



The Continuing Process of Renewal

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The Company

Motorola, Inc. is one of the world's leading manufacturers of electronic equipment, systems and components produced for both United States and international markets. Motorola products include two-way radios, pagers, cellular radiotelephones and other forms of electronic communications systems, semiconductors, defense and aerospace electronics, automotive and industrial electronic equipment, data communications and information processing and handling equipment. Motorola is one of the few end-equipment manufacturers that can draw on expertise in both semiconductor technology and government electronics.

On the Cover

The new Galvin Center for Continuing Education in Schaumburg, Ill., symbolizes Motorola's commitment to renewal. In addition to the classrooms and auditorium, the Center's advanced computer labs keep employees in the forefront of computer aided design and manufacturing (CAD/CAM), robotics and software development. The Center is designed for use by all Motorolans—at all levels and all functions.

Financial Highlights

Motorola, Inc. and Consolidated Subsidiaries, Years ended December 31

(In millions of dollars, except per share data)	1986	1985
Net sales	\$ 5,888	\$ 5,443
Earnings before income taxes	265	45
% to sales	4.5%	0.8%
Net earnings	194	72
% to sales	3.3%	1.3%
Net earnings per share	1.53	.61
Research and development expenditures	492	457
Fixed asset expenditures	567	641
Working capital	868	924
Current ratio	1.63	1.78
Return on average invested capital (stockholders' equity plus long- and short-term debt, net of short-term investments)	6.1%	2.4%
% of total debt less short-term investments to total debt less short-term investments plus equity	15.3%	26.9%
Book value per common share	21.48	19.14
Yearend employment (approximate)	94,400	90,200

Annual Meeting of Stockholders

The annual meeting will be held on May 4, 1987. A notice of the meeting, together with a form of proxy and a proxy statement, will be mailed to stockholders on or about March 20, 1987, at which time proxies will be solicited by the Board of Directors.

Form 10-K

After the close of each fiscal year, Motorola submits a report on Form 10-K to the Securities and Exchange Commission containing certain additional information concerning its business. A copy of this report may be obtained without charge by addressing your request to the Secretary, Motorola, Inc., Corporate Offices, Motorola Center, 1303 E. Algonquin Road, Schaumburg, Ill. 60196.

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Harris Trust and Savings Bank
111 W. Monroe Street
Chicago, Ill. 60603

Auditors

Peat, Marwick, Mitchell & Co.
303 E. Wacker Drive
Chicago, Ill. 60601

To Our Stockholders and Friends

Motorola resumed its growth in sales and earnings in 1986 as we began to see the benefits of the actions we have been taking to improve our businesses. It was a year that illustrated our continuing process of renewal—in terms of leadership and renewed commitment to quality, to our customers and to our employees.

Sales in 1986 increased 8 percent to a record \$5.89 billion from \$5.44 billion in 1985. Earnings rose to \$194 million, or \$1.53 per share, up from \$72 million, or 61 cents per share, in 1985.

Operations Overview

Communications Sector sales rose 11 percent, new orders increased 11 percent and backlog was up 23 percent. Operating profits were higher.

Sales in the Semiconductor Products Sector increased 9 percent, new orders climbed 42 percent and backlog was 3 percent lower. The sector recorded an operating profit for the year, compared with a loss in 1985.

Information Systems Group sales advanced 9 percent, new orders rose 10 percent and backlog was up 2 percent. Operating profits were higher.

Sales in the Government Electronics Group increased 6 percent, new orders were down 5 percent and backlog rose 13 percent. Operating profits declined.

Within the General Systems Group, sales of the Cellular Group rose 18 percent, new orders increased 13 percent and backlog was up 8 percent. Operating profits rose sharply. Motorola Computer Systems sales declined 17 percent, orders were down 25 percent and backlog was 35 percent lower. The operating loss was significantly lower than the loss recorded in 1985.

In the Automotive and Industrial

Electronics Group, sales were up 5 percent, orders increased 10 percent and backlog was 34 percent higher. Operating profits declined.

Senior Management

We began a series of organizational changes designed to put into place the next generation of senior management. The first phase of this plan went into effect July 1, 1986.

Robert W. Galvin continues as chairman of the board, the senior officership of the company. William J. Weisz, formerly chief operating officer, was elected chief executive officer and continues as vice chairman of the board. John F. Mitchell, formerly assistant chief operating officer, was elected chief operating officer and continues as president.

George M.C. Fisher, formerly senior vice president and assistant general manager of the Communications Sector, was elected senior executive vice president and deputy to the Chief Executive Office. Gary L. Tooker, formerly executive vice president and general manager of the Semiconductor Products Sector, was elected senior executive vice president and chief corporate staff officer. He replaced Robert N. Swift, who retired after 33 years of service with the company.

In the second phase, beginning January 1, 1988, George Fisher is to become president and chief executive officer and Gary Tooker is to become chief operating officer and will remain

as senior executive vice president. Bob Galvin is to continue as chairman. Bill Weisz and John Mitchell are to be designated as officers of the board and vice chairmen.

Several other officers were promoted during 1986, and some of our operations were restructured. The list of elected officers on pages 30 and 31 indicates with an asterisk which of the officers advanced in rank or assumed a new position since our last annual report to stockholders.

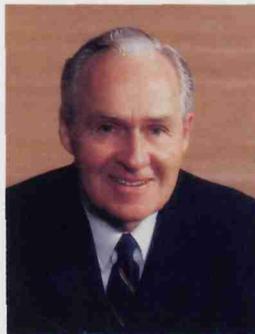
Board of Directors

The Board of Directors was expanded from 14 to 17, and three new directors were elected. They are George Fisher, Gary Tooker and David R. Clare, president of Johnson & Johnson.

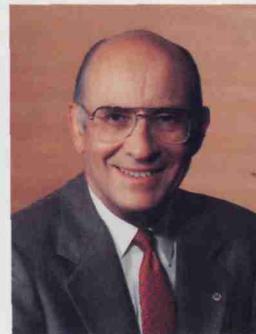
Globalization

Over the years, Motorola has become a global enterprise, and we are improving our performance throughout the world. Some of our efforts to gain more access to the important Japanese marketplace were successful during 1986, and we see great opportunities in this new relationship.

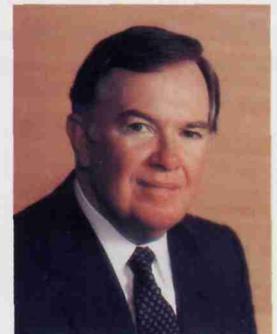
We announced an alliance with Toshiba Corporation covering establishment of a jointly owned semiconductor manufacturing facility in Japan and the exchange of product and process technology, as well as increased access by Motorola to the Japanese market. Details of this alliance are in the section on the Semiconductor Products Sector.



Robert W. Galvin



William J. Weisz



John F. Mitchell

Outlook

During 1987, we expect to be operating in an environment of modest economic growth and intense global competition in electronics. We believe, however, that the opportunity exists for continued sales growth and improved earnings performance. We expect to benefit from a program centered around renewing our quality commitment to our customers and reducing costs. We are confident that we can earn a greater share of our customers' business. Employees, most of whom are stockholders of Motorola, share this commitment, and we appreciate their dedication.

The improvement in the international trade climate, the lower dollar and lower interest rates should strengthen our businesses worldwide.

Looking farther into the future, we are optimistic about the growing applications for our products and services around the world. Electronics will become more and more important in the home, the car, the office and the factory, especially in densely populated, newly developing countries. Our technological and production expertise, the strong relationships with our customers, and our global capabilities should enhance Motorola's value to its stockholders and its position as a quality leader in electronics.

Yours very truly,

Robert W. Galvin
Chairman of the Board

William J. Weisz
Vice Chairman and Chief Executive Officer

John F. Mitchell
President and Chief Operating Officer

Renewal: The Driving Force

Throughout its history, Motorola has engaged in a continuous process of renewal to assure long-term growth. We have evolved from a consumer electronics company that established its roots by developing the car radio. Since the mid-1970s, when we divested the consumer-oriented end-equipment businesses, we have focused on high-technology markets in industrial, commercial and government electronics. Wherever possible, we have nurtured highly trained, direct selling and service organizations that stay close to our customers.

We have renewed our focus on finding new ways to grow and serve our customers with the highest quality products at the best possible price. We grow by expanding what we call our "total imaginable market." This means listening to our customers, giving free rein to our imaginations in developing the products and services they need and want, and, in fact, recognizing that new technology can create markets that could not be served before. As a result, we expand our core businesses into complementary product lines, and investigate emerging technologies that can grow into completely new businesses.

Manufacturing

This growth succeeds only when it is coupled with the constant renewal of manufacturing efficiency. We have concentrated our fixed asset expenditures on equipment that improves quality and enhances productivity.

A key tool in reducing costs is our cycle time management program. Shorter manufacturing cycles will result in lower inventories and more efficient use of assets. A vital component is our "Partnership for Growth" program, in which suppliers who meet our "just-in-time" delivery requirements benefit from stable, long-

term relationships. At Motorola, we will be applying cycle time management to all phases of the business, from research and design to marketing. The program, which fits well with our direct sales culture, will enable us to satisfy our customers sooner and better than our competition.

Quality

Early in this decade, Motorola initiated a formal program to increase quality tenfold over five years. Many of our manufacturing operations achieved and exceeded the goal well ahead of schedule, and it is being continuously renewed and even accelerated. Each year, as our operations receive quality awards from demanding customers, we focus our efforts on the ultimate quality goal of zero defects and complete customer satisfaction.



Using group technology cells, this semiconductor plant in Chandler, Ariz., has reduced cycle time significantly.

Training

Motorola's most important assets are its people, and we assign a high priority to teaching managers the concepts and strategies they need to renew their organizations. One example is our two-week Manufacturing Management Institute, where managers study manufacturing strategy and systems, with emphasis on computer-integrated short-cycle manufacturing, cost, quality, delivery and flexibility.

The results have been dramatic: One participant reorganized a 20-person section of his operation after attending the institute. Within a few months, the section increased its yield by 40 percent, while occupying an area less than half the former space.

Management, engineering, manufacturing, marketing and sales courses are held at or near facilities throughout the world, as well as at the new Galvin Center for Continuing Education in Schaumburg, Ill. In 1986, we invested more than \$40 million for training and education of 25,000 employees. Courses are designed for high benefit-to-cost ratios. A \$200,000 program for manufacturing personnel resulted in annual savings of \$6 million.

In the sections that follow, we will review the operations of our individual groups and sectors. Our commitment to renewal, of course, permeates all of our businesses. Our highly trained workforce can draw on Motorola's synergistic approach to solve customer problems and create new opportunities for future growth.

Communications Sector

The Communications Sector's sales rose 11 percent to \$2.24 billion in 1986, new orders increased 11 percent and backlog was up 23 percent from the end of 1985. Operating profits were higher.

The 1986 results include the operations of Storno A/S, acquired in April 1986. The results of the Cellular Group, discussed in the General Systems Group, are not included in the year-to-year comparisons.

International new orders rose sharply, especially in Europe. U.S. orders were higher in state and local

government, utility, transit and radio common carrier markets, while energy and federal government markets were weak.

Arthur P. Sundry, formerly general manager of the Communications Distribution Group, was promoted to assistant general manager of the sector.

During the year, the Federal Communications Commission allocated an additional 26 MHz of the 900 MHz spectrum for public safety and private land mobile radio, as well as cellular telephone services. This provides further growth opportunities for Motorola, since the additional spectrum will enable many users to expand their systems.

Demand increased for larger, more complex systems that integrate the advanced technologies the sector is developing. Once in place, these large systems create opportunities for add-on sales of Motorola mobile and portable radio equipment necessary for system expansion. Smartnet™ trunking, digital voice privacy and radio data systems all gained in marketplace acceptance.

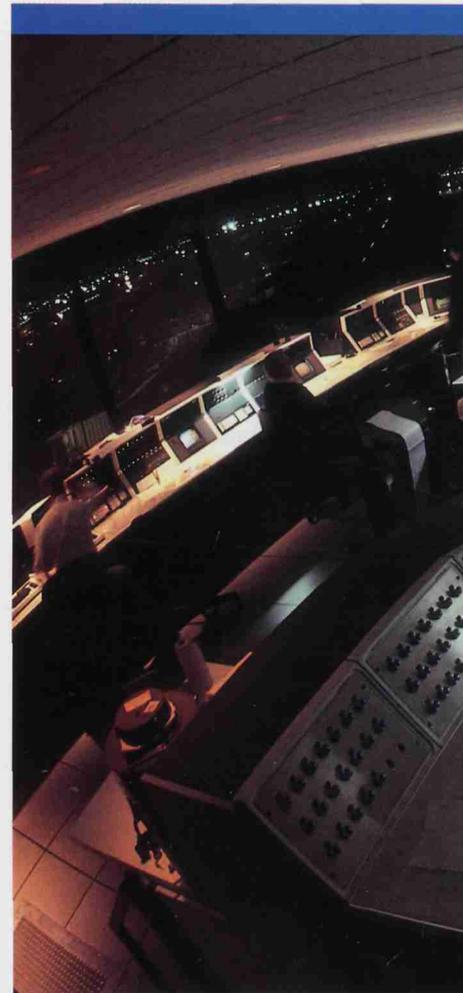
Large system orders in 1986 included a \$27 million award from New Jersey Transit for the first statewide mobile radio data system for buses and a \$13.5 million contract from the Louisiana State Police for a statewide Smartnet 800 MHz trunked system. Trunking provides the computer-aided sharing of channels by many users. The sector also received a \$15.9 million order from the U.S. Customs Service for an advanced voice-encrypted radio system, including fixed, mobile and portable radio products.

International Growth

In Japan, Nippon Telegraph & Telephone committed to buy approximately twice as many Pocket Bell pagers in 1986 as it did in 1985. The increased share of NTT's business is a result of Motorola's excellent record of

quality, on-time delivery and field performance.

The sector continued to expand its worldwide participation in service-provider businesses as a system operator. Nippon Motorola Ltd., in partnership with several Japanese companies, formed Tokyo Telemessager, which will provide radio paging service for the greater Tokyo area beginning in 1987. Through a joint venture with Hutchison Whampoa and others, Motorola also provides a paging service to a significant subscriber base in Hong Kong. In the United Kingdom, Motorola joined with Mercury Communications Ltd. to provide country-wide radio paging services.



From its new tower at Chicago's O'Hare Airport, American Airlines uses Motorola Centracom™ Series II control consoles to direct ground and ramp operations.

The sector is installing the first alphanumeric paging system in France for the Paris Fire Brigade, as well as an FM paging system for a French PTT subscriber service in Paris.

In Singapore, Motorola installed equipment for an alphanumeric paging system that is interconnected with the telephone network. In addition to automatic dial capability, the system enables messages to be sent directly from 15,000 Telex machines in Singapore. Data pages also may be put into the system through computers and page entry terminals.

Motorola completed its acquisition of Storno A/S from General Electric

Co. Storno is headquartered in Copenhagen, Denmark, and also has manufacturing facilities in Flensburg, West Germany, and Camberley, England. With the addition of Storno's two-way radio products and the success of Motorola's MC micro™ line, the sector significantly strengthened its position in Europe.

Motorola's MC micro mobile radio achieved widespread penetration of major commercial markets in the United Kingdom, France, West Germany and Scandinavia.

Paging

Motorola enhanced its worldwide leadership in paging with several new products, including the People Finder®

self-contained encoder/transceiver paging and two-way communications system. It is designed to provide cost-effective on-site paging for private systems in such places as hotels, restaurants and department stores. The People Finder system can accommodate all types of Motorola pagers, including alphanumeric. Up to 500 pagers or two-way portable radios can be selectively alerted from either the desktop unit or a telephone system.

