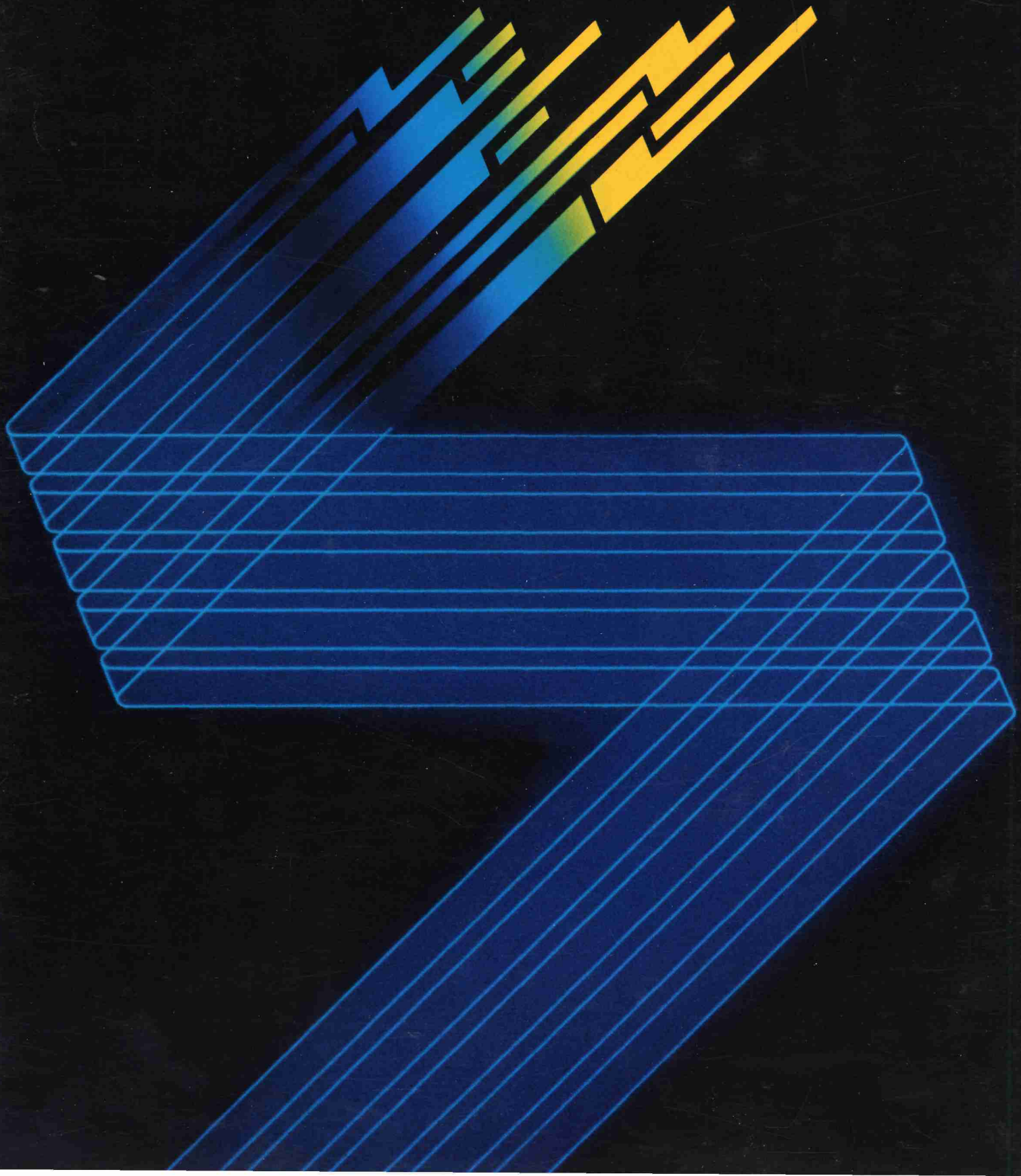
MOTOROLA INC. Annual Report 1982

Strategically Integrated Technology



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ON THE COVER

The strategically integrated technology of Motorola's sectors and groups is symbolized by a computer-generated design that ends in a "chip/circuit" graphic. Motorola's distinctive competences share a base of semiconductor technology.

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, 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 also one of the few end-equipment manufacturers that can draw on expertise in both semiconductor technology and government electronics.

FINANCIAL HIGHLIGHTS

(Dollars in thousands, except per share data)	1982	1981
Sales and other revenues	**$3,785,847**	$3,569,677
Earnings before income taxes and extraordinary gain*	**211,863**	259,472
% to sales	**5.6%**	7.3%
Net earnings before extraordinary gain*	**169,492**	182,138
% to sales	**4.5%**	5.1%
Earnings per share before extraordinary gain	**4.64**	5.10
Research and development expenditures	**278,000**	251,000
Fixed asset expenditures	**355,066**	344,546
Working capital	**924,356**	833,097
Current ratio	**2.57**	2.32
Return on average invested capital (stockholders' equity plus long- and short-term debt, net of marketable securities)	**9.1%**	11.2%
% of total debt less marketable securities to total debt less marketable securities plus equity	**12.8%**	18.5%
Book value per common share	**$44.40**	$39.27
Year-end employment (approximate)	**78,800**	80,800

*During the fourth quarter 1982, the Company issued 2,000,000 new shares of common stock. Approximately 80 percent of these shares were sold for cash. The remaining shares were exchanged for outstanding debentures of the Company, resulting in an extraordinary gain of $8,469,000 or $.23 per share for the year (see Note 3 to the consolidated financial statements).

