive Officer and President) and principal financial officer (Corporate Vice President and Chief Financial Officer) have evaluated the registrant's disclosure controls and procedures as of the end of the period covered by this Annual Report on Form 10-K and have concluded that these controls and procedures are effective to ensure that information required to be disclosed by the registrant in the reports the registrant files or submits under the Securities Exchange Act of 1934 (15 USC § 78a et seq) is recorded, processed, summarized, and reported within the time periods specified in the Securities and Exchange Commission's rules and forms. These disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by the registrant in the reports that it files or submits is accumulated and communicated to the registrant's management, including the principal executive officer and the principal financial officer, as appropriate to allow timely decisions regarding required disclosure. The principal executive officer and the principal financial officer have also concluded based upon their evaluation that there are no significant deficiencies or material weaknesses in these disclosure controls and procedures.

**PART III**

**Item 10. Directors and Executive Officers of the Registrant**

**Directors**

The information as to Directors will be incorporated herein by reference to the Proxy Statement for the 2004 Annual Meeting of Stockholders to be filed within 120 days after the end of the company's fiscal year.

**Executive Officers**

The following individuals were the elected officers of the company as of March 9, 2004:

<u>Name</u>	<u>Age</u>	<u>Office Held</u>	<u>Since</u>	<u>Business Experience Last Five Years</u>
Ronald D. Sugar	55	Chairman, Chief Executive Officer and President	2003	Chief Executive Officer and President; Prior to April 2003, President and Chief Operating Officer (2001-2003); Corporate Vice President, Northrop Grumman Corporation, and President, Litton Industries, Inc. (2001); President and Chief Operating Officer, Litton Industries, Inc. (2000-2001); President and Chief Operating Officer, TRW Aerospace & Information Systems and Member of the Chief Executive Office of TRW Inc. (1998-2000)
Herbert W. Anderson	64	Corporate Vice President and President, Information Technology Sector	2001	Corporate Vice President, President and Chief Executive Officer, Logicon, Inc.

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<u>Name</u>	<u>Age</u>	<u>Office Held</u>	<u>Since</u>	<u>Business Experience Last Five Years</u>
Wesley G. Bush	42	Corporate Vice President and President, Space Technology Sector	2003	Corporate Vice President of Northrop Grumman Corporation; Prior to December 2002, Executive Vice President of TRW Inc. and President and Chief Executive Officer of TRW Aeronautical Systems (2001-2002); Vice President and General Manager, TRW Ventures, TRW Space & Electronics Group (2000-2001); Vice President and General Manager, Telecommunications Division, TRW Space & Electronics Group (1999)
Philip A. Dur	59	Corporate Vice President and President, Ship Systems Sector	2001	Vice President, Electronic Systems Sector; Prior to December 1999, Vice President, Worldwide Business Development and Strategy, Tenneco, Inc.
J. Michael Hateley	57	Corporate Vice President and Chief Human Resources and Administrative Officer	2000	Vice President, Personnel
Robert W. Helm	52	Corporate Vice President, Government Relations	1994	
Robert P. Iorizzo	63	Corporate Vice President and President, Electronic Systems Sector	2001	Vice President and General Manager of Command, Control, Communications, Intelligence and Naval Systems Division, Electronic Systems Sector
John H. Mullan	61	Corporate Vice President and Secretary	1999	Acting Secretary
Albert F. Myers	58	Corporate Vice President, Strategy and Development	2003	Corporate Vice President and Treasurer
Charles H. Noski	51	Corporate Vice President and Chief Financial Officer	2003	Vice Chairman of the Board and Chief Financial Officer, AT&T; Prior to February 2002, Senior Executive Vice President and Chief Financial Officer, AT&T (1999-2002); President and Chief Operating Officer, Hughes Electronics Corporation (1997-1999)
Rosanne P. O'Brien	60	Corporate Vice President, Communications	2000	Vice President, Corporate Communications
James L. Sanford	58	Corporate Vice President and Treasurer	2003	Vice President, Contracts and Pricing
Thomas C. Schivelbein	50	Corporate Vice President and President, Newport News Sector	2001	Executive Vice President and Chief Operating Officer, Newport News Shipbuilding Inc.; Prior to March 1999, Executive Vice President, Newport News Shipbuilding Inc. (1995-1999)

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<u>Name</u>	<u>Age</u>	<u>Office Held</u>	<u>Since</u>	<u>Business Experience Last Five Years</u>
Scott J. Seymour	53	Corporate Vice President and President, Integrated Systems Sector	2002	Vice President, Integrated Systems Sector
W. Burks Terry	53	Corporate Vice President and General Counsel	2000	Vice President, Deputy General Counsel and Sector Counsel
Donald C. Winter	56	Corporate Vice President and President, Mission Systems Sector	2002	Executive Vice President of TRW Inc. and President and Chief Executive Officer, TRW Systems; Prior to 2002, Executive Vice President of TRW Inc. and General Manager, TRW Systems (2000-2001); Vice President and Deputy General Manager for Group Development, TRW Space & Electronics (1998-1999)
Sandra J. Wright	48	Corporate Vice President and Controller	2001	Corporate Controller; Prior to May 2001, Vice President and Controller of Litton Industries, Inc. (2000-2001); Vice President and Controller of Aerojet, a Gen Corp company (1999-2000)

**Audit Committee Financial Expert**

The information as to the Audit Committee Financial Expert is incorporated herein by reference to the Proxy Statement for the 2004 Annual Meeting of Stockholders to be filed within 120 days after the end of the company's fiscal year.

**Code of Ethics**

We have adopted Standards of Business Conduct for all our employees, including our principal executive officer, principal financial officer and principal accounting officer. The Standards of Business Conduct can be found on our internet web site at [www.northropgrumman.com](http://www.northropgrumman.com) under "Investor Relations – Corporate Governance – Overview."

Our web site and information contained on it or incorporated in it are not intended to be incorporated in this Annual Report on Form 10-K or our other filings with the SEC.

**Item 11. Executive Compensation**

The information as to Executive Compensation will be incorporated herein by reference to the Proxy Statement for the 2004 Annual Meeting of Stockholders to be filed within 120 days after the end of the company's fiscal year.

**Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters**

The information as to Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters will be incorporated herein by reference to the Proxy Statement for the 2004 Annual Meeting of Stockholders to be filed within 120 days after the end of the company's fiscal year.

**NORTHROP GRUMMAN CORPORATION**

**Item 13. Certain Relationships and Related Transactions**

The information as to Certain Relationships and Related Transactions will be incorporated herein by reference to the Proxy Statement for the 2004 Annual Meeting of Stockholders to be filed within 120 days after the end of the company's fiscal year.

**Item 14. Principal Accountant Fees and Services**

The information as to Principal Accountant Fees and Services will be incorporated herein by reference to the Proxy Statement for the 2004 Annual Meeting of Shareholders to be filed within 120 days after the end of the company's fiscal year.

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**PART IV**

**Item 15. Exhibits, Financial Statement Schedule, and Reports on Form 8-K**

- (a) 1. Financial Statements
  - Consolidated Statements of Financial Position
  - Consolidated Statements of Income
  - Consolidated Statements of Comprehensive Income
  - Consolidated Statements of Cash Flows
  - Consolidated Statements of Changes in Shareholders' Equity
  - Notes to Consolidated Financial Statements
  - Independent Auditors' Report
- 2. Financial Statement Schedule
  - Schedule II - Valuation and Qualifying Accounts

All other schedules are omitted either because they are not applicable or not required or because the required information is included in the financial statements or notes thereto.

(b) Reports on Form 8-K.

A report on Form 8-K was dated and submitted October 29, 2003, by Northrop Grumman Corporation including as an exhibit pursuant to Item 7 and furnishing as an exhibit pursuant to Item 12 information with respect to financial results for the quarter ended September 30, 2003.

A report on Form 8-K was dated and submitted February 4, 2004, by Northrop Grumman Corporation including as an exhibit pursuant to Item 7 and furnishing as an exhibit pursuant to Item 12 information with respect to financial results for the quarter and year ended December 31, 2003.

**Exhibits**

- 2 Master Purchase Agreement between BCP Acquisition Company L.L.C. and Northrop Grumman Corporation dated as of November 18, 2002 (incorporated by reference to Exhibit 2.1 to Form 8-K dated November 18, 2002, filed November 19, 2002), amended December 20, 2002 (incorporated by reference to Exhibit 99.1 to Form 8-K dated December 20, 2002, filed December 27, 2002) and February 28, 2003 (incorporated by reference to Exhibit 99.1 to Form 8-K dated February 28, 2003, filed March 5, 2003)
- 3(a) Restated Certificate of Incorporation of Northrop Grumman Corporation (incorporated by reference to Exhibit C to the Definitive Proxy Statement on Schedule 14A filed April 4, 2003)
- 3(b) Amended Bylaws of Northrop Grumman Corporation (incorporated by reference to Exhibit 3(b) to Form 10-K for the year ended December 31, 2002 filed March 24, 2003)
- 4(a) Registration Rights Agreement dated as of January 23, 2001 by and among Northrop Grumman Systems Corporation, Northrop Grumman Corporation and Unitrin, Inc. (incorporated by reference to Exhibit (d)(6) to Amendment No. 4 to Schedule TO filed January 31, 2001)
- 4(b) Certificate of Designations, Preferences and Rights of Series B Preferred Stock of Northrop Grumman Corporation (incorporated by reference to Exhibit C to the Definitive Proxy Statement on Schedule 14A filed April 13, 2001)
- 4(c) Indenture dated as of October 15, 1994 between Northrop Grumman Systems Corporation and JPMorgan Chase Bank (formerly The Chase Manhattan Bank), as trustee (incorporated by reference to Exhibit 4.1 to Form 8-K filed October 25, 1994)

**NORTHROP GRUMMAN CORPORATION**

- 4(d) Form of Officer's Certificate (without exhibits) establishing the terms of Northrop Grumman Systems Corporation's 7% Notes due 2006, 7 <sup>3</sup>/<sub>4</sub>% Debentures due 2016 and 7 <sup>7</sup>/<sub>8</sub>% Debentures due 2026 (incorporated by reference to Exhibit 4-3 to Form S-4 Registration Statement No. 333-02653 filed April 19, 1996)
- 4(e) Form of Northrop Grumman Systems Corporation's 7% Notes due 2006 (incorporated by reference to Exhibit 4-4 to Form S-4 Registration Statement No. 333-02653 filed April 19, 1996)
- 4(f) Form of Northrop Grumman Systems Corporation's 7 <sup>3</sup>/<sub>4</sub>% Debentures due 2016 (incorporated by reference to Exhibit 4-5 to Form S-4 Registration Statement No. 333-02653 filed April 19, 1996)
- 4(g) Form of Northrop Grumman Systems Corporation's 7 <sup>7</sup>/<sub>8</sub>% Debentures due 2026 (incorporated by reference to Exhibit 4-6 to Form S-4 Registration Statement No. 333-02653 filed April 19, 1996)
- 4(h) Purchase Contract Agreement dated as of November 21, 2001 between Northrop Grumman Corporation and JPMorgan Chase Bank, as Purchase Contract Agent (incorporated by reference to Exhibit 4.3 to Form 8-K dated and filed November 21, 2001)
- 4(i) Pledge Agreement dated as of November 21, 2001 among Northrop Grumman Systems Corporation, The Bank of New York, as Collateral Agent, Custodial Agent and Securities Intermediary, and JPMorgan Chase Bank, as Purchase Contract Agent (incorporated by reference to Exhibit 4.4 to Form 8-K dated and filed November 21, 2001)
- 4(j) Form of Remarketing Agreement (incorporated by reference to Exhibit 4.5 to Form 8-K dated and filed November 21, 2001)
- 4(k) Form of Officers' Certificate establishing the terms of Northrop Grumman Systems Corporation's 7 <sup>1</sup>/<sub>8</sub>% Notes due 2011 and 7 <sup>3</sup>/<sub>4</sub>% Debentures due 2031 (incorporated by reference to Exhibit 10.9 to Form 8-K dated and filed April 17, 2001)
- 4(l) Indenture dated as of November 21, 2001 between Northrop Grumman Corporation and JPMorgan Chase Bank, as trustee (incorporated by reference to Exhibit 4.1 to Form 8-K dated and filed November 21, 2001)
- 4(m) Officers' Certificate dated as of November 21, 2001 describing the terms of the Senior Notes that are a component of Northrop Grumman Corporation's Equity Security Units (incorporated by reference to Exhibit 4.2 to Form 8-K dated and filed November 21, 2001)
- 4(n) Indenture dated as of April 13, 1998 between Litton Industries, Inc. (predecessor-in-interest to Northrop Grumman Systems Corporation) and The Bank of New York, as trustee, under which its 6.05% Senior Notes due 2003 and 6.75% Senior Debentures due 2018 were issued (incorporated by reference to Exhibit 4.1 to the Form 10-Q of Litton Industries, Inc. for the quarter ended April 30, 1998, and filed June 15, 1998)
- 4(o) Supplemental Indenture with respect to Indenture dated April 13, 1998, dated as of April 3, 2001 among Litton Industries, Inc. (predecessor-in-interest to Northrop Grumman Systems Corporation), Northrop Grumman Corporation, Northrop Grumman Systems Corporation and The Bank of New York, as trustee (incorporated by reference to Exhibit 4.5 to Form 10-Q for the quarter ended March 31, 2001, filed May 10, 2001)
- 4(p) Supplemental Indenture with respect to Indenture dated April 13, 1998, dated as of December 20, 2002 among Litton Industries, Inc. (predecessor-in-interest to Northrop Grumman Systems Corporation), Northrop Grumman Corporation, Northrop Grumman Systems Corporation and The Bank of New York, as trustee (incorporated by reference to Exhibit 4(q) to Form 10-K for the year ended December 31, 2002 filed March 24, 2003)