The sector introduced the PMR 2000™ Personal Message Receiver, an alphanumeric pager with nearly twice the memory of its competitors. New features include a two-line, 32-character display and message lock and delete.



The new Bravo family of pagers features the Bravo™ Tone Alert pager, Motorola's smallest belt-worn pager, and the Bravo Numeric Display pager featuring five memories, memory protect and a second address. Other new paging products include the Minitor® II pager/monitor and Director™ II tone and voice pager. Each is about one-half the size of earlier models and offers more features than older versions. These two new pagers offer the highest audio output in the industry, a clear advantage in high-noise environments.

Two-way radio products

Motorola introduced the Expo® Touch Code series of two-way portable radios, which provide two-way communications plus paging and tele-

phone interconnect. It is the sector's smallest portable two-way radio.

In microwave radio, the new Starpoint® 23 family offers digital and video transmission capabilities in the uncongested 23 GHz frequency band.

Two new desktop control consoles were introduced. The Dispatcher® console provides control features never before found in a single-operator desktop console. The Centracom™ Series II Compact adds to Motorola's broad line of control products for trunked and conventional systems. The new Remote Operator Interface allows multiple consoles to communicate with each other across a city or coast to coast using ordinary telephone lines or microwave channels.

Radio Data Communications

In radio data communications, the Fort Lauderdale, Fla., Yellow Cab Co. ordered an automated taxi dispatch system for its fleet of more than 400 taxicabs. The dispatch system uses the new KDT® 440 mobile data terminal, which integrates the keypad, 4 by 40 character display and logic unit into a smaller, easily mounted single package. The systems application software was a joint venture between the sector and Motorola Computer Systems. The software runs on the new System 8000 super-microcomputer from MCS.

Development continued on a multi-city Motorola Data Radio Network targeted for Fortune 500 companies. Additional interface protocols for linking customer host computers were introduced in Chicago, where the system is on-line. New shared systems are being added in New York and Los Angeles, where testing has been completed.

Expansion

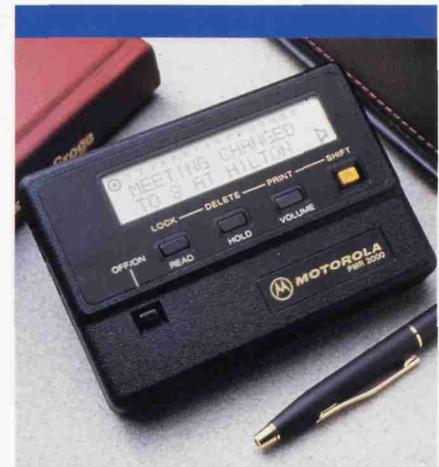
The sector occupied a new 30,000-square-foot manufacturing facility in Leon, Mexico. It produces communications products for Mexico and other Latin American countries.

Motorola Canada Ltd. was selected as the official radio communications supplier for the XV Winter Olympic Games in Calgary, Alberta, in 1988.



(above) This KDT® 440 mobile data terminal is part of the automated taxi dispatch system in Fort Lauderdale, Fla.

(right) The PMR 2000™ Personal Message Receiver has nearly twice the memory of other alphanumeric pagers.



Semiconductor Products Sector

Improved market conditions, new product introductions and tight cost controls helped the Semiconductor Products Sector achieve profitability and higher sales and orders.

Sales rose 9 percent to \$1.88 billion. New orders climbed 42 percent and backlog was down 3 percent. The sector recorded an operating profit for the year, compared with a loss in 1985.

Market demand grew during the first half of 1986, then continued stable during the remainder of the year. New orders were higher in all North American market segments except federal/

military. Increases were led by the computer, consumer electronics and industrial segments, while distributor orders were moderately higher. Many orders had short-term delivery requirements as customers worked to minimize component inventories.

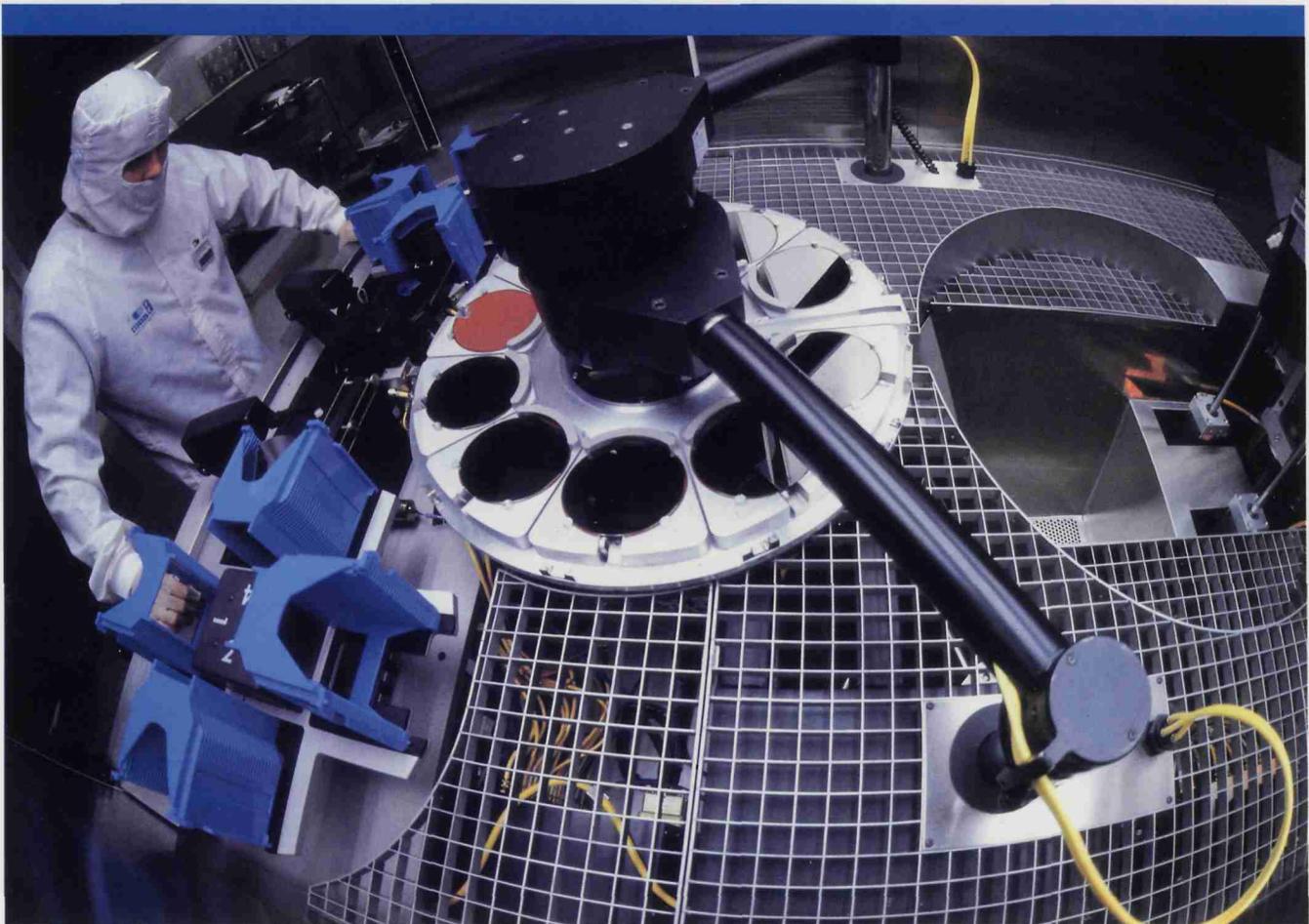
Internationally, orders were higher in all regions, especially in Asia, where export-market manufacturing rebounded. The stronger Japanese yen had a positive effect on the sector's performance.

Demand increased for all major product lines except devices made to military specifications. Average selling prices were under pressure in the second half because of excess industry capacity.

James A. Norling was promoted to general manager of the sector, succeeding Gary L. Tooker. Thomas D. George, general manager of the IC Wafer Manufacturing Group, succeeded Norling as assistant general manager of the sector.

Expenses remained tightly controlled throughout 1986. Cycle times were reduced by as much as 50 percent in some manufacturing operations, and statistical process control measures continued to be implemented.

A new Electronic Data Interchange system for order processing was inaugurated, and will be expanded throughout the world in 1987. Product quality and on-time delivery performance continued to improve.



This new high-energy ion implanter in Austin, Texas, uses clampless disk technology to handle six-inch wafers, increasing yield by 10 percent in the production of application specific integrated circuits.

Alliances

Motorola announced several cooperative agreements, including an alliance with Toshiba Corporation. Under terms of this agreement, Toshiba will transfer advanced DRAM (dynamic random access memory) and SRAM (static random access memory) product designs and process technology to Motorola production facilities worldwide. Toshiba also will purchase microprocessors from Motorola between 1987 and 1991, beginning with 8-bit and 16-bit components and expanding to include 32-bit devices later.

A joint venture manufacturing facility in Japan will produce MOS (metal-oxide semiconductor) DRAMs up to 4-megabit density; SRAMs up to 1 megabit, along with 8-bit, 16-bit and, eventually, 32-bit HCMOS (high performance, complementary MOS) microprocessors. Motorola will transfer additional technology to the joint venture as Motorola gains greater access to the Japanese market. The joint venture will receive technology from both companies. The facility, to be located in Izumi, Japan, is expected to begin production in the first quarter of 1988.

In the growing voice/data communications field, Motorola and Northern Telecom announced a cooperative agreement to develop a family of circuits based on the Integrated Services Digital Network (ISDN) standard.

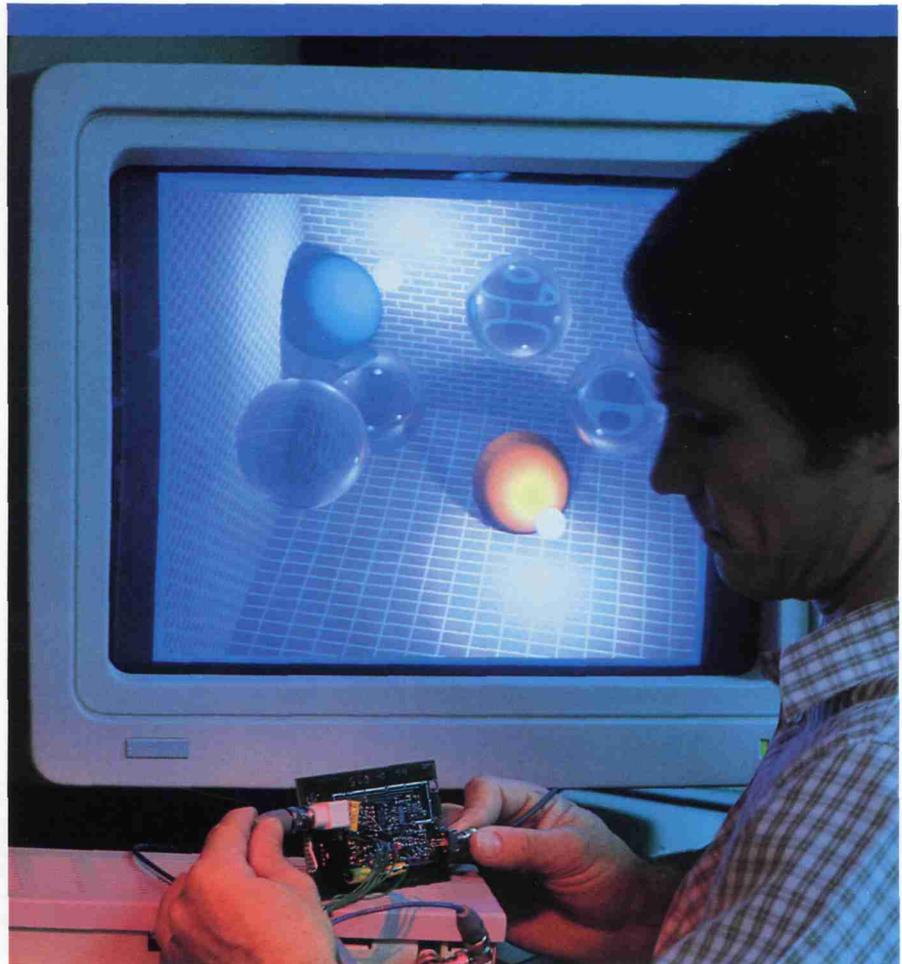
Motorola and Silicon Compilers Inc. reached a cooperative agreement for the design and fabrication of advanced semi-custom integrated circuits. Using automated design technology developed by Silicon Compilers, customers can have their devices produced by Motorola in 1.25 or 2-micron HCMOS processes for both commercial and military applications.

Leadership in Microprocessors

Motorola demonstrated its leadership as a supplier of "computers on a chip" by introducing higher performance versions of the MC68020 32-bit HCMOS microprocessor and announcing a second-generation machine, the

MC68030. At yearend, more than 125 companies worldwide were producing systems using the 68020, and annual shipments reached 250,000, a five-fold increase over the 1985 rate. Applications include multi-user office computers, computer-aided engineering and graphics workstations, parallel processors, robotics and factory automation, communications and classified military programs.

The new 20 MHz and 25 MHz versions of the 68020 permit a top sustained throughput of 5 million instructions per second (MIPS) and burst speeds of 12.5 MIPS. The second-generation MC68030, scheduled for sampling in mid-1987, uses a



Final evaluation of a new red-green-blue module that enables high-resolution graphics to be transmitted more than half a mile over fiber-optic cable.

"Harvard-style" parallel architecture and other features to produce twice the performance of the 68020 at the same megahertz rating. The 68030 maintains full software compatibility with the existing 8-, 16- and 32-bit M68000 family. A companion device, the second-generation MC68882 floating point co-processor, also was announced.

Motorola introduced two general-purpose digital signal processors featuring 10.25 MIPS performance. These HCMOS devices, the DSP56000 and DSP56001, address applications ranging from speech recognition and synthesis to three-dimensional imaging.

The sector expanded its role in General Motors' Manufacturing Automation Protocol (MAP), a communications standard adopted by leading manufacturers for networking all intelligent systems in the factory environment. New MAP devices include a single-chip microcontroller for use as a low-cost interface in factory automation systems, and the carrierband modem, a bipolar device for high-speed communications.

Expansions in the 8-bit microcomputer lines included a new HCMOS device with 4,000 bytes of EEPROM (electrically erasable programmable read-only memory). It is designed for alterable memory applications such as smart credit cards and other portable data carriers, a market in which Motorola expects to be a leading supplier.

Analog and Logic

New products added to the sector's analog portfolio included a BIMOS power switch for automotive use, which combines bipolar and MOS technologies on a single chip, and custom circuits for engine controls. Communications devices ranged from a voice-switched speakerphone circuit to universal digital loop transceivers for the ISDN market.

Expansions to logic IC families included 22 more bipolar FAST (Fairchild Advanced Schottky Transistor) devices. Development began on an advanced bipolar ECL (emitter-coupled logic) family.

Memory Devices

The sector began producing a family of ultra-fast 25- and 35-nanosecond HCMOS fast static RAMs in 16 and 64 kilobit densities using double-metal, double-polysilicon. Faster and higher density SRAMs and EPROMs are to be introduced in 1987. In bipolar memory, Motorola introduced the industry's first 10-nanosecond ECL PROM, organized 256-word by 4-bit.