Annual Meeting of Stockholders
The annual meeting will be held on Monday, May 2, 1983. A notice of the meeting, together with a form of proxy and a proxy statement, will be mailed to stockholders on or about March 24, 1983, at which time proxies will be solicited by the Board of Directors.

Form 10-K
At 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 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. 60690

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

TO OUR STOCKHOLDERS AND FRIENDS

Operating in a worldwide economic environment that continued to be difficult, Motorola recorded modestly higher sales in 1982, while earnings were somewhat lower than in the prior year. The company was able to nurture technological leadership by making major progress in several key strategic programs. The year also was highlighted by the introduction of significant new products and completion of the acquisition of Four-Phase Systems, Inc.

Sales and other revenues for 1982 were $3.79 billion, up 6.1 percent from the $3.57 billion a year ago. Before an extraordinary gain in 1982, earnings were $169 million, or $4.64 per share, down from the $182 million, or $5.10 per share, in 1981.

Also before the extraordinary gain in 1982, net margin on sales was 4.5 percent compared with 5.1 percent a year ago. Motorola's return on average invested capital (stockholders' equity plus long- and short-term debt, net of marketable securities) was 9.1 percent compared with 11.2 percent in 1981.

All of the above 1982 earnings figures exclude an extraordinary gain of $8.47 million, or 23 cents per share, which resulted from an exchange of stock for outstanding debentures. This exchange was part of a 2 million share equity offering that significantly strengthens our balance sheet. The equity offering is further discussed in the Financial Review on page 18. Note No. 3 to the Financial Statements discusses the impact of the extraordinary gain on 1982 earnings and earnings per share.

Figures for 1981 have been restated to include the results of Four-Phase Systems, the acquisition of which was completed in March 1982 on a pooling-of-interests basis.

Acquisitions

In early 1982, Motorola formed the Information Systems Group. It combines the former Data Communications organization with Four-Phase, a pioneer in distributed data processing, a key element in the "office of the future." Since the acquisition, we have taken several steps to strengthen Four-Phase operations by stressing synergy and technological integration with Motorola's other business segments. We also have provided assistance at the corporate and group level for programs to reduce costs, accelerate product development and improve the international distribution system. We are confident that Motorola will be an important force in office automation, which promises to be among the fastest growing segments of the information industry in the next decade.

During 1982, we acquired our Japanese partner's 50 percent interest in Aizu-Toko K.K., a joint venture formed in 1980 by Motorola and Toko K.K. to manufacture metal-oxide-silicon, large-scale (MOS/LSI) integrated circuits in Japan. On October 1, 1982, Aizu-Toko became Nippon Motorola Manufacturing Co. with headquarters in Tokyo and a production facility in Aizu Wakamatsu, 150 miles northeast of Tokyo.

Operations Overview

Sales in the Communications Sector rose 6 percent, but operating profits were lower than in 1981. Worldwide new orders were level, but domestic orders increased 6 percent and were strongest in the government, telephone and radio common carrier markets.

The Semiconductor Products Sector's sales rose slightly, while operating profits declined. New orders rose 8 percent. Gains in consumer electronics markets offset weaknesses in the automotive market.

Sales in the Information Systems Group were 18 percent higher than in 1981. Operating profits were significantly lower, primarily as a result of operations at Four-Phase Systems. New orders were approximately even.

The Automotive and Industrial Electronics Group's sales were slightly higher and operating profit margin rose sharply. New orders increased. Aggressive cost reduction programs were a major element in the group's improved profitability.

The Government Electronics Group recorded a 13 percent increase in sales and a sharply higher operating profit margin. New orders also set a record, reflecting strong demand for the group's state-of-the-art products.

Our Participative Management Program continued to expand during the year and contributed to meaningful improvements in productivity and quality.

Fixed Asset Expenditures

To enhance our strong competitive position worldwide, we invested heavily in efficient manufacturing facilities and equipment in several locations. Fixed asset expenditures rose 3 percent to $355 million in 1982 from $345 million in 1981. Details of new or expanded plants are discussed later in this report.

Research and Development

Maintaining technological leadership means adhering to our commitment to research and development despite an adverse economic climate. R&D expenditures, exclusive of government-funded work, were $278 million, up 11 percent from $251 million in 1981. Research efforts ranged from speech recognition and synthesis to computer-aided design of integrated circuits, which has resulted in dramatic improvements in engineering productivity.

Elsewhere in this report we describe many of the significant products introduced by our operating sectors and groups. In addition, 1982 was a year of major developments for Motorola's AM stereo broadcasting and receiving system. The Delco Electronics Division of General Motors Corp., after testing several proposed systems, recommended that the Motorola system be used on radios in GM vehicles.

Research in bubble memory technology continued during 1982. Volume shipments of 256-kilobit and one-megabit devices began from a facility in Tempe, Ariz.

International Issues

As a worldwide competitor, Motorola believes that an undistorted marketplace is best for all parties involved in international trade. We have spoken out vigorously during 1982 on the need to follow basic principles of fair trade. We have aggressively pursued cases in which we saw these principles being violated.

In one significant case, the U.S. International Trade Commission and the Commerce Department supported, in preliminary rulings, our antidumping petition concerning the sale of high-capacity pagers. The petition says that two Japanese companies are selling pagers in the United States at prices far below what they charge for equivalent products in Japan. In January 1983, the U.S. Commerce Department established estimated dumping margins on tone-only pagers.

Management and Board of Directors

Gary L. Tooker, vice president of Motorola and general manager of the Semiconductor Products Sector, was elected a senior vice president in December.

Donald R. Jones, vice president and assistant chief financial officer, assumed the additional title of treasurer.