**NORTHROP GRUMMAN CORPORATION**

- 4(q) Senior Indenture dated as of December 15, 1991 between Litton Industries, Inc. (predecessor-in-interest to Northrop Grumman Systems Corporation) and The Bank of New York, as trustee, under which its 7.75% and 6.98% debentures due 2026 and 2036 were issued and specimens of such debentures (incorporated by reference to Exhibit 4.1 to the Form 10-Q of Litton Industries, Inc. for the quarter ended April 30, 1996, filed June 11, 1996)
- 4(r) Supplemental Indenture with respect to Indenture dated December 15, 1991, dated as of April 3, 2001, among Litton Industries, Inc. (predecessor-in-interest to Northrop Grumman Systems Corporation), Northrop Grumman Corporation, Northrop Grumman Systems Corporation and The Bank of New York, as trustee (incorporated by reference to Exhibit 4.7 to Form 10-Q for the quarter ended March 31, 2001, filed May 10, 2001)
- 4(s) Supplemental Indenture with respect to Indenture dated December 15, 1991, dated as of December 20, 2002 among Litton Industries, Inc. (predecessor-in-interest to Northrop Grumman Systems Corporation), Northrop Grumman Corporation, Northrop Grumman Systems Corporation and The Bank of New York, as trustee (incorporated by reference to Exhibit 4(t) to Form 10-K for the year ended December 31, 2002 filed March 24, 2003)
- 4(t) Form of Exchange Security for the \$400,000,000 8% senior notes due 2009 of Litton Industries, Inc. (predecessor-in-interest to Northrop Grumman Systems Corporation) (incorporated by reference to Exhibit 4.3 to the Form 10-Q of Litton Industries, Inc. for the quarter ended April 30, 2000, filed June 9, 2000)
- 4(u) Indenture between TRW Inc. (now named Northrop Grumman Space & Mission Systems Corp.) and The Chase Manhattan Bank, as successor Trustee, dated as of May 1, 1986 (incorporated by reference to Exhibit 2 to the Form 8-A Registration Statement of TRW Inc. dated July 3, 1986)
- 4(v) First Supplemental Indenture between TRW Inc. (now named Northrop Grumman Space & Mission Systems Corp.) and The Chase Manhattan Bank, as successor Trustee, dated as of August 24, 1989 (incorporated by reference to Exhibit 4(b) to Form S-3 Registration Statement No. 33-30350 of TRW Inc.)
- 4(w) Second Supplemental Indenture between TRW Inc. (now named Northrop Grumman Space & Mission Systems Corp.) and The Chase Manhattan Bank, as successor Trustee, dated as of June 2, 1999 (incorporated by reference to Exhibit 4(c) to Form S-4 Registration Statement No. 333-83227 of TRW Inc. filed July 20, 1999)
- 4(x) Third Supplemental Indenture between TRW Inc. (now named Northrop Grumman Space & Mission Systems Corp.) and The Chase Manhattan Bank, as successor Trustee, dated as of June 2, 1999 (incorporated by reference to Exhibit 4(d) to Form S-4 Registration Statement No. 333-83227 of TRW Inc. filed July 20, 1999)
- 4(y) Fourth Supplemental Indenture between TRW Inc. (now named Northrop Grumman Space & Mission Systems Corp.) and The Chase Manhattan Bank, as successor Trustee, dated as of June 2, 1999 (incorporated by reference to Exhibit 4(e) to Form S-4 Registration Statement No. 333-83227 of TRW Inc. filed July 20, 1999)
- 4(z) Fifth Supplemental Indenture between TRW Inc. (now named Northrop Grumman Space & Mission Systems Corp.) and The Chase Manhattan Bank, as successor Trustee, dated as of June 2, 1999 (incorporated by reference to Exhibit 4(f) to Form S-4 Registration Statement No. 333-83227 of TRW Inc. filed July 20, 1999)