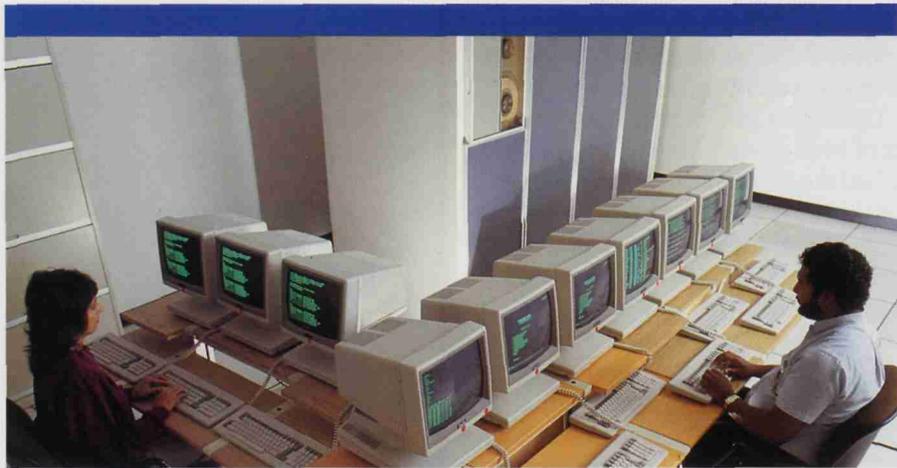
Motorola re-entered the 64K and 256K DRAM market through a dice

purchase agreement with Toshiba Corp. The sector is assembling and testing the devices.

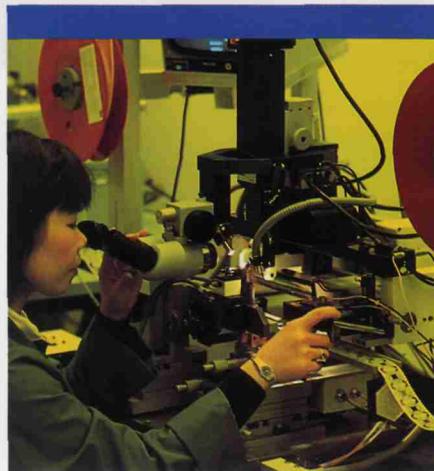
Application Specific ICs

For the application specific integrated circuit (ASIC) market, Motorola and NCR Corp. introduced an expanded library of high-performance, 2-micron, double level metal CMOS standard cells. Initially featuring more than 140 stand-alone cells, this new semi-custom library uses over-the-cell metal routing for improved speed and integration. Many high-level functions, including an 8-bit microprocessor core, are to be available in early 1987.

In gate arrays, an advanced family of HCMOS, 2-micron logic arrays



(above) Microelectronics and Computer Technology Corp., Austin, Texas, uses this multiprocessor for research into the processing of large data bases, massively parallel computing and advanced computer architectures. Motorola's microprocessor technology makes advanced computer research more productive.



(left) Tape-automated bonding technology permits development of gate arrays with 360 leads on a die that is only one-fourth the size of standard wire-bonded devices.

offering densities up to 8,500 gates was introduced. A new bipolar ECL 10,000-gate array with speeds under 250 picoseconds also was introduced, and has been designed into future generations of supercomputers. Development continued on the BIMOS array family, including a 10,000-gate device with user-configurable memory.

Expanded design services for ASICs were inaugurated with the addition of five independent design centers and new agreements with three national distribution companies.

Discretes

The sector added to its line of more than 15,000 types of discrete semiconductors. The major thrust was in power MOSFETs (MOS field-effect transistors). A new line called SENSEFETs™ was introduced for applications such as monitoring current loads in motor controls.

Other new products include a family of high-power transistor modules called the Energy Management Series for six-step and pulse-wide modulator motor control systems, a series of aluminum gallium arsenide light-emitting diodes and a digital output detector for fiber optics systems.

The sector's research laboratories continued their involvement in the U.S. Department of Defense Very High Speed Integrated Circuit (VHSIC) program. In Phase One, all yield enhancement goals for an advanced 1.25 micron CMOS process were met. In Phase Two, the ability to fabricate both bipolar and CMOS half-micron designs was demonstrated.

Global Expansion

To serve its global customer base, the sector added facilities in Europe and

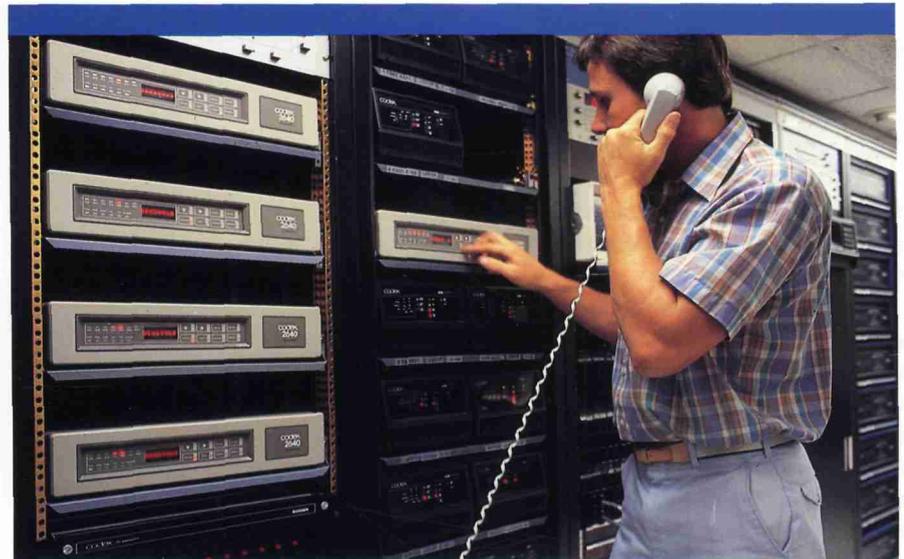
Asia. A new IC design center opened in Hong Kong.

In Japan, an ASIC design unit began operating at the Nippon Motorola Ltd. facility in Tokyo, and ASIC assembly and testing capability, along with TMOS production, was added to the Aizu Wakamatsu facility. Production of surface-mount and dual-inline devices began in a new assembly plant near Taipei, Taiwan. In Europe, the new HCMOS six-inch wafer fabrication line in East Kilbride, Scotland, began pilot production of microcomputer chips. This advanced plant is capable of processing down to 1-micron geometries. Construction of a new semiconductor facility began in Munich, West Germany.

Information Systems Group

Sales in the Information Systems Group (ISG) advanced 9 percent, new orders rose 10 percent and backlog was up 2 percent. Operating profits were higher. The results of Motorola Computer Systems, discussed in the General Systems Group, are not included in the year-to-year comparisons.

Demand was high for ISG's broad line of data communications products, despite softness in the computer industry. Tight cost controls and the success of new product lines contributed to the growth in operating profits.



Codex modems help Pacific Power & Light Co. keep electricity flowing to its 650,000 customers. A data communications specialist uses one of the Codex 2600 Series of modems to verify line quality.

While expanding its leadership in the modem market, the group introduced several new products for the broader networking arena, and continued its efforts to become a fully integrated supplier of digital communication networks.

Codex

New products from Codex include the 2250 and 2260 Series V.32 modems for the dial line market, the fastest

growing segment of the industry. The V.32 standard establishes full-duplex data transmission over two-wire dial lines at 4,800 and 9,600 bits per second. The newest addition to the Codex 2600 Series of leased-line modems is the 2650, a multipoint modem with eight-state trellis-coded modulation operating at 14,400 bps.

Codex introduced the 6003 Intelligent Network Processor, a point-to-point statistical multiplexer supporting four or eight asynchronous terminal ports. Demand was excellent for the 6740 nodal processor and the new 4840 Network Management System designed for mid-sized networks. To meet the need for connectivity and

compatibility with IBM systems, Codex announced the 4255 SNA Gateway, a multifunction cluster controller and protocol converter.

Codex's new entry into the digital networking world is the 6216, the industry's first totally software-driven digital transmission multiplexer. Users can control and configure channels and switch ports from a central site terminal.

Participating in the engineering and design of the emerging Integrated Service Digital Network (ISDN) technologies, Codex is developing a prototype terminal adaptor. It is to be used in the Phoenix, Ariz., ISDN trial being conducted by Mountain Bell, a unit of U S

West. The adaptor will allow customers to connect a variety of existing terminal equipment to the ISDN network, eliminating the need for specialized ISDN terminals.

Universal Data Systems

Universal Data Systems (UDS) expanded its Sync-Up™ line of IBM compatible plug-in cards that provide terminal emulation and modem hardware on one card. Used for micro-to-mainframe and micro-to-minicomputer communication, the Sync-Up line includes four modem speeds and five software packages. It is offered as both an OEM and end-user product, and is becoming the industry standard for synchronous PC communications.

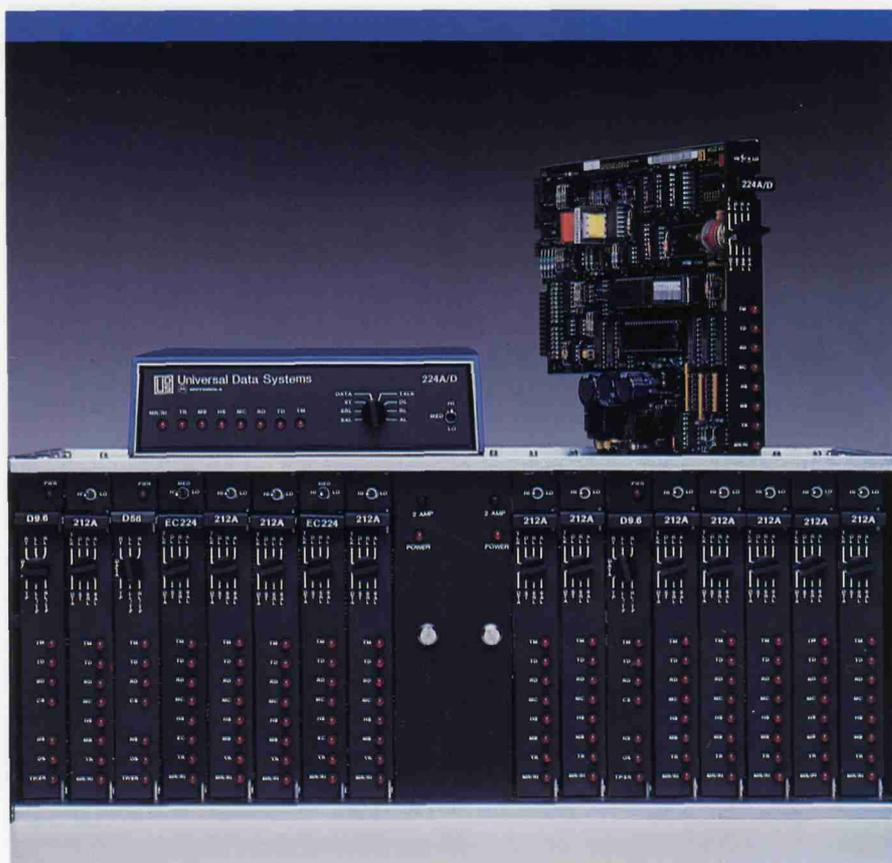
UDS introduced a multiplexer with a built-in Digital Service Unit that operates up to 56,000 bps over the DDS network. Another DDS product, the model SW56, has been tested and approved by AT&T for use on its new ACCUNET® Switched 56 network.

Demand was high for UDS high-speed modems, including the industry-standard V.33 modem, which offers trellis-coded capability at 14,400 bps over private lines.

International data communications orders improved sharply. ISG won contracts to supply data communications equipment to customers with private networks in Canada, the United Kingdom, France, West Germany, Portugal, Japan, Taiwan, Korea, Mexico, Colombia and Argentina.

During 1986, ISG stressed manufacturing processes to shorten cycle time and improve quality and productivity. New manufacturing technologies and customized robotic applications were put into effect.

Codex opened its new 250,000-square-foot headquarters facility in Canton, Mass., in September.



The UDS Universal Data Shelf™ offers telephone companies the flexibility to select the product mix and power requirements that best meet their data communication requirements. A combination of 16 UDS analog and digital modems can be installed in the shelf for central site application.

Government Electronics Group

Sales for the Government Electronics Group (GEG) increased 6 percent, while new orders were down 5 percent from the exceptional rate in 1985. The lower order rate was largely attributable to slowdowns and stretchouts of contract awards. Backlog at yearend was 13 percent higher than a year ago.

In meeting the new challenges within the defense contracting environment, GEG elevated the compliance function within the group in 1986, and proactively increased staffing, employee education and training, along with internal audits and the development and review of new and existing policies and procedures. These compliance measures reinforced the group's continuing commitment to high ethical standards in doing business with the government.

While the group's contract performance remained comparable to 1985, operating profits declined for the year. The lower operating profit is attributable to increased reserves for contract adjustments and costs associated with the group's elevated compliance measures mentioned earlier. U.S. government audits and the systems reviews also continued to adversely affect the group's profits in 1986.

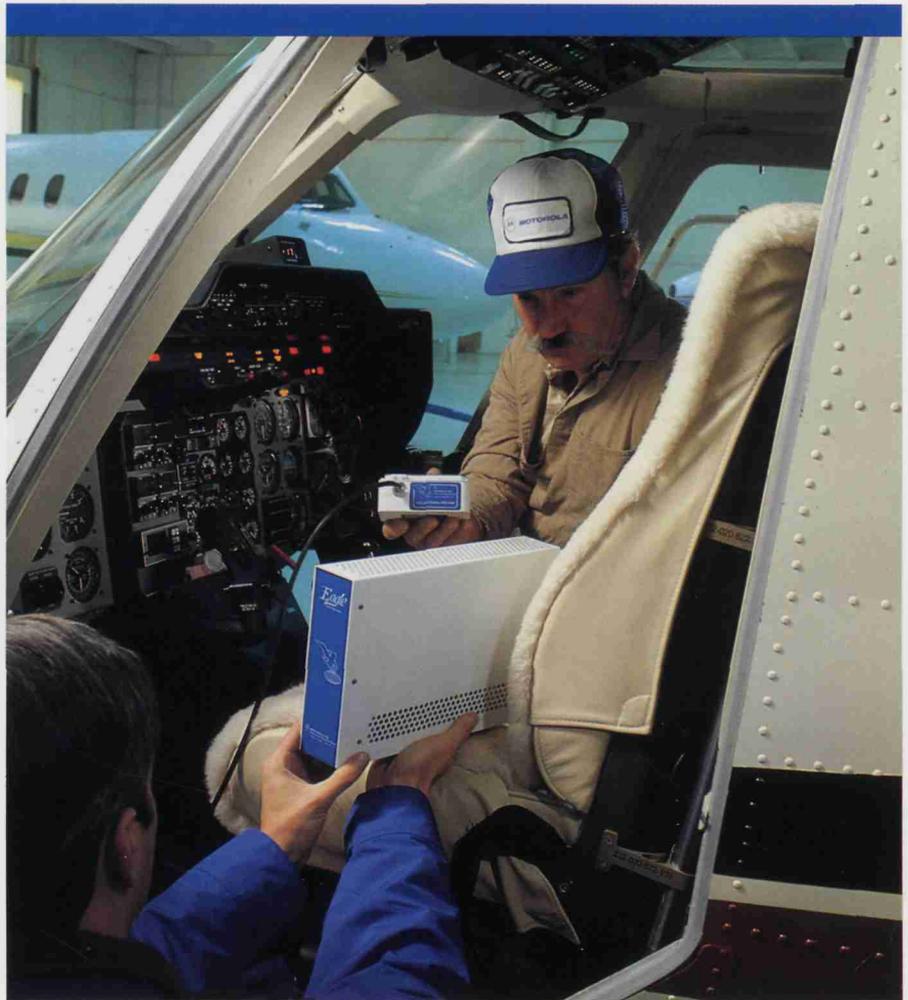
Despite these conditions and more aggressive competition, GEG succeeded in securing major follow-on funding for several programs. The group received two contracts totaling \$73 million to provide additional FMU-139/B fuzes and FZU-48 generators, in support of both U.S. Navy and Air Force requirements. The awards represent additional funding to existing full-scale production contracts, and include the exercise of an additional option.