Joseph F. (Ted) Miller, Jr., senior vice president and assistant to the Chief Executive Office, retired after completing 30 years of service with the company. Ralph W. Elsner, vice president and deputy to the Chief Executive Office, retired after 33 years of service. James W. Birkenstock, a director since 1975, is not standing for re-election to the board, in line with our policy on age and tenure of directors. We acknowledge with appreciation their many contributions to Motorola.

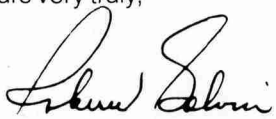
Outlook

We are planning for modest overall growth in 1983. Our capital expenditures should be higher as we continue to invest aggressively in critical strategic programs. We will practice the basic management controls that we have sharpened during these difficult times, and we will stringently control our operating costs.

Although we have not seen a significant recovery in the world's economies, the foundation is in place for improvement in the United States. The control of inflation is a major achievement, and the decline in interest rates is fostering hints of recovery in some of the markets we serve, including housing and autos.

For the longer term, we believe that Motorola is well positioned in key markets because of the excellence of our people, who focused their efforts on improving quality and productivity and controlling costs during the prolonged recession. We are confident that in an improved business environment, our sales growth and earnings performance will return to levels that provide satisfactory returns to stockholders.

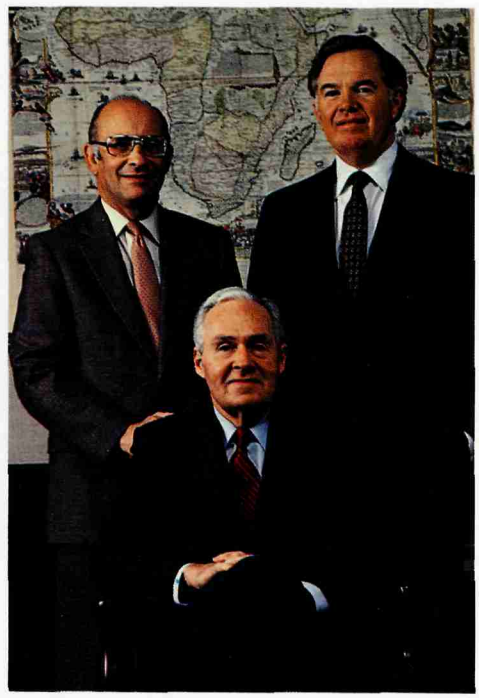
Yours very truly,



Robert W. Galvin,
Chairman

William J. Weisz,
Vice Chairman

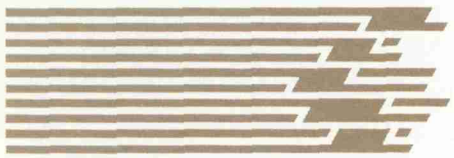
John F. Mitchell,
President



Left to right: William J. Weisz, Robert W. Galvin, John F. Mitchell


MOTOROLA
CLR
PWR

COMMUNICATIONS SECTOR



GROUPS:

Communications Distribution
Communications International
Fixed & Mobile
Portable/Paging/Systems

DIVISIONS:

Commercial Markets
Distribution Service
European
Fixed
Government Markets
Mobile
Paging
Portable
Special Markets
Systems

In a year of stringent cost controls and accelerated strategic investments, the sector's sales and backlog were higher and new orders were level, while operating profits declined. Sales rose 6 percent to a record $1.50 billion.

Despite unfavorable economic conditions, domestic new orders increased 6 percent over 1981, led by strength in the government, telephone, and common carrier markets. Federal government expenditures for defense and law enforcement and contract awards from state and local government agencies were major contributors.

Significant new orders included a $13.1 million contract award from the Federal Bureau of Investigation to supply and install a state-of-the-art radio communication system and an order for more than 1,000 MCX-100 synthesized mobile radios from the Consolidated Rail Corp. of Philadelphia.

The strong U.S. dollar continued to have a negative impact on international results. In addition, the economic crisis in Mexico caused the cancellation of some orders. Adjusting for this factor in Mexico, international new orders in U.S. dollar terms were down slightly compared with a year ago. When measured in local currencies, new order input was modestly higher.

Among the significant international orders were the sector's first major communications order from the People's Republic of China and a $17 million order from the Ontario Provincial Police in Canada.

New Facilities

A new facility in Albuquerque, N.M., for the Systems Division's ceramic products operation was completed and occupied during 1982. In Boynton Beach, Fla., the sector began construction of a major 323,000-square-foot facility for the Paging Division. Occupancy is expected in late 1983 or early 1984. The sector also broke ground for a new office and expanded manufacturing facility at its operation in Basingstoke, United Kingdom.

The sector's asset management programs on inventories, receivables and fixed assets continued to result in substantial cash inflows and return on net assets during 1982.

In 1982, the sector placed major emphasis on quality and productivity improvements. The Participative Management Program (PMP) has become a major vehicle for improvements in these two areas by making optimum use of the knowledge and skills of our employees. At the end of 1982 approximately 8,800 people, or more than 80 percent of the eligible U.S. employees in the sector's domestic facilities, were participating in PMP.

To ensure continued improvement in quality, the sector developed five-year plans for quality improvement for each of its divisions. These plans are reviewed and updated quarterly.

Investments in automated test systems, mechanized assembly and robotics began to yield benefits in 1982. For example, a computer-controlled laser trimming system in the Albuquerque facility resulted in a threefold productivity increase.

Pagers in Japan

In late 1981, Motorola was accepted as a qualified supplier of Pocket Bell pagers to Nippon Telegraph and Telephone of Japan. During calendar year 1982, the sector shipped more than 43,000 units to the NTT service companies. Order input is expected to exceed 60,000 units for NTT's fiscal year ending March 31, 1983.