**NORTHROP GRUMMAN CORPORATION**

- 4(aa) Sixth Supplemental Indenture between TRW Inc. (now named Northrop Grumman Space & Mission Systems Corp.) and The Chase Manhattan Bank, as successor Trustee, dated as of June 23, 1999 (incorporated by reference to Exhibit 4(g) to Form S-4 Registration Statement No. 333-83227 of TRW Inc. filed July 20, 1999)
- 4(bb) Eighth Supplemental Indenture with respect to Indenture dated as of May 1, 1986, dated as of March 27, 2003, among Northrop Grumman Space & Mission Systems Corp. (formerly TRW Inc.), Northrop Grumman Corporation and JP Morgan Chase Bank (formerly The Chase Manhattan Bank), as successor trustee (incorporated by reference to Exhibit 4.1 to Form 10-Q for the quarter ended March 31, 2003 filed May 14, 2003)
- 4(cc) Form of Guarantee dated as of March 27, 2003, made by Northrop Grumman Corporation, as Guarantor, in favor of JP Morgan Chase Bank (formerly The Chase Manhattan Bank), as trustee, of certain debt securities of Northrop Grumman Space & Mission Systems Corp. (formerly TRW Inc.) (incorporated by reference to Exhibit 4.2 to Form 10-Q for the quarter ended March 31, 2003 filed May 14, 2003)
- 10(a) Northrop Grumman 2001 Long-Term Incentive Stock Plan (As amended September 17, 2003) (incorporated by reference to Exhibit 10.1 to Form 10-Q for the quarter ended September 30, 2003 filed August 6, 2003)
- 10(b) Amendment Agreement between Kent Kresa and Northrop Grumman Corporation dated August 3, 2001 (incorporated by reference to Exhibit 10.2 to Form 10-Q for the quarter ended June 30, 2001 filed August 9, 2001)
- 10(c) Form of Restricted Performance Stock Rights Agreement under the Northrop Grumman Corporation 2001 Long-Term Incentive Stock Plan (incorporated by reference to Exhibit 10.42 to Amendment No. 6 to Form S-4 Registration Statement No. 333-83672 filed September 13, 2002)
- 10(d) Form of Notice of Non-Qualified Grant of Stock Options and Option Agreement under the Northrop Grumman Corporation 2001 Long-Term Incentive Stock Plan (incorporated by reference to Exhibit 10.5 to Form S-4 Registration Statement No. 333-83672 filed March 4, 2002)
- 10(e) Form of Non-Qualified Stock Option Agreement under the Northrop Grumman Corporation 2001 Long-Term Incentive Stock Plan (for officers) (incorporated by reference to Exhibit 10.41 to Amendment No. 6 to Form S-4 Registration Statement No. 333-83672 filed September 13, 2002)
- 10(f) Notice of Grant of Restricted Performance Stock Rights and Rights Agreement of Kent Kresa, dated August 15, 2001 under the Northrop Grumman Corporation 2001 Long-Term Incentive Stock Plan (incorporated by reference to Exhibit 10.6 to Form 10-Q for the quarter ended September 30, 2001 filed November 5, 2001)
- 10(g) Restricted Performance Stock Rights Agreement of Kent Kresa, dated August 20, 2002 under the Northrop Grumman Corporation 2001 Long-Term Incentive Stock Plan (incorporated by reference to Exhibit 10.44 to Amendment No. 6 to Form S-4 Registration Statement No. 333-83672 filed September 13, 2002)
- 10(h) Notice of Grant of Non-Qualified Stock Options and Option Agreement of Kent Kresa, dated August 15, 2001 under the Northrop Grumman Corporation 2001 Long-Term Incentive Stock Plan (incorporated by reference to Exhibit 10.7 to Form 10-Q for the quarter ended September 30, 2001 filed November 5, 2001)
- 10(i) Non-Qualified Stock Option Agreement of Kent Kresa, dated August 20, 2002, under the Northrop Grumman Corporation 2001 Long-Term Incentive Stock Plan (incorporated by reference to Exhibit 10.43 to Amendment No. 6 to Form S-4 Registration Statement No. 333-83672 filed September 13, 2002)

**NORTHROP GRUMMAN CORPORATION**

- 10(j) Form of \$2,500,000,000 Five-Year Revolving Credit Agreement dated as of March 30, 2001 among Northrop Grumman Corporation, Northrop Grumman Systems Corporation and Litton Industries, Inc. (predecessor-in-interest to Northrop Grumman Systems Corporation), the Lenders party thereto, The Chase Manhattan Bank and Credit Suisse First Boston, as Co-Administrative Agents, Salomon Smith Barney Inc., as Syndication Agent, and The Bank of Nova Scotia and Deutsche Banc Alex. Brown, Inc. as Co-Documentation Agents (incorporated by reference to Exhibit 10.7 to Amendment No. 2 to Form S-4 Registration Statement No. 333-54800 filed March 27, 2001), and amended by First Amendment dated as of November 26, 2003 (incorporated by reference to Exhibit 10.1 to Form 10-Q for the quarter ended March 31, 2003 filed May 14, 2003)
- 10(k) Form of Guarantee dated as of April 3, 2001 by Northrop Grumman Corporation of the indenture indebtedness issued by the former Litton Industries, Inc. (incorporated by reference to Exhibit 10.10 to Form 8-K dated and filed April 17, 2001)
- 10(l) Form of Guarantee dated as of April 3, 2001 by Northrop Grumman Corporation of Northrop Grumman Systems Corporation indenture indebtedness (incorporated by reference to Exhibit 10.11 to Form 8-K dated and filed April 17, 2001)
- \*10(m) Form of Second Amendment dated as of January 15, 2004 to the Five-Year Revolving Credit Agreement dated as of March 30, 2001, as heretofore amended, among Northrop Grumman Corporation, Northrop Grumman Systems Corporation, the Lenders party thereto, JPMorgan Chase Bank and Credit Suisse First Boston, as Co-Administrative Agents, JPMorgan Chase Bank, as Payment Agent, Salomon Smith Barney Inc., as Syndication Agent, and The Bank of Nova Scotia and Deutsche Bank Securities Inc., as Co-Documentation Agents
- 10(n) 1973 Performance Achievement Plan (incorporated by reference to Form 8-B filed June 21, 1985)
- 10(o) Northrop Grumman Supplemental Plan 2, including Northrop Supplemental Retirement Income Program for Senior Executives attached as Appendix A and ERISA Supplemental Program 2 attached as Appendix B (incorporated by reference to Exhibit 10(e) to Form 10-K filed February 22, 1996), amended as of June 19, 1996 (incorporated by reference to Exhibit 10(e) to Form 10-K filed February 25, 1997) and as of July 2003 (incorporated by reference to Exhibit 10(c) to Form 10-Q for the quarter ended June 30, 2003 filed August 6, 2003)
- 10(p) Northrop Grumman ERISA Supplemental Plan (incorporated by reference to Exhibit 10(d) to Form 10-K filed February 28, 1994)
- 10(q) Retirement Plan for Independent Outside Directors as amended April 24, 1998 (incorporated by reference to Exhibit 10(g) to Form 10-K filed March 23, 1999)
- 10(r) 1987 Long-Term Incentive Plan, as amended (incorporated by reference to Form SE filed March 30, 1989)
- 10(s) Executive Life Insurance Policy (incorporated by reference to Exhibit 10(i) to Form 10-K filed February 22, 1996)
- 10(t) Executive Accidental Death, Dismemberment and Plegia Insurance Policy (incorporated by reference to Exhibit 10(j) to Form 10-K filed February 22, 1996)
- 10(u) Executive Long-Term Disability Insurance Policy (incorporated by reference to Exhibit 10(k) to Form 10-K filed February 22, 1996)
- 10(v) Key Executive Medical Plan Benefit Matrix (incorporated by reference to Exhibit 10(l) to Form 10-K filed February 22, 1996)