GEG received several other significant contracts in 1986, including:

- A \$58 million follow-on production award from the U.S. Navy to manufacture target detecting devices for the Navy's Standard Missile. The group has produced these types of devices for 14 years, and the program continues to represent GEG's longest running production effort.
- \$20 million in funding from the U.S. Navy for additional UHF Demand Assigned Multiple Access (DAMA) units, and electronic maintenance components. The awards represent the exercise of options on previous production contracts.
- A \$15 million contract from the U.S. Army to develop a downsized ver-

sion of a ground station module for an airborne, joint-service radar-based surveillance system (Joint STARS). The module will be a highly mobile, smaller version of the Joint STARS ground station module, which GEG developed and is producing under a previous Army contract. The group also received an \$18 million award from Grumman Corp. to provide color raster scan display modules for the Air Force's airborne portion of the full-sized Joint STARS system.

- Under a \$50 million award from the National Security Agency, a corporate-wide team led by GEG is producing the STU III future secure voice system telephone instrument.



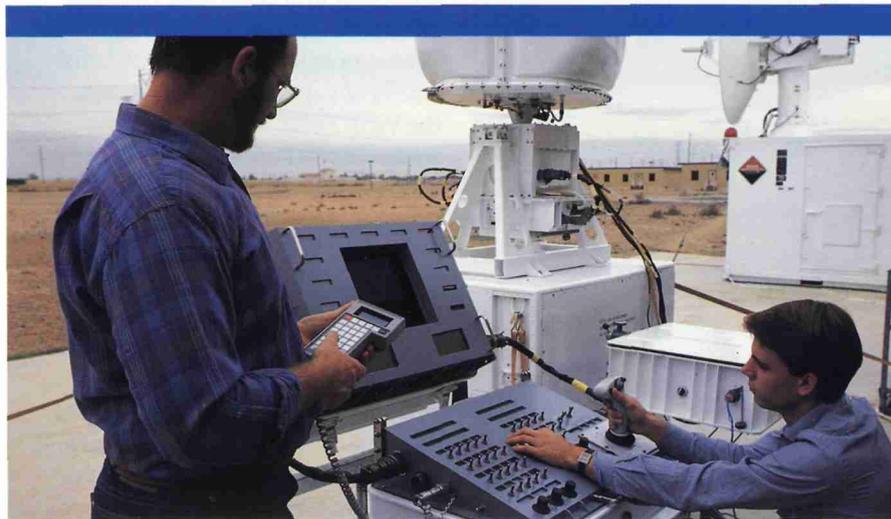
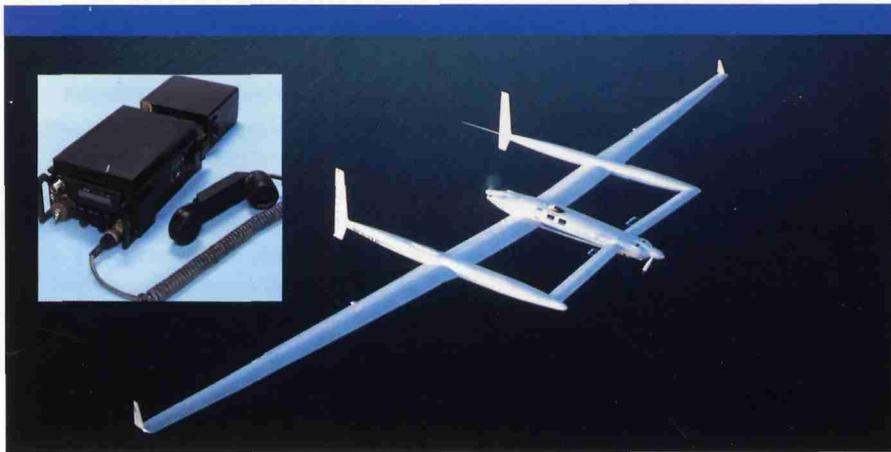
Surveying by helicopter is one of the many applications for Motorola's new Eagle Global Positioning System.

- A \$5.5 million development contract from Sanders Corp. to define an RF receiver subsystem for the joint Air Force/Navy Integrated Electronic Warfare System (INEWS), which is intended to provide increased aircraft survivability and enhanced mission capability. Teamed with General Electric and Sanders, GEG's involvement in this program represents major progress in further establishing the group in the electronics countermeasures market.

Communications equipment designed and produced by GEG contributed to the success of the historic flight of the Voyager aircraft as it estab-

lished a new world record for a non-stop, non-refuel flight around the world. Communications equipment lent to the Voyager project included an LST-5B tactical UHF satellite radio, which assisted the crew in communicating with ground mission control and in tracking volatile weather conditions. The Voyager crew selected the 7.5 pound, advanced military radio because of its light weight, reliability, performance and versatility in communicating through satellites.

GEG completed and occupied a 382,000-square-foot facility in Chandler, Ariz. It serves as headquarters of the Strategic Electronics Division.



(top) A lightweight LST-5B UHF satellite transceiver was used on the Voyager aircraft's historic nonstop flight around the world without refueling.

(above) The portable Integrated Target Control System developed for the U.S. Navy controls remotely piloted vehicles at target ranges on the Atlantic and Pacific coasts and at sea.

General Systems Group

During the General Systems Group's first full year of operation, its two major businesses made important changes and major progress.

Cellular

Sales of the Cellular Group rose 18 percent, new orders increased 13 percent and backlog was up 8 percent. Operating profits rose sharply.

Motorola continued to expand its leadership as a supplier of cellular telephone systems. The number of markets awarded to Motorola exceeded 125 worldwide by the end of 1986. Of the total, 76 systems were in service.

Internationally, the Cellnet system in the United Kingdom continued its rapid growth. New system awards were received from Thailand, Gabon and the Dominican Republic, as well as a second award from the People's Republic of China for a system in Shanghai.

In the United States, existing systems grew rapidly and new business resulted from the extension of Federal Communications Commission construction permits to cities smaller than the top 90. Motorola cellular systems began commercial operation in several major markets, including New York, Philadelphia and Dallas. Significant new awards for additional markets were received from current customers, including United Telespectrum and Centel.

Motorola received a major award from the Atlanta market. The system will employ an EMX™ 2500, a very high-capacity exchange designed to meet the longer range switching requirements of major metropolitan areas. Another new product put into widespread use was the LD-8 base station, which is optimized for low-density cell sites most often found in smaller cities.

The new DMX, or Distributed Mobile Exchange, permits multiple EMX switches to be interconnected and act as a single exchange, even though the switches may be geographically dispersed. This will be used in nationwide or "corridor" configurations.



(above) The new Tough Talker™ Transportable cellular telephone delivers two hours of talk time before battery recharging, and is fully compatible with other Mini T.A.C.™ mobile telephones and accessories.

(right) The Motorola System 8000™ super-microcomputer is the first of a new family of products employing both open-architecture hardware and an open software operating system. These products address one of the most rapidly growing segments of the computer market, in which a single super-microcomputer is shared by up to 32 users.

In subscriber products, the Cellular Group introduced a new generation of mobile telephones being built in the Arlington Heights, Ill., facility. They include the Mini-T.A.C.™ and Digital Micro Transceivers. A new transportable cellular phone, the Tough Talker™, weighs only 9½ pounds and delivers a full two hours of talk time, twice as much as competitive standard units. The group also introduced a fifth-generation portable cellular phone.

Major orders for subscriber equipment were received from several regional Bell operating companies, major independents and non-wireline operators. Deliveries began to customers in West Germany's NETZ-C

(450 MHz) Cellular Car Telephone System.

Motorola Computer Systems

Motorola Computer Systems (MCS) sales declined 17 percent, orders were down 25 percent and backlog was 35 percent lower. New systems orders were slightly higher in the second half of the year, compared with the first half. Costs were reduced during the year, and the operating loss was significantly lower than the loss recorded in 1985.

Operations were restructured to take better advantage of Motorola's leadership in semiconductors and microprocessors. Three new divisions were formed. The Microcomputer Division includes the Microsystems Operation of the Semiconductor Products Sector and the Tempe, Ariz., unit of MCS. This division sells computer products at the board and systems level to original equipment manufacturers. The Computer Systems Division adds applications expertise to provide total systems solutions for end users. It also markets to vertical and niche markets through value added resellers, independent software vendors and complementary marketing organizations. The Field Service Division provides customer support and all service functions for the Microcomputer and Computer Systems divisions.

Motorola introduced a powerful family of super-microcomputers, the VISION/32™ system and the System 8000 family. They feature the MC68020 32-bit microprocessor, VME bus architecture and the latest release of the UNIX V/68 operating system. (UNIX is a trademark of AT&T.) Implementation of the UNIX System V Release 3 allows users to develop, execute, and support technical, commercial and network applications. Key features of the release include virtual memory, remote file sharing with streams network protocol and media independence.



With the VISION/32 system, existing customers using VISION on-line transaction processing programs on their MCS Series 4000, 4500 and 5000 systems can run their applications under UNIX with little or no change.

Enhancements to the MCS Series 5000 family include expanded memory, an increase in processor speeds, and several new matrix printers.

Several new PC connectivity products were introduced to allow individual PCs to be integrated with departmental resources and networking facilities through a System 8000.

An expanded distribution agreement with Philips International B.V.

gives Philips distribution rights in 18 European countries for the Motorola Series 4000, 5000 and VISION/32 systems. The VISION/32 system provides existing Philips users the same kind of bridge into UNIX-based systems as it does for existing MCS customers.

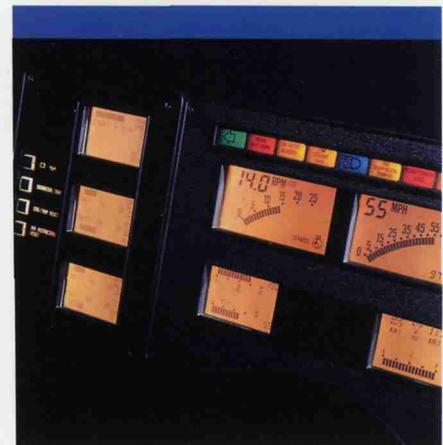
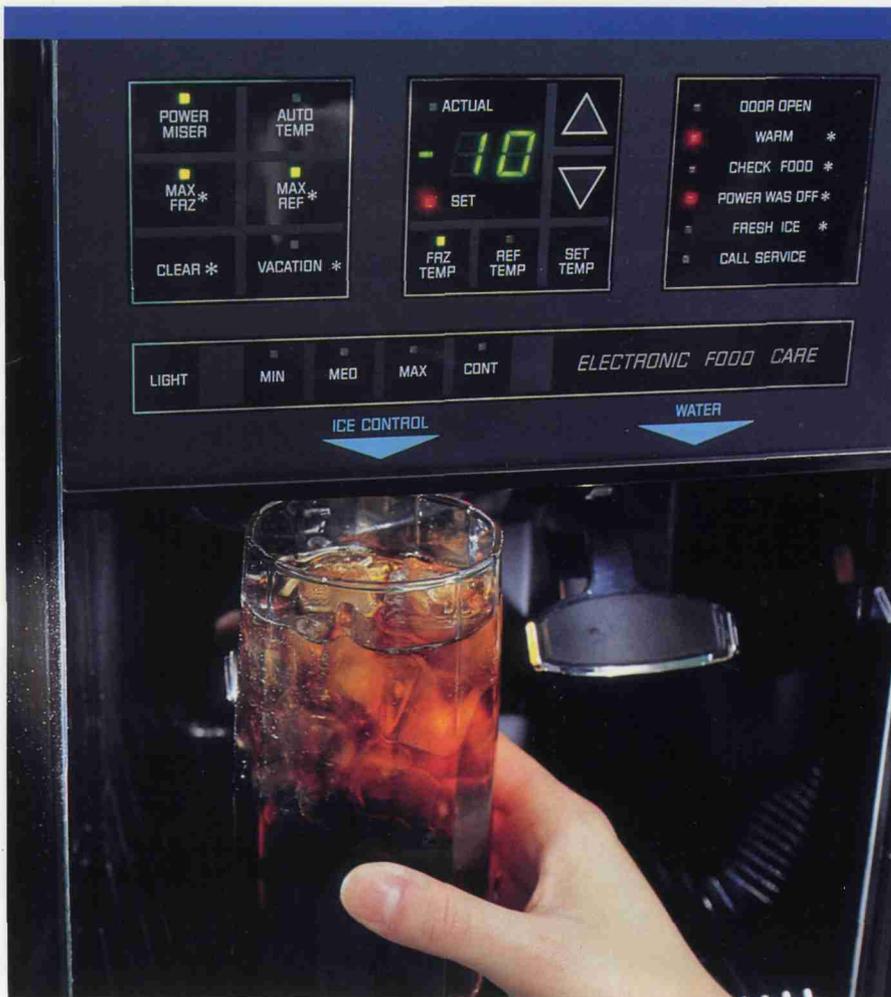
Automotive and Industrial Electronics Group

Automotive and Industrial Electronics Group (AIEG) sales were up 5 percent, orders increased 10 percent and backlog was 34 percent higher. Operating profits declined, because of the start-

up costs at a new manufacturing facility in Taiwan, discontinuation of certain product lines, and provisions for the pending move to a new headquarters facility. High demand for passenger car electronics products offset softer market conditions in other businesses.

The group signed an agreement to sell its IBM 3270-compatible terminal business and phased out of certain display product lines and markets in order to focus on other areas more in line with its long-term strategy.

AIEG reorganized to strengthen its globalization efforts and market focus. The group's various international operations were folded into their



(above) This advanced-concept instrument cluster for trucks uses Motorola's 68HC11 microprocessor to offer improved reliability, enhanced features, programmability and ease of installation.

(left) This electronic food care warning system monitors the temperature of the refrigerator and freezer and warns the user with visual and audible signals if the door is ajar or the unit needs service. AIEG supplies the control module for the system.

respective businesses, which now have worldwide profit-and-loss responsibility. Automotive electronics activities were reorganized based on the markets served—passenger car electronics, heavy vehicle electronics, and sensors and power controls.

Market expansion

AIEG benefited from greater application of its main passenger car electronics products. Ford Motor Co. is using Motorola engine control systems in more of its 1987 models. Volume shipments of sensors began from the group's Taiwan facility for Chrysler Corp.'s 1987 models.

Product, technology, customer and geographic coverage was expanded during the year. The group received a letter of intent from a major U.S. automotive manufacturer for an engine management system program and was awarded development contracts for mapped ignition from several major European car manufacturers.

AIEG began shipping an electronic cruise control module for Cummins Engine Co., a leading U.S. diesel engine manufacturer, and received a major instrument cluster program from a U.S. truck manufacturer. KHD, a German diesel manufacturer, awarded a contract for an electronic diesel engine control program.

AIEG developed LCD display instrumentation that is being sampled by U.S. truck producers and began several development programs in mass air flow sensor technology, which will be used in the next generation of engine management systems.

Electronic appliance control applications were further expanded beyond microwave ovens. AIEG received a contract for a high-volume laundry control production program and began producing a refrigerator control. Agreement was reached with a major Far East appliance manufacturer for the long-term supply of electronic controls.

Market response to the group's ultra-high-performance monochrome monitors remained strong. Production

shipments began to two suppliers of computer-aided engineering systems.

New facilities

AIEG invested heavily in worldwide customer support and production capabilities. The new manufacturing operation in Taiwan now produces a majority of the group's appliance controls and certain sensor products. Hybrid capacity in France was expanded and ground was broken in Taiwan to meet future production needs.