Cellular Activity Increases

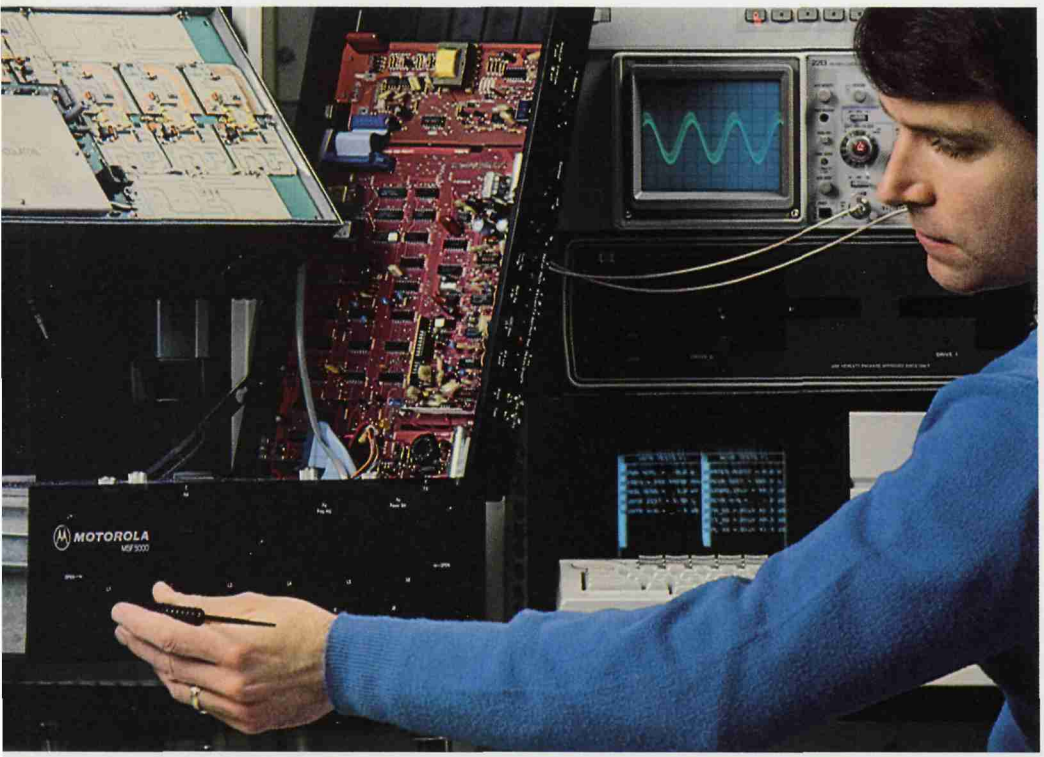
A key opportunity for Motorola is the cellular car telephone market. To date, the company has invested more than $100 million and 1,000 work years of engineering and manufacturing resources in pursuit of this new market.

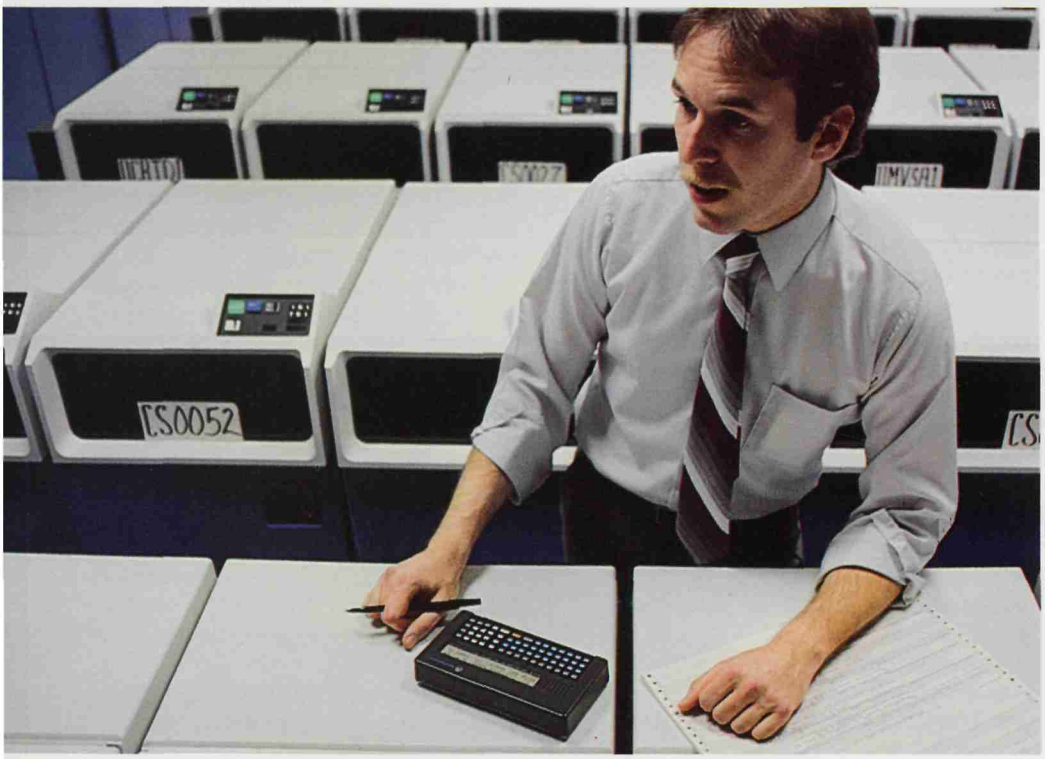
In 1983, the first of Motorola's Dyna•TAC® systems can be placed into commercial operation. During the next ten years, the cellular business could represent $1 billion worth of opportunity to the company in the United States, with an equivalent potential from international cellular markets.