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**NORTHROP GRUMMAN CORPORATION**

10(w)	Executive Dental Insurance Policy Group Numbers 5134 and 5135 (incorporated by reference to Exhibit 10(m) to Form 10-K filed February 22, 1996)
10(x)	Group Excess Liability Policy (incorporated by reference to Exhibit 10(n) to Form 10-K filed February 22, 1996)
10(y)	Northrop Grumman 1993 Long-Term Incentive Stock Plan, as amended and restated (incorporated by reference to Exhibit 4.1 to Form S-8 Registration Statement filed November 25, 1998)
10(z)	Northrop Corporation 1993 Stock Plan for Non-Employee Directors (incorporated by reference to Exhibit B to the Northrop Corporation 1993 Proxy Statement filed March 30, 1993), amended as of September 21, 1994 (incorporated by reference to Exhibit 10(q) to Form 10-K filed March 21, 1995)
10(aa)	Northrop Grumman Corporation 1995 Stock Option Plan for Non-Employee Directors (incorporated by reference to Exhibit A to the Definitive Proxy Statement on Schedule 14A filed March 30, 1995)
10(bb)	Northrop Grumman Corporation March 2004 Change-in-Control Severance Plan (incorporated by reference to Exhibit 10.4 to Form 10-Q for quarter ended September 30, 2003 filed November 6, 2003)
10(cc)	Form of Northrop Grumman Corporation March 2000 Special Agreement (effective March 1, 2000) (incorporated by reference to Exhibit 10(a) to Form 10-Q filed November 4, 1999)
10(dd)	Northrop Grumman Executive Deferred Compensation Plan (effective December 29, 1994), as amended (incorporated by reference to Exhibit 10.31 to Form S-4 Registration Statement No. 333-83672 filed March 4, 2002)
10(ee)	Northrop Grumman Corporation Non-Employee Directors Equity Participation Plan, as amended December 18, 2002 (incorporated by reference to Exhibit 10(ff) to Form 10-K for the year ended December 31, 2002 filed March 24, 2003)
10(ff)	CPC Supplemental Executive Retirement Program (incorporated by reference to Exhibit 10(u) to Form 10-K filed March 30, 1998) and amended by Tenth Amendment (incorporated by reference to Exhibit 10(d) to Form 10-Q for the quarter ended June 30, 2003 and filed August 6, 2003)
10(gg)	Northrop Grumman Estate Enhancement Program, effective November 1, 2000 (incorporated by reference to Exhibit 10(v) to Form 10-K/A filed March 8, 2001)
10(hh)	Special Officer Retiree Medical Plan (As amended September 17, 2003) (incorporated by reference to Exhibit 10.3 to Form 10-Q for quarter ended September 30, 2003 filed November 6, 2003)
10(ii)	Northrop Grumman Deferred Compensation Plan (effective December 1, 2000) and amended March 1, 2001, March 30, 2001 and September 14, 2001 (incorporated by reference to Exhibit 10.36 to Form S-4 Registration Statement No. 333-83672 filed March 4, 2002)
10(jj)	The 2002 Incentive Compensation Plan of Northrop Grumman Corporation (incorporated by reference to Exhibit B to the Definitive Proxy Statement on Schedule 14A filed April 4, 2002)
10(kk)	Form of Indemnification Agreement between Northrop Grumman Corporation and its directors and executive officers (incorporated by reference to Exhibit 10.39 to Form S-4 Registration Statement No. 333-83672 filed March 4, 2002)
10(ll)	Transition Agreement dated as of February 19, 2003 between Northrop Grumman Corporation and Kent Kresa (incorporated by reference to Exhibit 10(mm) to Form 10-K for the year ended December 31, 2002 filed March 24, 2003)

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**NORTHROP GRUMMAN CORPORATION**