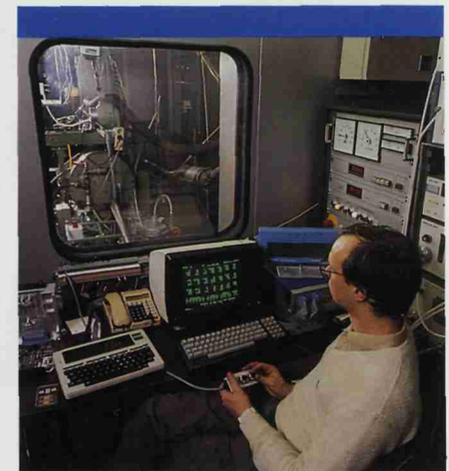
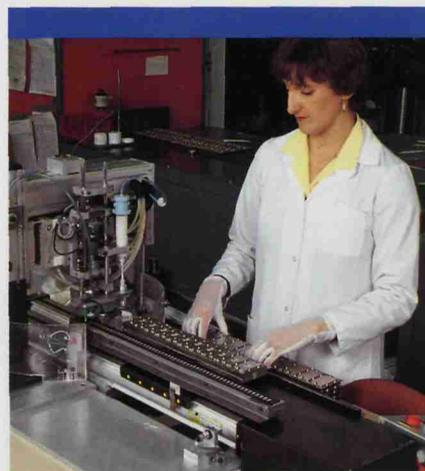
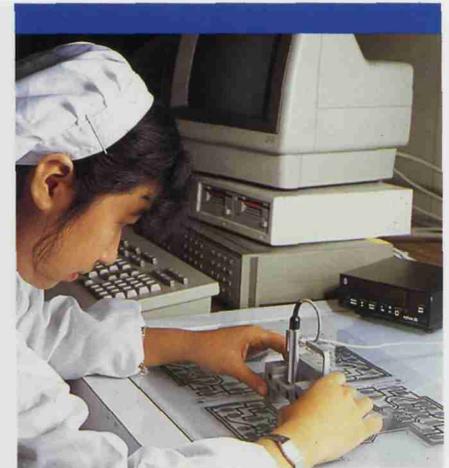
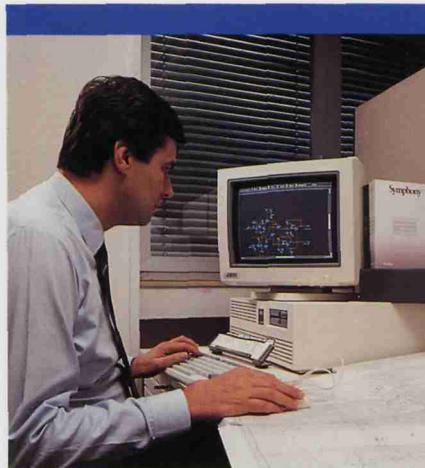
An automotive design center opened in Frankfurt, West Germany, augmenting the group's European test center, and a new Detroit design center began serving the U.S. automotive

community. The group also opened a sales and marketing office in Hong Kong to serve the Asia-Pacific region.

A 27-acre campus was purchased in Northbrook, Ill., where Chicago-area operations will be consolidated in 1987.

AIEG emphasized its commitment to customer service and quality. The group stressed the use of statistical control, aggressive supplier certification, tightened product specifications and product application testing.

To ensure availability of skilled personnel, AIEG intensified job rotation efforts across regions and functions, and stepped up strategic training programs, including program management and supervisory development.



AIEG employees serve their customers throughout the world: (upper left) mapped ignition circuitry layout at the new automotive design center in Frankfurt, West Germany; (upper right) the appliance control and sensor manufacturing facility in Chung-Li, Taiwan; (lower left) the hermetic regulator production line in Angers, France; and (lower right) vehicular electronics applications and systems laboratory in Darmstadt, West Germany.

Financial Review

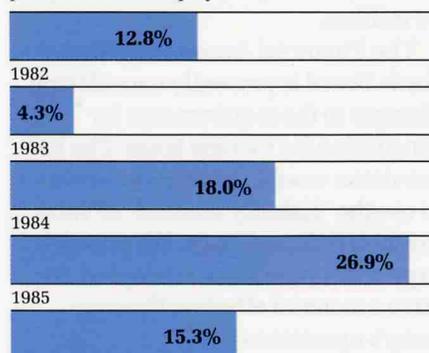
Financial Condition

In 1986 Motorola took a variety of actions to further strengthen its balance sheet. In particular, during the first quarter we issued 8 million new shares of common stock and used the proceeds to reduce short-term debt. Total debt has decreased from \$996 million at yearend 1985 to \$641 million at the end of 1986, which is approximately the same as yearend 1984. Net of short-term investments, the debt to debt plus equity ratio decreased from 26.9 percent to 15.3

Net Debt to Net Debt plus Equity*

(As of Yearend)

* $\frac{\text{Total Debt Less Short-Term Investments}}{\text{Total Debt Less Short-Term Investments plus Stockholders' Equity}}$



percent at the end of 1986. This ratio is now well within our preferred range.

Backup credit facilities totaling \$933 million, including \$350 million of revolving credit agreements and \$561 million of other credit facilities, were in place at yearend 1986. We plan to discontinue the \$350 million of revolving credit agreements in 1987 and adjust other credit facilities to more closely match current and projected short-term borrowing needs.

The decision to discontinue the revolving credit agreement requires us to classify short-term notes, previously included in long-term debt, as

notes payable in current liabilities at December 31, 1986.

The current ratio decreased from 1.78 in 1985 to 1.63 and working capital decreased from \$924 million in 1985 to \$868 million principally due to increased liabilities. The use of the stock issuance proceeds to reduce short-term notes was largely offset at yearend 1986 by the classification of short-term notes as current liabilities as noted above.

Management believes the company has sufficient capital resources to meet the needs of its business.

Receivables and Inventories

Receivables ended the year at 6.5 weeks, down from the 7.1 weeks at yearend 1985. However, this appears to be a one-month phenomenon. During 1986 average receivable weeks were only slightly lower than 1985. As the shift to more complex product and systems orders continues, maintaining the strong receivable performance of recent years will be a challenge to all of us. Yearend receivables totaled \$851 million in 1986, up from \$813 million a year earlier, reflecting the increased sales level of the company.

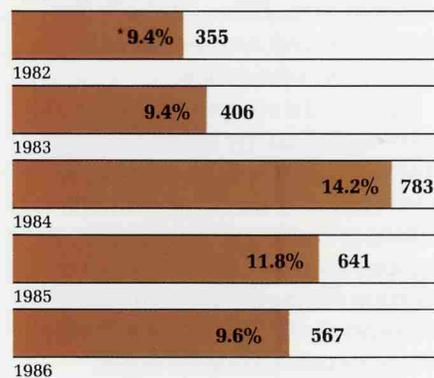
Solid improvement in inventory management continued for the second straight year. Inventory turnover, based on cost of goods sold, increased to 3.0 turns from 2.7 turns in 1985. Yearend inventory totaled \$819 million, compared to \$801 million in 1985.

Fixed Asset Expenditures

Investments in fixed assets returned to their approximate historic levels as a percent of sales. Expenditures for the year were \$567 million, or 9.6 percent of sales, compared to \$641 million, or 11.8 percent of sales, in 1985. As shown in the segment information on page 26 of this report, the Semiconductor Products segment continues to make the highest dollar investment but at a lower percentage of total expenditures than the prior two years.

Capital Expenditures

(Millions of Dollars)
* Percent of Sales

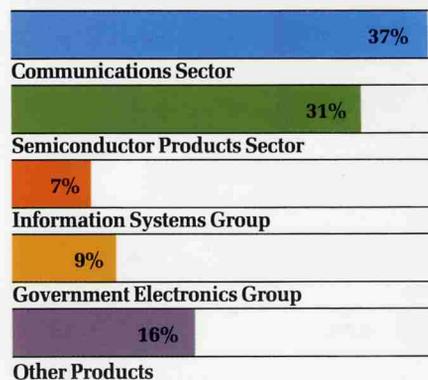


The company intends to maintain and/or establish itself as the highest quality and most efficient producer of goods in its various businesses. We are, therefore, not rigidly committed to a specific level of new investment in fixed assets as measured by a percent to sales. Investments will be made as appropriate to achieve our goals.

Operations

Information on the company's sales, operating profits, and assets by product and market segments is shown in Note 8 on page 26 of this report. The segment data shown now excludes the Cellular Group from Communication Products segment and

1986 Net Sales by Business Segment



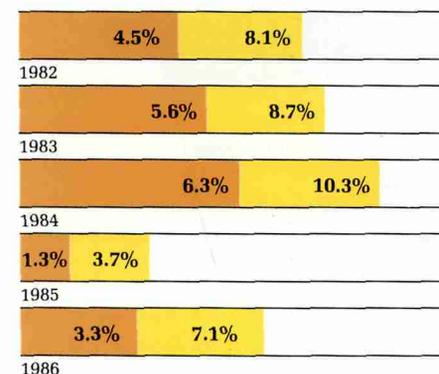
Motorola Computer Systems (formerly Four-Phase Systems, Inc.) from the Information Systems Products segment. These operations are now included in the Other Products segment. Prior year amounts have been restated for consistency.

Sales for the company increased to a new record, as the Semiconductor business began to recover from the severe industry downturn of 1985. Selling prices for semiconductor devices, however, remained under pressure during the year. The Communications Product segment continued its pattern of growth and represents 37 percent of total sales. The Information Systems Products and Government Electronics Products maintained their respective relative shares of the total company's sales. In the Other Products segment, the Cellular Group's sales growth offset the sales decline experienced by Motorola Computer Systems, while the Automotive and Industrial Electronics Products sales increased modestly over 1986.

Although operating and net profits increased sharply from the severely depressed levels of 1985, they remain below the company's historical trends and profitability targets. Operating profits were 7.1 percent of sales in 1986 compared to 3.7 percent in 1985, while net earnings improved to 3.3 percent compared to 1.3 percent in 1985. The improved profit margins

Profit Margins

■ Net ■ Operating



resulted from the return to profitability by the Semiconductor Products segment, improved margins by the Cellular Group and significantly reduced losses by Motorola Computer Systems. Automotive and Industrial Electronics Products continued to operate profitably, despite higher costs associated with startup of a new manufacturing facility and discontinuation of certain product lines. Operating profits benefited from a companywide emphasis on cost control. Selling, general and administrative costs have declined in absolute dollars in each of the last two years, and as a percent of sales have declined by 2 percentage points since 1984. This reflects the continued emphasis on cost control.

The effective tax rate on income was 27 percent for the year. It is estimated that due to the reduced investment tax credit only partially offset by renewed research credits allowable under the Tax Reform Act of 1986, the company's taxes were increased approximately \$10 million in 1986 under the provisions of the new law. We believe the elimination of the investment credit and reduction of research credits, together with apparent further restrictions on foreign tax credits, will be detrimental to our ability to compete in world markets.

As noted in the individual discussions of each of our businesses elsewhere in this report, we see favorable indications for each of our businesses that should enable them to achieve a more acceptable pattern of profitable growth in 1987.

Research and Development

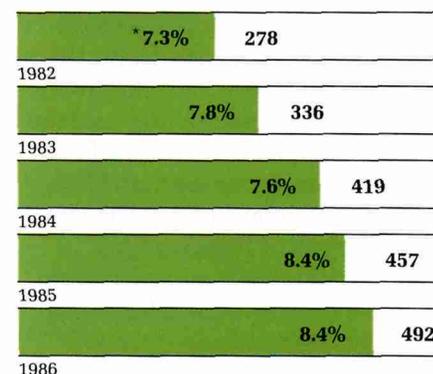
Research and development expenditures, exclusive of government funded work, increased 8 percent to \$492 million. As a percent of sales, R&D continued at the high end of the company's historical pattern. Management believes that the continued emphasis on research and development is critical to the company's long-term success.

Research and Development Expenditures**

(Exclusive of Government Funded Work)
(Millions of Dollars)

* Percent to Sales

** As defined by SEC



Accounting Changes and Issues

The company adopted the new pension accounting rules in Statement of Financial Accounting Standards No. 87. The effect of the adoption was to increase earnings by approximately \$4 million.

The Financial Accounting Standards Board is presently considering changes to the requirements for accounting for income taxes. The key provision would require companies to use the "liability method" of valuing their deferred taxes. We do not expect this provision, if adopted, to have a material effect on the company's operations.

Quality and Training

During 1986 the company placed renewed emphasis on the need of maintaining an effective system of internal controls. Virtually all finance professionals worldwide have received training on the control system and its effective implementation. Financial management believes that this renewed emphasis will be a vital factor in maintaining the historic high quality of the company's financial statements and protection of the corporate assets.

Statements Of Consolidated Earnings

Motorola, Inc. and Consolidated Subsidiaries, Years ended December 31

(In millions of dollars, except per share data)	1986	1985	1984
Net sales	\$5,888	\$5,443	\$5,534
Manufacturing and other costs of sales	3,647	3,406	3,206
Selling, general and administrative expense	1,431	1,464	1,472
Depreciation of plant, equipment, and leased equipment	459	441	353
Interest expense, net	86	87	37
Total costs and other expenses	5,623	5,398	5,068
Earnings before income taxes	265	45	466
Income taxes (benefit) provided on earnings	71	(27)	117
Cancellation of DISC taxes	—	—	(38)
Income taxes (benefit)	71	(27)	79
Net earnings	194	72	387
Net earnings per share	\$ 1.53	\$.61	\$ 3.27
Average shares outstanding (in millions)	126.5	119.0	118.5

See accompanying notes to consolidated financial statements.

Statements Of Consolidated Stockholders' Equity

Motorola, Inc. and Consolidated Subsidiaries, Years ended December 31

(In millions of dollars, except per share data)	Common Stock and Additional Paid-in Capital			Retained Earnings		
	1986	1985	1984	1986	1985	1984
Balances at January 1,	\$ 844	\$834	\$581	\$1,440	\$1,444	\$1,367
Stock split (3-for-1)	—	—	237	—	—	(237)
Net earnings	—	—	—	194	72	387
Stock option plans	18	6	16	—	—	—
Stock issuance	334	—	—	—	—	—
Contributions to Employee Stock Ownership Plan	6	4	—	—	—	—
Dividends declared (\$.64 per share in 1986 and 1985, \$.61 per share in 1984)	—	—	—	(82)	(76)	(73)
Balances at December 31,	\$1,202	\$844	\$834	\$1,552	\$1,440	\$1,444

See accompanying notes to consolidated financial statements.

Consolidated Balance Sheets

Motorola, Inc. and Consolidated Subsidiaries, as of December 31

Assets	(In millions of dollars, except per share data)	1986	1985
Current assets			
Cash		\$ 42	\$ 19
Short-term investments, at cost (approximating market)		143	157
Accounts receivable, less allowance for doubtful accounts (1986 \$33; 1985, \$32)		851	813
Inventories:			
Finished goods		194	187
Work in process and production materials		625	614
Future income tax benefits		206	170
Other current assets		178	149
Total current assets		2,239	2,109
Property, plant and equipment			
Land		86	81
Buildings		1,092	1,012
Machinery		2,471	2,169
Accumulated depreciation		(1,509)	(1,281)
Property, plant, and equipment, net		2,140	1,981
Equipment leased to others, net		130	157
Sundry assets		173	123
Total assets		\$4,682	\$4,370
Liabilities and Stockholders' Equity			
Current liabilities			
Notes payable and current portion of long-term debt		\$ 307	\$ 291
Accounts payable		411	375
Accrued liabilities		536	455
Income taxes payable		117	64
Total current liabilities		1,371	1,185
Long-term debt		334	705
Noncurrent deferred taxes		110	100
Other noncurrent liabilities		113	96
Stockholders' equity			
Common stock, \$3 par value.			
Authorized shares (in millions): 1986, 300.0; 1985, 150.0			
Outstanding shares (in millions): 1986, 128.2; 1985, 119.3		385	358
Preferred stock, \$100 par value issuable in series.			
Authorized shares (in millions): 0.5 (none issued)		—	—
Additional paid-in capital		817	486
Retained earnings		1,552	1,440
Total stockholders' equity		2,754	2,284
Total liabilities and stockholders' equity		\$4,682	\$4,370

See accompanying notes to consolidated financial statements.