A key step toward commercialization of cellular in the United States occurred in March 1982 when the Federal Communications Commission issued final guidelines and filing dates for cellular applications. On June 7, 194 applications were filed for the top 30 metropolitan areas. On November 8, almost 400 applications were filed for markets 31 through 60. The FCC will accept applications for the remaining metropolitan areas in 1983. The Justice Department has withdrawn its challenge to the FCC guidelines.

The high-capacity Dyna•TAC cellular system has been specified by two-

Portable radiotelephone for the Dyna•TAC® cellular system. Motorola offers the world's broadest cellular product line.





thirds of the more than 500 independent telephone and non-wireline applications submitted thus far. This includes an initial $22 million commitment from General Telephone & Electronics. The sector also has other firm contracts to deliver U.S. compatible cellular systems, including one outside the United States to supply the infrastructure equipment and mobile and portable subscriber units. Most of these orders are scheduled for 1983 delivery.

In September, Motorola was selected to provide the switches, called Electronic Mobile Exchanges (EMX), plus associated radio infrastructure and control equipment for the new medium capacity cellular Austrian National Mobile Telephone System. This system, which uses the Nordic signaling format at 450 MHz, employs two EMX switches to serve up to 30,000 subscribers. Total value of the contract is $7 million.

In Japan, Motorola was the only non-Japanese company selected by NTT as a potential cellular car telephone supplier for its Phase II system.

The sector also received an order from Bell Laboratories for new generation cellular mobile telephones to be used in testing the AT&T American Mobile Phone Service (AMPS) system in Chicago.

Before the sector could begin the market trial testing currently underway in Washington/Baltimore, it designed and produced five major new families of Dyna•TAC hardware and software products. This investment has yielded the world's broadest cellular product line.

Radio/Data System

For another high growth opportunity, the sector has developed a unique land-mobile radio/data communica-

(Above) The MSF5000™ base station, which permits more stations at antenna sites where space is at a premium, undergoes final reliability test.

(Below) Technician enters data into portable terminal for radio transmission to a central computer.

tions system which gives users access to computers while on the move. The basic element of the system is a hand-held computer/data terminal containing both a radio and a telephone modem. The system's intelligent network controller directs messages between a large fixed computer and the portable user, and controls the operation of the radio network.

The portable computer/terminal incorporates major advancements in radio data transmission, microelectronics, and manufacturing technology. It features read-only and random access storage, a two-line liquid crystal display, and an alphanumeric keyboard. The portable can use either the radio network or the dial-up telephone system to access computers for data entry and retrieval.

The first customer, International Business Machines Corp., has contracted for a system to be used by its field service personnel. The IBM system will consist of approximately 250 separate citywide radio networks, coordinated by 20 intelligent network controllers, each interfacing with the IBM nationwide computer network. Each controller is capable of supporting up to 1,500 portable users. Installation will begin in late 1983 and is scheduled for completion in 1985.

This revolutionary product will be marketed during 1983 to general commercial, industrial, and government markets worldwide.

Other New Products

In addition to our NTT, cellular and radio/data programs, the sector continued to invest in a wide range of product development. In 1982, the sector improved its leadership position by introducing 35 new products.

One of the most exciting technological advancements is the Sensar™ pager. Measuring less than one inch wide and less than 5½ inches high, the tone-only Sensar pager fits into a shirt or jacket pocket. Its sophisticated miniature components combine reliability with design excellence.

The Dimension 1000™ pager, the world's first 900 MHz microprocessor-controlled pager, also was introduced. With a new binary digital coding scheme known as Golay Sequential, this pager accommodates both tone-only and tone and voice paging, programmable to the user requirements.

Also featuring a revolutionary design is the new "pager-sized" Expo™ portable two-way radio. Less than 5½ inches high and approximately 2½ inches wide, the Expo portable meets or exceeds many stringent U.S. military standards and specifications for dependable two-way portable operation.

The 800 MHz trunked products expanded with the introduction of the first hand-held portable for trunked systems in the industry and two new 20-channel mobiles of compact design. The trunked MX-300T™ portable gives Motorola the most complete 800 MHz offering in the market. Trunked radio systems automatically share a small number of channels among many users through microprocessor-controlled channel assignments.

The new trunked Mostar™ and Traxar™ mobiles feature 5 or 20 channel capability and are the smallest trunked mobiles in the U.S. market. Their compact size enables these radios to be mounted almost anywhere in a vehicle. The Mostar radio, the industry's only dash-mount trunked mobile to meet the U.S. military's stringent standards for shock and vibration, offers a variety of options including a private conversation capability and telephone interconnect.

Among the several new base station products announced, the MSF5000™ and the MSR2000™ base stations and repeaters represent a new generation of radios. The compact design of both of these new products simplifies installation and servicing and permits more stations to be installed in antenna sites where space is at a premium.

Digital Voice Protection products were expanded with three new synthesized radios: the DVP Syntor-X® mobile, the DVP MCX-100™ mobile and the DVP MX300-S™ portable.

Olympics Sponsor

Some of the products introduced in 1982 will be part of the communications system Motorola will provide as an official sponsor of the Games of the XXIII Olympiad to be held in Los Angeles, Calif., in 1984. The equipment will include base stations, mobile and portable radios, and pagers, and will be used by the Los Angeles Olympic Organizing Committee and its staff, international athletic officials, the press and broadcasters.

(Above) The compact Expo™ portable two-way radio meets or exceeds many stringent U.S. military standards for dependable operation.