10(mm)	Employment Agreement dated February 19, 2003 between Northrop Grumman Corporation and Dr. Ronald D. Sugar (incorporated by reference to Exhibit 10(nn) to Form 10-K for the year ended December 31, 2002 filed March 24, 2003)
10(nn)	Northrop Grumman Supplementary Retirement Income Plan effective October 23, 2002 (incorporated by reference to Exhibit 10(f) to Form 10-Q of TRW Inc. filed November 6, 2002)
10(oo)	Form of Guarantee dated as of January 9, 2003 by Northrop Grumman Space & Mission Systems Corp. (formerly known as TRW Inc.) of Northrop Grumman Systems Corporation indenture indebtedness (incorporated by reference to Exhibit 10(qq) to Form 10-K for the year ended December 31, 2002 filed March 24, 2003)
10(pp)	Time Sharing Agreement between Kent Kresa and Northrop Grumman Corporation dated April 16, 2003 (incorporated by reference to Exhibit 10(b) to Form 10-Q for the quarter ended June 30, 2003 filed August 6, 2003)
10(qq)	Severance Plan for Elected and Appointed Officers of Northrop Grumman Corporation (As amended and restated effective August 1, 2003) (As amended September 17, 2003) (incorporated by reference to Exhibit 10.2 to Form 10-Q for the quarter ended September 30, 2003 filed August 6, 2003)
10(rr)	Form of Northrop Grumman Corporation March 2004 Special Agreement (incorporated by reference to Exhibit 10.5 to Form 10-Q for the quarter ended September 30, 2003 filed November 6, 2003)
10(ss)	Separation Agreement and General Release between Richard B. Waugh, Jr. and Northrop Grumman Corporation dated October 16, 2003 (incorporated by reference to Exhibit 10.6 to Form 10-Q for the quarter ended September 30, 2003 filed November 6, 2003)
10(tt)	Employment Agreement between Charles H. Noski and Northrop Grumman Corporation dated as of October 16, 2003, including Charles H. Noski Executive Retirement Plan attached as Exhibit A, Executive Perquisite Summary attached as Exhibit B, Northrop Grumman Corporation March 2004 Special Agreement attached as Exhibit C and Release Agreement attached as Exhibit D (incorporated by reference to Exhibit 10.7 to Form 10-Q for the quarter ended September 30, 2003 filed November 6, 2003)
*21	Subsidiaries
*23	Independent Auditors' Consent
*24	Power of Attorney
*31.1	Rule 13a-14(a)/15d-14(a) Certification of Ronald D. Sugar (Section 302 of the Sarbanes-Oxley Act of 2002)
*31.2	Rule 13a-14(a)/15d-14(a) Certification of Charles H. Noski (Section 302 of the Sarbanes-Oxley Act of 2002)
**32.1	Certification of Ronald D. Sugar pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
**32.2	Certification of Charles H. Noski pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
*	Filed with this Report
**	Furnished with this Report



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NORTHROP GRUMMAN CORPORATION

SCHEDULE II—VALUATION AND QUALIFYING ACCOUNTS

(\$ in millions)

<u>COL. A</u>	<u>COL. B</u>	<u>COL. C</u>	<u>COL. D</u>	<u>COL. E</u>
<u>Classification</u>	<u>Balance at Beginning of Period</u>	<u>Additions At Cost<sup>(2)</sup></u>	<u>Changes - Add (Deduct)<sup>(1)</sup></u>	<u>Balance at End of Period</u>
Description:				
Year ended December 31, 2001				
Reserves and allowances deducted from asset accounts:				
Allowances for doubtful amounts <sup>(3)</sup>	\$ 53	\$ 104	\$ (19)	\$ 138
Year ended December 31, 2002				
Reserves and allowances deducted from asset accounts:				
Allowances for doubtful amounts	\$ 138	\$ 219	\$ (67)	\$ 290
Year ended December 31, 2003				
Reserves and allowances deducted from asset accounts:				
Allowances for doubtful amounts	\$ 290	\$ 81	\$ (128)	\$ 243

(1) Uncollectible amounts written off, net of recoveries.

(2) Includes reserves and allowances acquired of \$.4, \$72, and \$56 for the years ended December 31, 2003, 2002, and 2001, respectively.

(3) Prior year amounts have been reclassified to conform to current year presentation and have been restated for discontinued operations.

SECOND AMENDMENT dated as of January 15, 2004 (this “*Amendment*”), to the Five-Year Revolving Credit Agreement dated as of March 30, 2001, as heretofore amended (the “*Credit Agreement*”), among NORTHROP GRUMMAN CORPORATION, a Delaware corporation formerly known as NNG, Inc. (the “*Company*”); NORTHROP GRUMMAN SYSTEMS CORPORATION (“*Northrop Operating*” and, together with the Company, the “*Borrowers*”), a Delaware corporation formerly known as Northrop Grumman Corporation and the successor by merger to LITTON INDUSTRIES, INC.; the LENDERS (as defined in Article 1 of the Credit Agreement), JPMORGAN CHASE BANK and CREDIT SUISSE FIRST BOSTON, as Co-Administrative Agents, JPMORGAN CHASE BANK, as Payment Agent, SALOMON SMITH BARNEY INC., as Syndication Agent, and THE BANK OF NOVA SCOTIA and DEUTSCHE BANK SECURITIES INC. (formerly known as Deutsche Banc Alex. Brown Inc.), as Co-Documentation Agents.

A. Pursuant to the Credit Agreement, the Lenders have extended, and have agreed to extend, credit to the Borrowers.

B. The Company announced on August 20, 2003, a share repurchase program providing for the acquisition of common shares of the Company for cash consideration not to exceed (a) \$200,000,000 in the aggregate during calendar year 2003 and (b) \$500,000,000 in the aggregate during calendar year 2004. The Company may in the future announce additional share repurchase programs.

C. In connection with the foregoing, the Borrowers have requested that the Lenders agree to amend certain provisions of the Credit Agreement as provided herein. The Lenders whose signatures appear below, constituting the Required Lenders, are willing, on the terms and subject to the conditions set forth herein, so to amend the Credit Agreement.

D. Capitalized terms used but not defined herein shall have the meanings assigned to them in the Credit Agreement as amended hereby.

Accordingly, in consideration of the mutual agreements herein contained and other good and valuable consideration, the sufficiency and receipt of which are hereby acknowledged, the parties hereto agree as follows:

SECTION 1. *Amendments.* (a) The definition of “Fixed Charge Coverage Ratio” in Section 1.01 of the Credit Agreement is hereby amended to read as follows:

“*Fixed Charge Coverage Ratio*” means, at any Fiscal Date, the ratio of (a) the sum of (i) Consolidated EBITDA for the period of four consecutive fiscal quarters of the Company ending on such date minus (ii) Capital Expenditures during such period to (b) the sum of (i) Interest Expense for such period plus (ii) Restricted Payments (other than Excluded Restricted Payments) made by the Company or, prior to the Northrop Merger, by Northrop Operating during such period.

(b) The following new definitions are hereby inserted in Section 1.01 in their appropriate alphabetical positions:

“*Excluded Restricted Payments*” means cash Restricted Payments not greater than (a) \$200,000,000 in the aggregate during calendar year 2003 or (b) \$500,000,000 in the aggregate during any calendar year thereafter, in each case to acquire shares of the Company’s common stock pursuant to Stock Repurchase Programs.

“*Stock Repurchase Programs*” means the stock repurchase program announced by the Company on August 20, 2003, and stock repurchase programs that may in the future be announced by the Company, in each case pursuant to which the Company may acquire common shares of the Company for cash consideration.