Statements Of Consolidated Changes In Financial Position

Motorola, Inc. and Consolidated Subsidiaries, Years ended December 31

(In millions of dollars)	1986	1985	1984
Operations			
Net earnings	\$ 194	\$ 72	\$ 387
Add (deduct) noncash items:			
Depreciation:			
Fixed assets	406	366	286
Equipment leased to others	53	75	67
Net change in deferred taxes	(26)	(24)	(51)
Funds provided by operations	627	489	689
Funds provided by (used for):			
Cash	(23)	6	—
Accounts receivable, net	(38)	4	(162)
Inventories	(18)	136	(258)
Other current assets	(29)	(16)	(47)
Accounts payable and accrued liabilities	117	(146)	238
Income taxes payable	53	(51)	25
Sundry assets	(50)	(24)	(22)
Other noncurrent liabilities	17	15	(1)
Total funds provided by (used for)	29	(76)	(227)
Net funds provided by operations	656	413	462
Investments			
Fixed asset expenditures	(567)	(641)	(783)
Disposals and other changes to plant and equipment, net	2	36	33
Increase in equipment leased to others, net	(26)	(82)	(66)
Decrease (increase) in short-term investments	14	(14)	39
Net funds used for investments	(577)	(701)	(777)
Dividends Declared			
Total funds provided (required)	\$ (82)	\$ (76)	\$ (73)
Financing			
Increase (decrease) in notes payable and current portion of long-term debt	16	180	103
Increase (decrease) in long-term debt	(371)	174	269
Issuance of common stock	358	10	16
Net funds provided by (used for) financing	\$ 3	\$ 364	\$ 388

See accompanying notes to consolidated financial statements.

Accountants' Report



The Board of Directors and Stockholders
of Motorola, Inc.:

Certified Public Accountants

Peat Marwick Plaza
303 East Wacker Plaza
Chicago, Illinois 60601
(312) 938-1000

We have examined the consolidated balance sheets of Motorola, Inc. and consolidated subsidiaries as of December 31, 1986 and 1985, and the related statements of consolidated earnings, stockholders' equity, and changes in financial position for each of the years in the three-year period ended December 31, 1986. Our examinations were made in accordance with generally accepted auditing standards and, accordingly, included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

In our opinion, the aforementioned consolidated financial statements present fairly the financial position of Motorola, Inc. and consolidated subsidiaries at December 31, 1986 and 1985, and the results of their operations and changes in their financial position for each of the years in the three-year period ended December 31, 1986, in conformity with generally accepted accounting principles applied on a consistent basis.

Peat Marwick, Mitchell & Co.

January 21, 1987

Notes To Consolidated Financial Statements Motorola, Inc. and Consolidated Subsidiaries

1. Accounting Policies:

The following is a summary of significant accounting policies used in the preparation of these consolidated financial statements.

Consolidation: The consolidated financial statements include the accounts of the Company and all majority-owned subsidiaries except for financial subsidiaries, which are not significant and are accounted for on the equity basis. All significant intercompany accounts and transactions have been eliminated in consolidation.

Inventories: Inventories are valued at the lower of average cost (which approximates computation on a first-in, first-out basis) or market (i.e., net realizable value or replacement cost).

Investment Tax Credits: Investment tax credits are recorded under the flow-through method.

Property, Plant and Equipment and Equipment Leased to Others: Property, plant and equipment is stated at cost. Equipment leased to others is stated at cost, net of accumulated depreciation. The cost of buildings, machinery and equipment is depreciated generally by the declining-balance method over the estimated useful lives of such assets, as follows: buildings and building equipment, 5-50 years, machinery and equipment, 2-12 years.

Foreign Currency Translation: The Company uses the U.S. dollar as the functional currency for financial reporting. Gains and losses from translation to U.S. dollars are included in the determination of net income in the period in which they occur.

Reclassifications: Certain amounts in the 1984 and 1985 financial statements have been reclassified to conform to the current year's presentation. The reclassifications are not significant.

2. Income Taxes

The Company provides for income taxes based on earnings reported for financial statement purposes. Income tax expense differs from income taxes currently payable because of timing differences in the recognition of certain income and expense items for tax and financial statement purposes.

The components of earnings before income taxes are as follows:

(In millions of dollars)	1986	1985	1984
U.S. and U.S. possessions	\$ 137	\$ (10)	\$ 327
Other nations	128	55	139
Total	\$ 265	\$ 45	\$ 466

The components of income taxes (benefit) are as follows:

(In millions of dollars)	1986	1985	1984
Current:			
United States	\$ 52	\$ (42)	\$ 80
Other nations	39	34	34
State income taxes (U.S.)	6	5	16
Total current	97	(3)	130
Deferred	(26)	(24)	(51)
Income taxes (benefit)	\$ 71	\$ (27)	\$ 79

The Company carried back 1985 U.S. pretax operating losses to reduce taxes provided in prior years. As of December 31, 1986, for federal income tax purposes, general business credit carryforwards of \$48 million are available to reduce future taxes. If not used, these credits will begin to expire in 2000. For financial reporting purposes, all of the tax credits have been utilized.

Income taxes (benefit) are different than the amounts computed by applying the U.S. statutory Federal income tax rate of 46%. The differences are summarized as follows:

(In millions of dollars)	1986	1985	1984
Income tax expense at U.S. Federal Corporate rate of 46%	\$ 122	\$ 21	\$ 214
Increase (decrease) in tax expense resulting from:			
Taxes on earnings in other nations and U.S. possessions	(33)	(10)	(43)
Investment tax credit	(8)	(36)	(36)
Research and experimentation tax credit	(5)	(13)	(21)
State income taxes	4	1	9
Other	(9)	10	(6)
Income taxes (benefit), excluding DISC tax cancellation	71	(27)	117
Cancellation of DISC taxes	—	—	(38)
Income taxes (benefit)	\$ 71	\$ (27)	\$ 79

The Tax Reform Act of 1984 cancelled any future obligations for previously deferred Federal taxes on certain earnings of Domestic International Sales Corporations (DISC) and such taxes, totaling approximately \$38 million, were reversed in 1984.

Income taxes have not been provided on the undistributed earnings of certain of the Company's foreign subsidiaries amounting to \$353 million, \$299 million and \$285 million at December 31, 1986, 1985 and 1984, respectively. It is intended that these earnings will be permanently invested in operations outside the United States. Should these earnings be distributed, foreign tax credits would reduce the additional U.S. income tax which would be payable.

At December 31, 1986, certain non-U.S. subsidiaries had loss carryforwards for financial reporting purposes of approximately \$36 million.

The Internal Revenue Service has examined the Federal income tax returns for Motorola, Inc. through 1981 and the returns have been settled through 1978. In connection with the audits for the years 1979-1981, the IRS has proposed adjustments to the Company's income for those years which would result in substantial additional tax. The Company disagrees with most of the proposed adjustments and is contesting them. In the opinion of the Company's management, the final disposition of these matters will not have a material adverse effect on the business or financial position of the Company.

An analysis of deferred taxes is as follows:

(In millions of dollars)	1986	1985	1984
General business credit carryforward	\$ —	\$(36)	\$ —
Completed contract accounting	5	37	20
Cancellation of DISC tax	—	—	(38)
Depreciation	3	2	16
Earnings of foreign subsidiaries anticipated to be repatriated in the future	8	4	7
Income from long-term lease of equipment	(6)	(6)	(10)
Tax credits recognized as increases (reductions) in deferred taxes	(1)	19	(4)
Inventory valuations	5	(24)	(24)
Capitalization of expense items	(7)	(6)	—
Other, net	(33)	(14)	(18)
Net change in deferred taxes	\$(26)	\$(24)	\$(51)

3. Long-Term Debt and Backup Credit Facilities

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

(In millions of dollars)	1986	1985
Floating Rate Debt:		
Commercial paper supported by revolving credit commitments from banks	\$ —	\$317
Variable rate redeemable pollution control revenue bonds supported by revolving credit commitments from banks	—	28
Foreign notes payable (generally at prevailing local rates) due in installments to 1991	2	10
Fixed Rate Debt:		
12¼% eurodollar notes due December 15, 1994	2	75
12% eurodollar notes due December 15, 1994	67	12
11½% eurodollar notes due May 9, 1997	95	100
8⅞% ECU notes due July 16, 1992	54	44
8% sinking fund debentures due October 1, 2007 (callable at 104.9% reducing to 100.0% of the principal amount)	62	62
7¾% industrial revenue bonds due January 1, 2014	20	20
4¾% debentures due April 1, 1986	—	6
Capitalized lease obligations	21	26
Other long-term debt	21	24
	344	724
Less current maturities	(10)	(19)
Long-term debt	\$334	\$705

During 1986, warrants were exercised to purchase \$61 million of the 12% eurodollar bearer notes. Outstanding warrants allow the purchase of an additional \$2 million of 12% bearer notes. During 1986, the Company exercised its option and called \$73 million of the 12¼% eurodollar notes. Also, \$6 million of the 12% eurodollar notes and \$5 million of the 11½% eurodollar notes were purchased by the Company on the open market. The increase in value of the 8⅞% ECU notes is the result of changes in exchange rates.

The Company had total backup credit facilities of \$933 million at December 31, 1986, including \$350 million of revolving credit agreements and \$561 million of annually renewable (but withdrawable at any time) lines of credit. The Company plans to discontinue the \$350 million of revolving credit agreements in 1987. Accordingly, short-term notes previously supported by these agreements are now considered current liabilities. Of the available lines of backup credit facilities \$454 million remain unused at December 31, 1986. The Company pays commitment fees generally of ⅛% of unused lines of credit. Borrowings are generally at the market rate.

The aggregate maturities and sinking fund requirements for long-term debt during the next five years are as follows:

(In millions of dollars)	1987	1988	1989	1990	1991
	10	12	10	4	2

4. Leases

The Company owns most of its major facilities, but does lease certain office, factory and warehouse space, land, data processing and other equipment.

Rental expense was \$111 million in 1986, \$104 million in 1985, and \$100 million in 1984.

Minimum future lease revenues as well as the Company's minimum future lease obligations, net of minimal sublease rentals, both of which were based on noncancellable leases in effect at year-end 1986, were as follows:

(In millions of dollars)		
Year ending December 31:	Future Lease Revenues	Future Lease Obligations
1987	\$113	\$ 76
1988	62	55
1989	25	38
1990	5	26
1991	3	20
Later	—	103

5. Employee Benefit and Incentive Plans

Management Incentive: The Company may provide up to 7% of its annual consolidated pretax earnings, as defined in the Motorola Executive Incentive Plan, for the payment of cash incentive awards to key employees. During 1986, \$3 million was provided for incentive awards, as compared to no provision in 1985 and \$23 million in 1984.

Retirement Benefits: The Company and certain subsidiaries have profit-sharing plans, principally contributory, in which all eligible employees participate. The Company contributions to profit-sharing funds in the United States and other nations, which are generally based upon percentages of pretax earnings from those operations, as defined, were \$9 million in 1986, \$9 million in 1985, and \$76 million in 1984. No Company contribution for 1986 and 1985 was provided for the plan covering most domestic employees.

The Company has a noncontributory pension plan covering most domestic employees after one year of service. The benefit formula is dependent upon employee earnings and years of service. The Company's policy is to fund the accrued pension cost or the amount allowable based on the full funding limitations of the Internal Revenue Service, if less.

The Company also has a noncontributory pension plan covering selected domestic employees as well as a supplemental plan for elected officers which is also noncontributory. Both of these plans are unfunded with the benefit formula driven by employee earnings and years of service.

During 1986, the Company adopted Statement of Financial Accounting Standards No. 87 for its U.S. operations which requires that the projected unit credit method be used and that the discount rate and investment return assumptions reflect current market conditions. Comparative prior year data using this method is unavailable.

The actuarial present value of the projected benefit obligation was calculated using an investment return assumption of 8 percent and the rate of increase of future compensation of 5.5 percent. During 1986, the Company increased the discount rate from 8 percent to 8.25 percent.

Net U.S. pension expense (income) for 1986 included the following components:

(In millions of dollars)	Funded Plan	Unfunded Plans
Service cost	\$ 15	\$ 1
Interest cost on projected obligation	17	4
Actual return on plan assets	(67)	—
Net amortization and deferral	27	1
Net U.S. pension expense (income)	(8)	6

The 1984 and 1985 information presented below was calculated using the aggregate cost method. The Company recognized no pension expense in 1985 compared to \$11 million expense in 1984 on the funded plan covering most domestic employees. The unfunded plans covering selected domestic employees and elected officers recognized pension expense of \$5 million in 1985 compared to \$4 million in 1984.

The funded status of U.S. plans as of December 31, 1986 follows:

(In millions of dollars)	Funded Plan	Unfunded Plans
Actuarial present value of benefit obligations:		
Vested benefit obligation	(149)	(27)
Accumulated benefit obligation	(169)	(39)
Projected benefit obligation for service rendered to date	(230)	(42)
Plan assets at fair value, primarily listed stocks, bonds, and cash equivalents	411	—
Plan assets in excess (deficit) of projected benefit obligation	181	(42)
Unrecognized net gain from experience different from assumptions	(36)	—
Unrecognized net transition (asset) liability	(137)	18
Pension asset (liability) recognized in statement of financial position	8	(24)

The funded plan's transition asset is being amortized over a period of 13 years. The unfunded plans' transition liabilities are being amortized over a period of 15 years.

During 1985, the Company offered an early retirement plan to certain employees. Benefits under this plan are payable from the pension plan assets and the present value of these benefits of \$10 million is included in the present value of the projected, accumulated, and vested benefits detailed above.

Certain foreign subsidiaries have varying types of retirement plans providing benefits for substantially all of their employees. The Company has not adopted Statement of Financial Accounting Standards No. 87 for its foreign plans.

Essentially all of the cost of these plans is borne by the subsidiaries. Amounts charged to earnings for the plans were \$7 million in 1986, \$6 million in 1985, and \$8 million in 1984.

In addition to providing pension benefits the Company provides certain health care benefits to its retired employees. The majority of its domestic employees may become eligible for these benefits if they reach normal retirement age while working for the Company. The cost of retiree health care benefits is recognized as expense when claims are paid and totaled \$4 million in 1986, and \$2 million in 1985 and 1984. There are no significant post-retirement health care benefit plans in foreign countries.

Stock Options: Under the Company's employee share option plans, shares of common stock have been made available for grant to key employees. The exercise price of each option granted is 100% of market value on the date of grant.

Shares subject to option under these plans during 1986 and 1985 are as follows:

(In thousands of shares)	1986	1985
Options outstanding beginning of year	5,306	5,200
Additional options granted	1,055	852
Options exercised	(823)	(555)
Options terminated, cancelled or expired	(129)	(191)
Options outstanding at end of year	5,409	5,306
Shares reserved for possible future options grants	5,427	1,353
Total shares reserved	10,836	6,659
Total options exercisable	4,354	4,444

Options exercised during 1986 were at per share prices from \$12.08 to \$43.71. Options outstanding at December 31, 1986 were at per share prices from \$11.48 to \$48.44.