(Below) Sophisticated miniature components enable the revolutionary Sensar™ pager to meet the highest standards of reliability.

SEMICONDUCTOR PRODUCTS SECTOR

GROUPS:

Bipolar Integrated Circuits

Discrete Semiconductor

Internal Operations

International Semiconductor

MOS Integrated Circuits

DIVISIONS:

European Semiconductor

High Frequency and Optical Products

Linear and Military Products

Microprocessor

Power Products

Important new product introductions and the industry's broadest product portfolio allowed the sector to maintain its sales level in the face of a depressed worldwide economy and highly competitive semiconductor market. The rate of new orders and backlog improved from 1981 levels. This performance enabled the sector to keep the U.S. sales lead it attained in 1981, and continue to gain in world markets.

On a worldwide basis, sector sales rose slightly to $1.30 billion, while new orders increased 8 percent. Backlog at the end of 1982 was 3 percent higher than a year earlier. Operating profits, which were down as measured year to year, were affected by currency exchange losses due to the U.S. dollar's strength, continued strategic R&D and capital investments, price attrition and product mix changes.

The sector's operating groups introduced record numbers of new products. This effort was supported by strategic capital investments in equipment and facilities.

The sector emphasized the vital areas of research and development, computer-aided design, automated manufacturing, cost reduction and customer service.

Underlying these actions was continued attention to the human element of the sector's businesses: its people. By the end of the year, most eligible employees were active in Motorola's innovative and effective Participative Management Program, with 100 percent participation scheduled by the first quarter of 1983. The program has helped to bring about impressive gains in productivity and quality.

In the United States, the sector made substantial sales gains in important consumer electronics segments. These increases offset weaknesses in the automotive market, in which the sector is a major supplier. High worldwide market acceptance was generated during 1982 for a number of key new products, including 64K dynamic random access memories (RAMs), the high-speed High-performance Complementary Metal Oxide Semiconductor (HCMOS) logic family, TMOS Power, Power Switchmode Transistors, and 8-bit and 16-bit microprocessors and microcomputers.

Bookings improved in the international marketplace, as the International Semiconductor Group exceeded its 1981 performance by 7 percent.

Greatest strength was seen in Europe, where the group significantly improved profitability. Successful products designed specifically for the European marketplace by the Geneva, Switzerland, Design Center, were instrumental in this performance.

In Japan, Motorola's 100 percent acquisition of Aizu-Toko will strengthen the company's competitiveness in that marketplace. With the planned addition of assembly and test capabilities in early 1983, Motorola will be able to produce key MOS products through all phases of design and manufacturing. The Japan Design Center also was expanded.

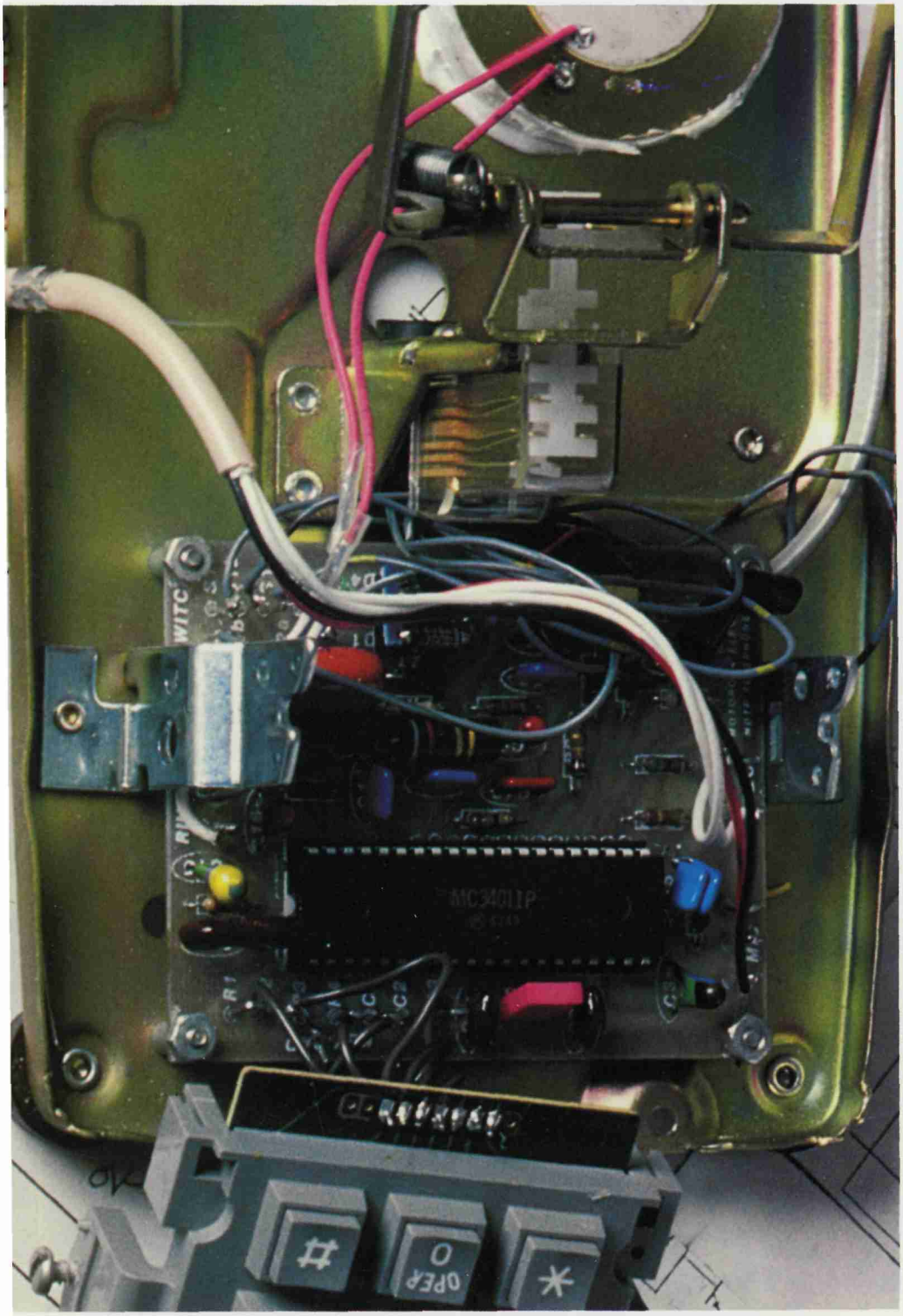
Computer-aided design system shows integrated circuit in minute detail. This system enables faster and more accurate development of new semiconductor products.