(c) The definition of “Consolidated Net Income available for Restricted Payments” is hereby amended by inserting in clause (ii)(B) thereof, immediately after the words “redemption, purchase or other acquisition of any shares of its stock” the words “(other than any such redemption, purchase or other acquisition constituting an Excluded Restricted Payment)”.



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(d) Section 6.01 of the Credit Agreement is hereby amended by inserting in clause (a) thereof, immediately after the words “any such Restricted Payment” the words “(other than any Excluded Restricted Payment)”.

SECTION 2. *Representations and Warranties.* To induce the Lenders to enter into this Amendment, the Borrowers represent and warrant to such parties that (a) the representations and warranties set forth in Article III of the Credit Agreement are true and correct in all material respects on and as of the date hereof, except to the extent such representations and warranties expressly relate to an earlier date; and (b) no Default or Event of Default has occurred and is continuing.

SECTION 3. *Conditions to Effectiveness.* The amendments provided for in Section 1 shall become effective on the date (the “*Amendment Effective Date*”) on which the Payment Agent shall have received counterparts of this Amendment that, when taken together, bear the signatures of the Borrowers and the Required Lenders.

SECTION 4. *Effect of Amendment.* Except as expressly set forth herein, this Amendment shall not by implication or otherwise limit, impair, constitute a waiver of, or otherwise affect the rights and remedies of the Lenders, the Co-Administrative Agents, the Syndication Agent or the Co-Documentation Agents under the Credit Agreement or any other Loan Document, and shall not alter, modify, amend or in any way affect any of the terms, conditions, obligations, covenants or agreements contained in the Credit Agreement or any other Loan Document, all of which are ratified and affirmed in all respects and shall continue in full force and effect. Nothing herein shall be deemed to entitle any Loan Party to a consent to, or a waiver, amendment, modification or other change of, any of the terms, conditions, obligations, covenants or agreements contained in the Credit Agreement or any other Loan Document in similar or different circumstances. This Amendment shall apply and be effective only with respect to the provisions of the Credit Agreement specifically referred to herein. After the date hereof, any reference to the Credit Agreement shall mean the Credit Agreement, as modified hereby. This Amendment shall constitute a “Loan Document” for all purposes of the Credit Agreement and the other Loan Documents.

SECTION 5. *Counterparts.* This Amendment may be executed in any number of counterparts and by different parties hereto in separate counterparts, each of which when so executed and delivered shall be deemed an original, but all such counterparts together shall constitute but one and the same contract. Delivery of an executed counterpart of a signature page of this Amendment by facsimile transmission shall be as effective as delivery of a manually executed counterpart hereof.

SECTION 6. *Applicable Law.* THIS AMENDMENT SHALL BE GOVERNED BY, AND CONSTRUED IN ACCORDANCE WITH, THE LAWS OF THE STATE OF NEW YORK.

SECTION 7. *Expenses.* The Borrower agrees to reimburse the Payment Agent for all out-of-pocket expenses in connection with this Amendment, including the reasonable fees, charges and disbursements of Cravath, Swaine & Moore LLP, counsel for the Co-Administrative Agents.

IN WITNESS WHEREOF, the parties hereto have caused this Amendment to be duly executed by their duly authorized officers, all as of the date and year first above written.

NORTHROP GRUMMAN CORPORATION,

by: \_\_\_\_\_  
Name:  
Title:

NORTHROP GRUMMAN SYSTEMS CORPORATION,

by: \_\_\_\_\_  
Name:  
Title:

JPMORGAN CHASE BANK,  
individually and as Co-Administrative Agent and Payment  
Agent,

by: \_\_\_\_\_  
Name:  
Title:

CREDIT SUISSE FIRST BOSTON,  
individually and as Co-Administrative Agent,

by: \_\_\_\_\_  
Name:  
Title:

by: \_\_\_\_\_  
Name:  
Title:

SIGNATURE PAGE to  
SECOND AMENDMENT  
dated as of January 15, 2004  
to NORTHROP GRUMMAN CORPORATION  
FIVE-YEAR REVOLVING CREDIT AGREEMENT

To approve the Second Amendment:

Name of Institution: \_\_\_\_\_

by: \_\_\_\_\_  
Name:  
Title:

**NORTHROP GRUMMAN CORPORATION SUBSIDIARIES**

**Address for all subsidiaries is:**  
**c/o NORTHROP GRUMMAN CORPORATION**  
**Office of the Corporation Secretary**  
**1840 Century Park East**  
**Los Angeles, California 90067**

<u>Name of Subsidiary</u>	<u>Jurisdiction of Incorporation</u>	<u>Ownership Percentage</u>
Northrop Grumman Systems Corporation (formerly Northrop Grumman Corporation)	Delaware	100%
Newport News Shipbuilding Inc.	Delaware	100%
Northrop Grumman Space & Mission Systems Corp. (formerly TRW Inc.)	Ohio	100%

The company has additional operating subsidiaries, which considered in the aggregate or as a single subsidiary, do not constitute a significant subsidiary.

All above listed subsidiaries have been consolidated in the company's consolidated financial statements.

**INDEPENDENT AUDITORS' CONSENT**

We consent to the incorporation by reference in Registration Statement Nos. 333-107734, 333-59815, 33-59853, 333-68003, 333-61936, 33-67266, 333-100179, 333-100180, 333-103429 and 333-03959 on Form S-8; Registration Statement Nos. 333-78251, 333-85633, 333-71290, and 333-77056 on Form S-3; and Registration Statement Nos. 333-40862, 333-54800, and 333-83672 on Form S-4 of our report dated March 9, 2004 (which report expresses an unqualified opinion and includes an explanatory paragraph relating to the Company's change in method of accounting for goodwill and other intangible assets to conform to Statement of Financial Accounting Standards No. 142 – Goodwill and Other Intangible Assets), appearing in this Annual Report on Form 10-K of Northrop Grumman Corporation for the year ended December 31, 2003.