6. Other Financial Data

(In millions of dollars)	1986	1985	1984
Interest expense	\$105	\$111	\$ 56
Interest income	(15)	(19)	(15)
Interest capitalized	(4)	(5)	(4)
Net interest expense	\$ 86	\$ 87	\$ 37
Research and development expenditures	492	457	419
Foreign currency gains (losses)	4	(7)	2
Accrued liabilities:			
Taxes (other than income taxes)	\$ 61	\$ 65	\$ 59
Contribution to employees' pension and profit-sharing funds	9	8	85
Accrued compensation	148	135	159
Dividends payable	21	19	19
Other	297	228	218
Total accrued liabilities	\$536	\$455	\$540

Nonconsolidated Finance Subsidiaries. The following is a summary of financial information for the Company's finance subsidiaries for years ending December 31:

(In millions of dollars)	1986	1985	1984
Total Revenue	\$ 17	\$ 13	\$ 13
Net Income	4	3	2
Total Assets	\$201	\$128	\$115
Total Liabilities	(147)	(80)	(75)
Stockholders' Investment	\$ 54	\$ 48	\$ 40

The finance subsidiaries purchase customer obligations under long-term contracts from the Company at net carrying value.

7. Contingencies

The Company is a defendant in various suits and claims which arise in the normal course of business and is obligated under repurchase and other agreements principally in connection with the financing of sales.

The Company's Government Electronics Group (GEG) has been subpoenaed for records in connection with a federal criminal investigation. The criminal investigation appears to involve allegations of defective pricing and whether the Company improperly charged labor expenses under certain government defense contracts. In addition, GEG is being audited by the Department of Defense with respect to government contract pricing, cost allocation and charging matters. GEG has voluntarily made some refunds and contract adjustments. However, the Company is unable to predict the outcome of the criminal investigation or the civil audits at this time or to estimate the kinds or amounts of claims or other actions that could be instituted against the Company, its officers or employees as a result of such proceedings. Under government procurement regulations, an indictment could result in a government contractor being suspended from eligibility for awards of any new government contracts for one year and a conviction also could result in debarment from government contracts for one year or more.

In the opinion of management, the ultimate disposition of these matters will not have a material adverse effect on the business or financial position of the Company.

8. Information by Industry Segment and Geographic Region

Information about the Company's operations in different industry segments for the years ended December 31, is summarized below (in millions of dollars and percent of net sales):

	NET SALES			OPERATING PROFIT					
	1986	1985	1984	1986		1985		1984	
Communications Products ¹	\$2,237	\$2,016	\$1,864	\$245	11.0%	\$235	11.6%	\$194	10.4%
Semiconductor Products	1,880	1,728	2,240	87	4.6%	(37)	(2.0)%	373	16.7%
Information Systems Products ²	465	428	481	75	16.2%	65	15.2%	37	7.7%
Government Electronic Products	526	496	441	33	6.3%	39	7.8%	52	11.8%
Other Products ³	956	934	698	(17)	(1.8)%	(99)	(10.5)%	(72)	(10.3)%
Adjustments and eliminations	(176)	(159)	(190)	(3)	—	(3)	—	(13)	—
Industry totals	\$5,888	\$5,443	\$5,534	420	7.1%	200	3.7%	571	10.3%
General corporate expenses				(69)		(68)		(68)	
Interest expense, net				(86)		(87)		(37)	
Earnings before income taxes				\$265	4.5%	\$ 45	0.8%	\$466	8.4%

	ASSETS		
	1986	1985	1984
Communications Products ¹	\$1,404	\$1,227	\$1,208
Semiconductor Products	1,661	1,529	1,495
Information Systems Products ²	360	318	301
Government Electronic Products	350	311	233
Other Products ³	584	719	708
Adjustments and eliminations	(40)	(33)	(33)
Industry totals	4,319	4,071	3,912
General corporate assets	308	251	242
Other, net	55	48	40
Consolidated totals	\$4,682	\$4,370	\$4,194

	FIXED ASSET EXPENDITURES			DEPRECIATION		
	1986	1985	1984	1986	1985	1984
Communications Products ¹	\$128	\$120	\$120	\$ 94	\$ 72	\$ 60
Semiconductor Products	250	325	412	205	197	150
Information Systems Products ²	44	52	59	21	19	15
Government Electronic Products	46	55	36	19	15	13

Expenditures and depreciation for property, plant and equipment do not include amounts for equipment leased to others.

¹Excludes Cellular Group, 1985 and 1984 restated

²Excludes Motorola Computer Systems, 1985 and 1984 restated

³Includes Cellular Group and Motorola Computer Systems, 1985 and 1984 restated

Information about the Company's operations in different geographic regions for the years ended December 31 is summarized below (in millions of dollars and percent of net sales):

	NET SALES			OPERATING PROFIT					
	1986	1985	1984	1986		1985		1984	
United States	\$5,258	\$5,040	\$5,260	\$299	5.7%	\$113	2.2%	\$434	8.3%
Other nations	2,250	1,818	1,870	164	7.3%	76	4.2%	173	9.3%
Adjustments and eliminations	(1,620)	(1,415)	(1,596)	(43)	—	11	—	(36)	—
Geographic totals	\$5,888	\$5,443	\$5,534	420	7.1%	200	3.7%	571	10.3%
General corporate expenses				(69)		(68)		(68)	
Interest expense, net				(86)		(87)		(37)	
Earnings before income taxes				\$265	4.5%	\$ 45	0.8%	\$466	8.4%

	ASSETS		
	1986	1985	1984
United States	\$3,109	\$3,084	\$3,031
Other nations	1,278	1,046	950
Adjustments and eliminations	(68)	(59)	(69)
Geographic totals	4,319	4,071	3,912
General corporate assets	308	251	242
Other, net	55	48	40
Consolidated totals	\$4,682	\$4,370	\$4,194

The Company operates predominantly in one industry, electronic equipment and components. Operations involve the design, manufacture and sale of a diversified line of electronic products, which includes, but is not limited to, two-way radio and communications systems; semiconductors, including integrated circuits and microprocessor units; data communication and distributive data processing equipment and systems; electronic equipment and industrial electronic products. The Company operates manufacturing and distribution facilities outside the United States. No single country outside the United States accounts for more than 10% of consolidated net sales or total assets.

Operating profit was computed as total revenues less operating expenses which exclude general corporate expenses, net interest and income taxes. Identifiable assets are those assets of the Company that are identified to classes of similar products or operations in each geographical area, excluding internal receivables. Corporate assets are principally cash and marketable securities, the corporate administrative headquarters, and future income tax benefits. Intersegment sales, principally semiconductor components, amounted to \$121 million for 1986, \$113 million for 1985, and \$137 million for 1984. Intersegment and intergeographic transfers are accounted for on an arm's length pricing basis and are consistent with rules and regulations of domestic and foreign taxing authorities.

Sales to United States federal government agencies aggregated \$809 million for 1986, \$780 million for 1985 and \$696 million for 1984. No other single customer (or group of customers under common control) accounted for 10% or more of the Company's sales.

The equity in the net assets of non-U.S. subsidiaries amounted to \$767 million at December 31, 1986 and \$657 million at December 31, 1985.

Quarterly and Other Financial Data

Motorola, Inc. and Consolidated Subsidiaries (Unaudited)

The principal market for Motorola Common Stock is the New York Stock Exchange. The table below sets forth the high and low sales price per share for Motorola Common Stock as reported by the New York Stock Exchange and the dividends declared and paid for the periods indicated.

(In millions of dollars, except per share data)	1986				1985			
	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.
Net sales	\$1,339	\$1,499	\$1,431	\$1,619	\$1,322	\$1,372	\$1,301	\$1,448
Gross profit before depreciation	518	576	525	622	515	519	450	552
Net earnings (loss)	45	55	31	63	41	26	(39)	44
Net earnings (loss) per share	.37	.43	.24	.49	.35	.22	(.33)	.37
Dividends:								
Declared and paid	.16	.16	.16	.16	.16	.16	.16	.16
Stock prices:								
High	45.88	50.00	44.50	40.00	39.38	35.25	37.38	40.75
Low	35.63	37.25	33.75	33.63	31.00	29.50	32.38	29.25

The number of holders of record of Motorola Common Stock on January 30, 1987 was 13,946.

Five Year Financial Summary

Motorola, Inc. and Consolidated Subsidiaries, Years ended December 31

	1986	1985	1984	1983	1982
Operating Results (In millions of dollars)					
Net sales	\$ 5,888	\$ 5,443	\$ 5,534	\$ 4,328	\$ 3,786
Manufacturing and other costs of sales	3,647	3,406	3,206	2,593	2,269
Selling, general and administrative expense	1,431	1,464	1,472	1,110	1,007
Depreciation of plant, equipment, and leased equipment	459	441	353	289	244
Net interest expense	86	87	37	27	54
Total costs and other expenses	5,623	5,398	5,068	4,019	3,574
Earnings before income taxes and extraordinary gain	265	45	466	309	212
Income taxes (benefit) provided on earnings	71	(27)	117	65	42
Cancellation of DISC taxes	—	—	(38)	—	—
Net earnings before extraordinary gain	194	72	387	244	170
Extraordinary gain	—	—	—	—	8
Net earnings	\$ 194	\$ 72	\$ 387	\$ 244	\$ 178
Net earnings excluding DISC tax cancellation	\$ 194	\$ 72	\$ 349	\$ 244	\$ 178
Net earnings excluding DISC tax cancellation as a percent of sales	3.3%	1.3%	6.3%	5.6%	4.5%
Per Share Data ² (In dollars)					
Net earnings	\$ 1.53	\$.61	\$ 3.27	\$ 2.09	\$ 1.62
Net earnings excluding DISC tax cancellation	\$ 1.53	\$.61	\$ 2.95	\$ 2.09	\$ 1.62
Dividends declared	.64	.64	.61	.53	.53
Balance Sheet (In millions of dollars)					
Total assets	\$ 4,682	\$ 4,370	\$ 4,194	\$ 3,236	\$ 2,833
Working capital	868	924	1,001	894	924
Long-term debt	334	705	531	262	369
Total debt	641	996	642	270	378
Stockholders' equity	\$ 2,754	\$ 2,284	\$ 2,278	\$ 1,948	\$ 1,700
Other Data					
Current ratio	1.63	1.78	1.83	2.07	2.57
Return on average invested capital	6.1%	2.4%	14.5% ¹	12.2%	9.1%
Return on average stockholders' equity	7.4%	3.2%	16.4% ¹	13.5%	11.3%
Yearend employment (approximate)	94,400	90,200	99,900	88,800	78,800
Average shares outstanding (in millions) ²	126.5	119.0	118.5	117.1	109.5

NOTES

1. Excludes cancellation of DISC taxes.

2. Years 1982 and 1983 reflect the 3-for-1 stock split in 1984.

Management's Discussion And Analysis Of Financial Condition And Results Of Operations

Operations: The Company's principal operations are the Communications, Semiconductor, Information Systems, and Government Electronic Product segments. Note 8 to the consolidated financial statements indicates each segment's relative contribution to the Company's overall sales and operating profit for each of the past three years.

For the Company as a whole sales increased to a new record, as the Semiconductor business began to recover from the severe industry downturn of 1985. Operating profits increased significantly as the Semiconductor Products segment strengthened and the Communications Products segment continued its performance from a year ago. Net earnings more than doubled from the prior year's depressed levels and return on average invested capital increased to 6.1 percent compared to 2.4 percent in 1985 but below record levels of 14.5 percent in 1984.

Sales in the Communications Product segment rose 11 percent and operating profits increased slightly from the prior year. International orders rose sharply, especially in Europe and Japan. The results include the operations of Storno A/S, acquired in April 1986. The results of the Cellular Group are not included in the year-to-year comparisons.

The Semiconductor Product segment sales increased 9% and the segment had an operating profit compared to an operating loss a year ago. Demand increased for all major product lines except devices made to military specifications. Orders were higher throughout the world, especially in Asia.

Information System Products segment sales increased 9 percent. Operating profits were higher as demand was high for their data communications products despite the softness in the computer industry. The results of Motorola Computer Systems are not included in the year-to-year comparisons.

Sales in the Government Electronics Products segment increased 6 percent. Operating profits declined, partly due to the increased costs associated with the increased level of U.S. government audits and systems review.

Liquidity and Capital Resources: Total debt of the Company decreased from \$996 million in 1985 to \$641 million principally due to the issuance of 8 million shares of common stock by the Company during the first quarter of 1986. Net of short-term investments, the debt to debt plus equity ratio decreased from 26.9 percent in 1985 to 15.3 percent in 1986. Fixed asset expenditures for the year were \$567 compared to \$641 million in 1985. Note 3 to consolidated financial statements details the changes in the Company's long-term debt and Note 8 presents the majority of fixed asset expenditures by segment.

The current ratio decreased to 1.63 at yearend 1986 from 1.78 in 1985. Working capital decreased \$56 million to \$868 million in 1986, primarily due to the increased liabilities. The use of the stock issuance proceeds to reduce short-term notes was largely offset at yearend 1986 by the classification of short-term notes in current liabilities which had been classified as long-term debt at yearend 1985.

Management believes the Company continues to have sufficient capital resources to meet the needs of its businesses.

Effects of Inflation: The electronic components and equipment industry (e.g., semiconductors and semiconductor based equipment), has been able to accomplish significant productivity gains in its manufacturing processes, which have reduced the costs of products sold more than the increase in the costs of production resources due to inflation. Thereby, over time, selling prices generally decrease. Productivity gains in the company's other businesses have reduced the effects of increased production costs, resulting in price increases over time at rates significantly less than general inflation. Management believes that the historical statements fairly represent the financial position and results of operations of the Company and have not been significantly distorted by inflation.

Accounting for Taxes: During 1986 the Financial Accounting Standards Board issued an Exposure Draft (ED) on Accounting for Income Taxes. One of the key provisions of the ED would require companies to value their deferred taxes based on the rates expected to be in effect when the deferred tax becomes payable ("liability method"). This provision combined with the rate change provision of the Tax Reform Act of 1986 would have required a revaluation of the Company's deferred tax assets and liabilities. Had this revaluation been required, the effect on the Company's operations and liquidity would have been immaterial. The nature of the Company's global production results in deferred tax assets which offset the deferred tax liabilities generated by depreciation and completed contract accounting.

Another key provision of the ED would require the Company to accrue taxes on the unrepatriated earnings of its foreign operations. The Company currently accrues such taxes on earnings of certain subsidiaries.

Management believes that the provisions of the ED will not have a material effect on the Company's financial statements or operations.

Directors of Motorola, Inc.

ROBERT W. GALVIN
WILLIAM J. WEISZ
JOHN F. MITCHELL

DAVID R. CLARE
 President, and Chairman of the
 Executive Committee,
 Johnson & Johnson

WALLACE C. DOUD
 Retired; formerly Vice President,
 International Business Machines
 Corporation

GEORGE M.C. FISHER

JOHN T. HICKEY
 Retired; formerly Executive Vice President
 and Chief Financial Officer, Motorola, Inc.

LAWRENCE HOWE
 Executive Director, Civic Committee of the
 Commercial Club of Chicago; formerly Vice
 Chairman, Jewel Companies, Inc.

ANNE P. JONES
 Partner, Sutherland, Asbill & Brennan
 law firm

M. JOSEPH LAMBERT
 Retired; formerly Senior Vice President
 and Chief Financial Officer, Kraft, Inc.

STEPHEN L. LEVY

WALTER E. MASSEY
 Vice President for Research and for Argonne
 National Laboratory, The University of
 Chicago

ARTHUR C. NIELSEN, JR.
 Retired; formerly Chairman of the Board and
 Chief Executive Officer, A.C. Nielsen
 Company

WILLIAM G. SALATICH
 Retired; formerly President, Gillette North
 America and Vice Chairman of the Board,
 Gillette Company

GARY L. TOOKER

GARDINER L. TUCKER
 Retired; formerly Vice President for Science
 and Technology, International Paper
 Company

B. KENNETH WEST
 Chairman of the Board and Chief Executive
 Officer, Harris Bankcorp, Inc.

DIRECTOR EMERITUS

ELMER H. WAVERING
 Formerly Vice Chairman and Chief
 Operating Officer, Motorola, Inc.