MOS Integrated Circuits

The MOS Integrated Circuits Group achieved solid successes in its industry-leading microprocessor families. The group expanded 64K dynamic RAM production and sales, and introduced a record number of products.

Motorola's 16-bit microprocessor family, the MC68000, continued its worldwide market penetration in applications ranging from automotive to personal computers. Further momentum came in March 1982, with the announcement of a comprehensive alternate source agreement with four other companies for development of peripheral devices for the 68000 family, followed by on-schedule introduction of the announced products during the year.

Technician prepares highly automated diamond saw to dice wafers into MC68000 integrated circuit chips. Computerized positioning of the wafer increases production speed and reduces cost.



The group's Microprocessor Division introduced upward and downward extensions of the 68000, both of which were well received in the marketplace. The MC68010 is a second-generation device with "virtual memory," enabling it to perform functions usually associated with mainframe computers. And the new 8-bit microprocessor, the MC68008, which offers many of the performance features of the 16-bit machine, was introduced four months ahead of its original schedule. Development also proceeded as planned on the powerful third-generation HCMOS MC68020, a 32-bit microprocessor with more than double the 68000's capabilities; and the HCMOS MC68881 "floating point co-processor," which will perform mathematical calculations offloaded by the 68020 central processor.

Several new devices were introduced in Motorola's 8-bit microprocessor line, including the world's first CMOS microprocessor with on-board electrically programmable read-only memory (EPROM), which permits very low-cost, short-cycle-time systems development.

The group's Microsystems Operation introduced a new line of compact, high-density/high-performance 68000-based board and system level products that are becoming an industry standard. In support of the company's many microprocessor customers, microsystems also introduced two new high-performance "real-time" development systems for use with Motorola's 8- and 16-bit products. Software support for the 68000 family continued to receive high priority, with both the number and variety of applications programs expanding rapidly during 1982. In addition to Motorola's own extensive development work, approximately 100 independent software firms were offer-

Bipolar integrated circuit technology enables miniaturization resulting in more efficient and reliable telephone design. Tiny semiconductor components replace bulky, heavy components in this phone.

ing 300 applications programs for the 68000 by year's end, including the highly successful CP/M from Digital Research.

In MOS memories, Motorola continued to be a leading world supplier of the popular 64K dynamic RAM by pursuing an aggressive production build-up plan. Output more than quadrupled during the year, exceeding the 2 million-per-month level in December, with the majority in lower cost, plastic packages. Rapid production increases also occurred in static RAMs, ROMs, EPROMs and other dynamic RAM memory products. During the year, major progress was made in developing the next generation 256K dynamic RAM, which is scheduled for sampling in the first half of 1983.

Expansion of Motorola's high-speed CMOS logic family continued in 1982 with the introduction of 59 additional devices offering low-power and high-performance features that have been widely accepted. In addition, the group introduced 34 new products during the year for telecommunications and analog-digital applications; and 55 military-specification high-speed logic devices.

Development also continued on the HCMOS "Macrocell Array" family, with the first product—a 4800-gate device—due for early 1983 introduction.

Bipolar Integrated Circuits

The Bipolar Integrated Circuits Group introduced a record number of new products in 1982. Video games, personal computer and telecommunications markets were strong, and the military market showed exceptional bookings strength for the year.

Key product introductions in bipolar linear included a single-chip telephone circuit, which replaces all of the electrical components in a mechanical telephone; an AM stereo decoder chip; and expansion of the "MONOmax" family of single-chip black-and-white television circuits for increased penetration of this market worldwide.

In bipolar digital, the group made significant advances in both the digital logic and memory areas. Early in the year, Motorola became the first company in the industry to offer all three Schottky digital logic products: Low-power Schottky (LS), Advanced Low-power Schottky (ALS), and Fairchild Advanced Schottky Transistor-logic (FAST).

Discrete Semiconductor Products

Motorola's Discrete Semiconductor Group continued to make major investments during the year in product development and automated processes to maintain its world sales leadership.

New product highlights included the introduction of "smart power" devices, which are based upon a state-of-the-art technology combining power transistor and CMOS integrated circuit capabilities, to serve a variety of markets; a line of pressure/temperature sensors for use in automotive, industrial and biomedical markets; a slotted opto coupler family, which has been especially well received in the video games markets; and fiber optics emitters and detectors for use in a wide range of signal and data transmission applications.