/s/ Deloitte & Touche LLP  
Los Angeles, California  
March 9, 2004

**POWER OF ATTORNEY IN CONNECTION WITH THE  
2003 ANNUAL REPORT ON FORM 10-K**

KNOW ALL MEN BY THESE PRESENTS, that each of the undersigned directors and officers of NORTHROP GRUMMAN CORPORATION, a Delaware corporation, does hereby appoint W. BURKS TERRY and JOHN H. MULLAN, and each of them as his or her agents and attorneys-in-fact (the "Agents"), in his or her respective name and in the capacity or capacities indicated below, to execute and/or file the Annual Report on Form 10-K for the fiscal year ended December 31, 2003 (the "Report") under the Securities Exchange Act of 1934, as amended (the "Act"), and any one or more amendments to any part of the Report that may be required to be filed under the Act (including the financial statements, schedules and all exhibits and other documents filed therewith or constituting a part thereof) and to any part or all of any amendment(s) to the Report, whether executed and filed by the undersigned or by any of the Agents. Further, each of the undersigned does hereby authorize and direct the Agents to take any and all actions and execute and file any and all documents with the Securities and Exchange Commission (the "Commission"), which they deem necessary or advisable to comply with the Act and the rules and regulations or orders of the Commission adopted or issued pursuant thereto, to the end that the Report shall be properly filed under the Act. Finally, each of the undersigned does hereby ratify each and every act and documents which the Agents may take, execute or file pursuant thereto with the same force and effect as though such action had been taken or such document had been executed or filed by the undersigned, respectively.

This Power of Attorney shall remain in full force and effect until revoked or superseded by written notice filed with the Commission.

IN WITNESS THEREOF, each of the undersigned has subscribed these presents this 9th day of March 2004.

/s/ RONALD D. SUGAR

\_\_\_\_\_  
Ronald D. Sugar

Chairman of the Board, Chief Executive Officer, President and  
Director (Principal Executive Officer)

/s/ JOHN T. CHAIN, JR.

\_\_\_\_\_  
John T. Chain, Jr.

Director

/s/ LEWIS W. COLEMAN

\_\_\_\_\_  
Lewis W. Coleman

Director

/s/ J. MICHAEL COOK

\_\_\_\_\_  
J. Michael Cook

Director

/s/ VIC FAZIO

\_\_\_\_\_  
Vic Fazio

Director

/s/ PHILLIP FROST

\_\_\_\_\_  
Phillip Frost

Director

/s/ CHARLES R. LARSON

\_\_\_\_\_  
Charles R. Larson

Director

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/s/ JAY H. NUSSBAUM

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**Jay H. Nussbaum**

Director

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/s/ PHILIP A. ODEEN

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**Philip A. Odeen**

Director

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/s/ AULANA L. PETERS

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**Aulana L. Peters**

Director

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/s/ KEVIN W. SHARER

---

**Kevin W. Sharer**

Director

---

/s/ JOHN BROOKS SLAUGHTER

---

**John Brooks Slaughter**

Director

---

/s/ CHARLES H. NOSKI

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**Charles H. Noski**

Corporate Vice President, Chief Financial Officer and Director  
(Principal Financial Officer)

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/s/ SANDRA J. WRIGHT

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**Sandra J. Wright**

Corporate Vice President and Controller (Principal Accounting  
Officer)

**CERTIFICATION PURSUANT TO  
RULE 13a-14(a)/15d-14(a) OF THE SECURITIES EXCHANGE ACT OF 1934,  
AS ADOPTED PURSUANT TO  
SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002**

I, Ronald D. Sugar, Chairman, Chief Executive Officer and President, certify that:

1. I have reviewed this annual report on Form 10-K of Northrop Grumman Corporation (“registrant”);
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant’s other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) for the registrant and have:
  - (a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
  - (b) evaluated the effectiveness of the registrant’s disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
  - (c) disclosed in this report any change in the registrant’s internal control over financial reporting that occurred during the registrant’s most recent fiscal quarter (the registrant’s fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant’s internal control over financial reporting; and
5. The registrant’s other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant’s auditors and the audit committee of the registrant’s board of directors (or persons performing the equivalent functions):
  - (a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant’s ability to record, process, summarize and report financial information; and
  - (b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant’s internal control over financial reporting.

Date: March 9, 2004

/s/ **Ronald D. Sugar**

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Ronald D. Sugar  
Chairman, Chief Executive Officer and President

**CERTIFICATION PURSUANT TO  
RULE 13a-14(a)/15d-14(a) OF THE SECURITIES EXCHANGE ACT OF 1934,  
AS ADOPTED PURSUANT TO  
SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002**

I, Charles H. Noski, Corporate Vice President and Chief Financial Officer, certify that:

1. I have reviewed this annual report on Form 10-K of Northrop Grumman Corporation (“registrant”);
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant’s other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) for the registrant and have:
  - a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this annual report is being prepared;
  - b) evaluated the effectiveness of the registrant’s disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
  - c) disclosed in this report any change in the registrant’s internal control over financial reporting that occurred during the registrant’s most recent fiscal quarter (the registrant’s fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant’s internal control over financial reporting; and
5. The registrant’s other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant’s auditors and the audit committee of the registrant’s board of directors (or persons performing the equivalent functions):
  - a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant’s ability to record, process, summarize and report financial information; and
  - b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant’s internal control over financial reporting.

Date: March 9, 2004

/s/ **Charles H. Noski**

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Charles H. Noski  
Corporate Vice President and Chief Financial Officer



**CERTIFICATION PURSUANT TO  
18 U.S.C. SECTION 1350,  
AS ADOPTED PURSUANT TO  
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the Annual Report of Northrop Grumman Corporation (the "Company") on Form 10-K for the period ending December 31, 2003, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Ronald D. Sugar, Chairman, Chief Executive Officer and President of the Company, certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that:

- (1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: March 9, 2004

/s/ **Ronald D. Sugar**

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Ronald D. Sugar  
Chairman, Chief Executive Officer and President

**CERTIFICATION PURSUANT TO  
18 U.S.C. SECTION 1350,  
AS ADOPTED PURSUANT TO  
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the Annual Report of Northrop Grumman Corporation (the "Company") on Form 10-K for the period ending December 31, 2003, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Charles H. Noski, Corporate Vice President and Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that:

- (1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: March 9, 2004

/s/ **Charles H. Noski**

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Charles H. Noski  
Corporate Vice President and Chief Financial Officer