Elected Officers of Motorola, Inc.

CORPORATE

*Robert W. Galvin
 Chairman of the Board

*William J. Weisz
 Vice Chairman of the Board and
 Chief Executive Officer

*John F. Mitchell
 President and Chief Operating
 Officer

*George M.C. Fisher
 Senior Executive Vice President
 and Deputy to the Chief Executive
 Office

Stephen L. Levy
 Executive Vice President and
 General Manager, Japanese
 Operations

Levy Katzir
 Senior Vice President and
 General Manager, New
 Enterprises

FINANCE

Donald R. Jones
 Executive Vice President and
 Chief Financial Officer

David W. Hickie
 Senior Vice President and
 Assistant Chief Financial Officer

Richard H. Weise
 Senior Vice President, General
 Counsel and Secretary

Kenneth J. Johnson
 Corporate Vice President and
 Controller

H. Richard Klotz
 Corporate Vice President and
 Director of Taxes

Victor R. Kopidlansky
 Corporate Vice President and
 Assistant General Counsel

INTERNATIONAL OPERATIONS

Carl E. Lindholm
 Executive Vice President,
 International Operations

C. Travis Marshall
 Senior Vice President and
 Motorola Director of Government
 Relations

*James D. Burge
 Corporate Vice President and
 Director of Employment
 Regulatory Affairs

PERSONNEL

James Donnelly
 Senior Vice President and
 Motorola Director of Personnel

*Joseph F. Miraglia
 Corporate Vice President and
 Assistant Motorola Director of
 Personnel

*William B. Dimitro
 Corporate Vice President and
 Director, Career Redirection
 Center

STAFF

*Gary L. Tooker
 Senior Executive Vice President
 and Chief Corporate Staff Officer

Jack Germain
 Senior Vice President and
 Motorola Director of Quality

William G. Howard, Jr.
 Senior Vice President and
 Motorola Director of Research
 and Development

Keith J. Bane
 Corporate Vice President and
 Motorola Director of Strategy

Toni Dewey
 Corporate Vice President and
 Motorola Director of Public
 Relations and Advertising

Vincent J. Rauner
 Corporate Vice President for
 Patents, Trademarks and
 Licensing

COMMUNICATIONS SECTOR

Rhesa S. Farmer, Jr.
 Executive Vice President and
 General Manager,
 Communications Sector

*Arthur P. Sundry
 Senior Vice President and
 Assistant General Manager,
 Communications Sector

David K. Bartram
 Senior Vice President and
 General Manager,
 Communications International
 Group

Arnold S. Brenner
 Senior Vice President and Chief,
 Sector Staff Operations

Theodore Saltzberg
 Senior Vice President and
 Director, Research and New
 Businesses

*Morton L. Topfer
 Senior Vice President and
 General Manager, Product
 Operations

Raymond S. Balzer
 Corporate Vice President and
 General Manager, Special
 Markets Division

As of 12/31/86

Years of

Age Service

Age Years of
 Service

	Age	Years of Service		Age	Years of Service		Age	Years of Service
*Wilhelm Braxmaier Corporate Vice President and General Manager, European Division, Communications International Group	56	18	*Andre Borrel Senior Vice President and General Manager, International Semiconductor Group	50	19	INFORMATION SYSTEMS GROUP *John A. Lockett Corporate Vice President, Information Systems Group, and President, Codex Corporation	43	13
*Richard Buetow Corporate Vice President and Director, Quality Assurance	55	28	*Murray A. Goldman Senior Vice President and General Manager, Microprocessor Products Group	49	17	GOVERNMENT ELECTRONICS GROUP James R. Lincicome Executive Vice President and General Manager, Government Electronics Group	61	36
R. LaVance Carson Corporate Vice President and General Manager, National Markets Division	57	33	Gary M. Johnson Senior Vice President and General Manager, Standard Logic and Analog Integrated Circuits Group	42	19	*David G. Wolfe Corporate Vice President and Assistant General Manager, Government Electronics Group	51	22
Gordon Comerford Corporate Vice President and Sector Director, Business Management	50	12	Geno Ori Senior Vice President and General Manager, Discrete and Special Technologies Group	49	24	*Edward H. Lange, Jr. Corporate Vice President and Director, Management Control Systems Development	60	29
*Ronald E. Greenwell Corporate Vice President and General Manager, Communications Distribution Group	48	24	Charles E. Thompson Senior Vice President and Sector Director of World Marketing	57	17	Robert J. Solem Corporate Vice President and Director of Group Operations	57	28
*Robert L. Growney Corporate Vice President and General Manager, Fixed Products Division	44	20	Gordon C. Chilton Corporate Vice President and General Manager, Assembly Manufacturing and Equipment Engineering Division	47	6	GENERAL SYSTEMS GROUP Edward F. Staiano Senior Vice President and General Manager, General Systems Group	50	13
Robert L. Hammer Corporate Vice President and Sector Director, Personnel	51	13	Weldon D. Douglas Corporate Vice President and General Manager, Special Technologies	49	26	*Bernard R. Smedley Corporate Vice President and General Manager, Cellular Infrastructure Division	50	10
Kenneth R. Hessler Corporate Vice President and General Manager, Distribution Service Group	53	29	*Larry L. Gartin Corporate Vice President and Director, Sector Finance	43	19	*Lawrence R. Paggeot Corporate Vice President and General Manager, Cellular Subscriber Division	46	19
Bradford K. Kroha Corporate Vice President and Director of Sector Sourcing	60	32	Brian O. Hilton Corporate Vice President and Director, Geographic and Distributor Sales	44	19	AUTOMOTIVE AND INDUSTRIAL ELECTRONICS GROUP Gerhard Schulmeyer Senior Vice President and General Manager, Automotive and Industrial Electronics Group	48	6
*Wayne Leland Corporate Vice President and General Manager, U.S. Federal Government Division	43	21	*Robert J. Jenkins Corporate Vice President and Director, Semiconductor Technology Management	52	22	*Frederick T. Tucker Corporate Vice President and Assistant General Manager, Automotive and Industrial Electronics Group	46	21
*Jerome C. Leonard Corporate Vice President and General Manager, Portable Products Division	49	25	*Michael J. Pollak Corporate Vice President and General Manager, Logic Integrated Circuits Division	41	18	Philip D. Gunderson Corporate Vice President and Business Director, Sensors and Power Controls Business	48	18
*William J. Millon Corporate Vice President and General Manager, Radius Products Division	53	27	*Hector Ruiz Corporate Vice President and General Manager, Integrated Circuits Wafer Manufacturing Group	41	8	*Chi-Sun Lai Corporate Vice President and Director, Group Manufacturing Operations	50	16
Robert L. Wasni Corporate Vice President and General Manager, Communications Manufacturing Group	54	30	*Dedy Saban Corporate Vice President and General Manager, European Semiconductor Group	55	14	<i>* Assumed new title or advanced in rank since previous annual report.</i>		
SEMICONDUCTOR PRODUCTS SECTOR *James A. Norling Executive Vice President and General Manager, Semiconductor Products Sector	44	21	*Paul J. Shimp Corporate Vice President and Director, Sector Support Operations	47	22			
*Thomas D. George Senior Vice President and Assistant General Manager, Semiconductor Products Sector	46	7	Kenneth G. Wolf Corporate Vice President and General Manager, Application Specific Integrated Circuits Division	46	21			

Sectors, Groups and Divisions

Communications Sector

Communications Distribution Group

Commercial Markets Division
Distribution Service Group
National Markets Division
Special Markets Division
State and Local Government Markets Division

Communications International Group

European Division

Communications Manufacturing Group

Components Division
Microelectronics Division

Product operations

Fixed Products Division
Land Mobile Systems Division
Paging Products Division
Portable Products Division
Radius Products Division
U.S. Federal Government Division

Data Products Division

Semiconductor Products Sector

Discrete and Special Technologies Group

Low-frequency Power Transistor/Thyristor Products Division
RF and Optoelectronic Products Division
Small Signal and Sensor Products Division
Zener/Rectifier Products Division

Integrated Circuits Wafer Manufacturing Group

Mesa Wafer Manufacturing Division
Austin Wafer Manufacturing Division

International Semiconductor Group

Asia Pacific Semiconductor Products Division

European Semiconductor Group

Discrete and Analog Products Division (Toulouse)
Logic, ASIC and Microsystems Products Division (Munich)
MOS Memory and Microprocessor Division (East Kilbride)

Microprocessor Products Group

Standard Logic and Analog Integrated Circuits Group

Bipolar Analog Integrated Circuits Division
Logic Integrated Circuits Division
MOS Digital-Analog Integrated Circuits Division

Application Specific Integrated Circuits Division

Assembly Manufacturing and Equipment Engineering Division

MOS Memory Division

Information Systems Group

Codex Corporation

Universal Data Systems

Government Electronics Group

Communications Division

Tactical Electronics Division

Radar Systems Division

Strategic Electronics Division

General Systems Group

Cellular Group

Cellular Infrastructure Division
Cellular Subscriber Division

Microcomputer Division

Computer Systems Division

Field Service Division

Automotive and Industrial Electronics Group

Passenger Car Electronics Division

Heavy Vehicle Electronics Business

Sensors and Power Controls Business

Electronic Appliance Controls Business

Display Business

CEO Quality Awards

Winners of Motorola's Chief Executive Office Quality Awards in 1986 were:

- William B. Smith Jr., of the Communications Sector, for his work in correlating early life field reliability to total defects found in the manufacturing process.
- The Communications Sector's Fixed Products Division "Fab" shop, for delivering 1,026 lots of material in 1985 with zero defects.
- The Semiconductor Products Sector's 14/16 lead IC plastic die bond and wire bond "Q" team in Seremban, Malaysia, for reduction of defects by 85%, in-process inventory by 50%, cycle time by 58% and improvement in yield by 2.8%.

- The Ladner Equipment Team of the Government Electronics Group, for achieving incentive awards for early delivery, exceeding reliability requirements by 600% and reducing defects by 66%.
- The Publications and Graphic Arts Department of the Automotive and Industrial Electronics Group, for a 38% reduction in "needs improvement" responses to their 1986 customer survey.
- The Western Area Computer Center, for achieving four perfect weeks of service and improving weekly uptime by 36%.

Winners of the Motorola Supplier Award for Excellence were Gibson-Egan Co., Phoenix, Ariz., for non-production materials; and Four Star Tool, Inc., Rosemont, Ill., for production materials.

Motorola Worldwide

Major facilities in:

Australia

Melbourne

Canada

Ontario

Brampton, North York

Costa Rica

Guadalupe

Denmark

Copenhagen

France

Angers, Toulouse

Hong Kong

Kowloon

Israel

Tel Aviv

Japan

Aizu Wakamatsu, Tokyo

Korea

Seoul

Malaysia

Kuala Lumpur, Penang, Seremban

Mexico

Guadalajara, Leon, Mexico City

Philippines

Manila

Singapore

Switzerland

Geneva

Taiwan

Chung-Li

United Kingdom

Basingstoke, Camberley, East Kilbride, Stotfold

United States

Alabama

Huntsville

Arizona

Chandler, Mesa, Phoenix, Scottsdale, Tempe

California

Cupertino, Novato

Florida

Boynton Beach, Fort Lauderdale

Illinois

Arlington Heights, Franklin Park, Schaumburg

Iowa

Mount Pleasant

Massachusetts

Canton, Mansfield

Missouri

Joplin

New Mexico

Albuquerque

New York

Arcade

Texas

Austin, Fort Worth, Seguin

Puerto Rico

Vega Baja

West Germany

Flensburg, Munich, Taunusstein

Motorola Products

Communications Sector

Base stations
Closed-circuit television systems
Communications control centers
Component products
Digital voice-protection systems
Electronic command and control systems
Health care communications systems
High-frequency single-sideband radio systems
Information display systems
Microwave communications systems
Mobile and portable FM two-way radio communications systems
Mobile/portable data communications systems
Portable data terminals
Radio paging systems
Signaling and remote control systems
Test equipment

Semiconductor Products Sector

Control circuits
Custom and semi-custom semiconductors
 Macrocell Arrays, standard cells
Data conversion circuits
Fiber optic active components
Field-effect transistors
Industrial control circuits
Interface circuits
Manufacturing Automation Protocol (MAP) products
Microprocessors and microcomputers
Microwave devices
MOS and bipolar analog ICs
MOS and bipolar digital ICs
MOS and bipolar memories
Motor control circuits
Operational amplifiers
Optoelectronics components
Power supply circuits
Pressure and temperature sensors
Rectifiers
RF power and small signal transistors
SMARTpower products
Telecommunications circuits
Thyristors
TMOS™ and bipolar power products
Voltage regulator circuits
Zener and other diodes

Information Systems Group

Digital service/channel service units
Distributed communications processors
Electronic data switches
Leased-line modems
Limited distance modems
Local area network products
Multiplexers
Network control and management systems
Protocol converters
Switched network modems
X.25 concentrators

Government Electronics Group

Antenna and microwave systems
Battlefield management systems (Joint STARS)

C³I systems
Countermeasures systems
Drone command and control systems
Electronic defense systems
Electronic fuze systems
Electronic positioning and tracking systems
Fixed and satellite communications systems
Intelligent display terminals and systems
Missile and aircraft instrumentation
Missile guidance systems
Satellite data systems
Satellite power electronics
Satellite survey and positioning systems
Secure communications
Surveillance radar systems
Survival transceivers
Tactical communications
Tracking and command transponder systems
Video processing systems and products

General Systems Group

Cellular mobile and portable subscriber products
Cellular mobile and portable telephone systems
Conventional car telephone systems
Electronic Mobile Exchanges (EMX)
High-density cellular base stations
IMTS car telephones
Low-density cellular base stations
Microcomputer board-level products
Microcomputer systems and peripherals
Microprocessor development system hardware and software
Minicomputer systems and peripherals
OEM operating systems (SYSTEM V/68™, VERSA™ dos)
Software for distributed data processing and office information applications:
 Application development, communications, data entry, electronic forms processing, electronic mail, graphics, host-emulation, inquiry retrieval, interactive communications to multiple mainframes, micro-to-mainframe links, office support services, PC connectivity, relational data base management, report generation, spreadsheet analysis, transaction processing, word processing.

Automotive and Industrial Electronics Group

Automotive and industrial sensors
CRT display monitors, color and monochrome (5" to 23")
Electronic and electromechanical instrumentation
Electronic appliance controls
Electronic engine controls (gasoline and diesel)
Electronic motor controls
Ignition systems
Transmission controls
Vehicle charging systems
Vehicle monitoring and recording systems

Vehicle theft deterrent systems
Voltage regulators

New Enterprises

Deposition equipment for the semiconductor industry
Etching equipment for the semiconductor industry
Real-time computer platform for factory control environment
Software and hardware for automation of hard disk factories
Software and hardware for automation of wafer fabrication factories
Software and hardware for hospital intensive care units
Supervisory Control Data Acquisition (SCADA) and cell controller systems

1986 Dan Noble Fellows

The Dan Noble Fellow is the highest honorary award that can be made to a technologist within Motorola. It recognizes outstanding technical creativity, innovative ability and productive achievements. It is named for Dan Noble, a visionary technological pioneer, former vice chairman of Motorola and chairman of its Science Advisory Board. Only 86 Motorolans are Dan Noble Fellows. Those chosen in 1986 are:

Richard Adlhoch, Corporate Research and Development
Quirino Balzano, Communications Sector
Ernest A. Carter, Semiconductor Products Sector
Orville Eness, Corporate Research and Development
Peter Leahy, Government Electronics Group
Sal T. Mastroianni, Semiconductor Products Sector
A.F. "Slim" Petrie, Automotive and Industrial Electronics Group
Frank Yester, Communications Sector



MOTOROLA INC.

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