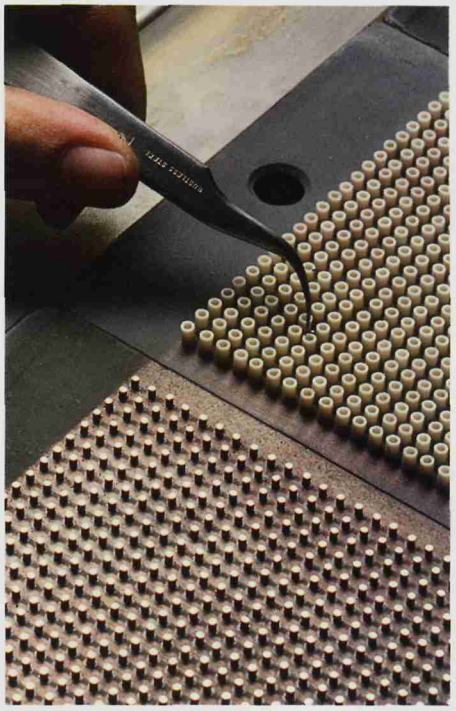
In addition, the group introduced lines of ultra-fast "Switchmode" power transistors and rectifiers, and the first standard series of RF power transistors for the 900 MHz cellular radiotelephone market. Continued growth was seen in products for such markets as cable TV, where Motorola is a major supplier of modules and other components.

While focusing on strategic products and programs essential to continued success in the future, the sector also implemented a number of actions during 1982 to reduce or eliminate costs and improve profitability.

During 1982, the sector began construction of a highly automated assembly and test facility in Chandler, Ariz., a new 226,000-square-foot facility in southwest Austin, Texas, and a major addition to the East Kilbride, Scotland, plant. It is also preparing a new MOS module for very large scale integration wafer processing at its existing Austin, Texas, site.

The sector completed expansion of its Seoul, Korea, assembly plant and occupied a new facility in Hong Kong to consolidate operations previously located in several leased facilities. The Microsystems Operation of the MOS Integrated Circuits Group and the Linear and Military Products Division of the Bipolar Group moved into new facilities, both located in Tempe, Ariz.

These programs and actions supported the sector's drive in 1982 to strategically position itself for continued semiconductor industry leadership in the years to come.



Highly automated assembly area for production of zener diodes at Discrete Semiconductor Group facility.


codex

INFORMATION SYSTEMS GROUP

ORGANIZATIONS:

Codex Corporation

Four-Phase Systems, Inc.

Intelligent Systems Operation

International Division

Universal Data Systems

During the first year of its new organizational structure, the group concentrated on developing a business strategy that combines the information processing expertise of Four-Phase Systems, Inc., with the networking technology developed in the Data Communications organization. Revenues for 1982 rose 18 percent to $485 million, but operating profits were significantly lower, primarily as a result of operations at Four-Phase Systems. New orders were approximately level with the exceptional results in 1981. Domestic orders were higher for Four-Phase Systems and the Data Communications organization, while international orders were weaker. The group's backlog at the end of 1982 was slightly below the year-earlier level.

The acquisition of Four-Phase, completed in March 1982, was a key step in Motorola's strategy to aggressively pursue the data processing and office automation markets. A pioneer in distributed data processing, Four-Phase is an excellent match to Motorola's talents capabilities and strategy. The Four-Phase field service organization is computer controlled and radio directed. The software portfolio is excellent, and the philosophy of clustered controller terminals interweaves well with the activities of the Data Communications organization.

During 1982, the group stressed synergy and technological integration with Motorola's other business segments. In a major organizational move, ISG created an International Division to manage activities abroad for Four-Phase, Codex, Universal Data Systems and the Intelligent Systems Operation. The division oversees worldwide marketing of the group's products through both direct channels and distributors.

New product developments were significant in 1982. Leading the introductions were Four-Phase's Series 5000 and Fastrak™ terminals, which are designed specifically to meet the office automation needs of large, multi-site customers. This new family of computer systems features an extensive range of capabilities, including a personal computing option, touch-sensitive screens, voice store and forward (voice mail), business graphics, broadband local area networking, and software compatibility with the company's current product line.

Two allied products came out of the Intelligent Systems Operation: The CDX-268™, a distributed data processing system that allows users to perform concurrently an extensive range of applications usually handled by separate, dedicated terminals; and the Phoenix Intelligent Workstation™, designed to give professional users a powerful single-system, multifunction distributed data processing capability.

On the networking side, Codex continued to broaden its product line offerings. Long known as a technology leader in high-speed modems, Codex introduced a new line of 9600 bit per second modems designed to meet the needs of users who require basic functionality at a low price without having to compromise on reliability or performance. The company also expanded its line of intelligent network processors with the introduction of the 6005 INP for small system or minicomputer use. In addition, the electronic data switching/data products family was expanded with the new IMS 7760. A good example of Motorola's "technology pool," the IMS 7760 uses the 68000 microprocessor and employs a Motorola real-time, multitasking operating system called RMS-68K. In addition to these development efforts, Codex concluded an agreement with a Danish computer firm, Christian Rovsing, to market that company's packet switch network in the United States.

Universal Data Systems had a record year for product introductions, with more than 25 new products released in 1982. This included major revisions and enhancements across existing product lines, resulting in improved performance at a lower cost to the customer. The new products included a 9600 bit per second modem, which represents UDS's first entry into the high-speed modem market. In addition, a complete line of 212 modems was introduced, including the LP, 212A and 212 A/D intelligent modem, which has had excellent reception in the growing small business systems/personal computer marketplace.

The Codex IMS 7800 Data PABX allows all terminals in an office system to gain access to different host computers.

The Phoenix Intelligent Workstation™ provides professionals with a powerful single-system distributed data processing capability, including high-level language computing.

Facilities were expanded throughout the group to meet planned growth. ESE Limited began construction on a 300,000-square-foot office/assembly facility in Brampton, Ontario, Canada. UDS is adding 150,000 square feet of manufacturing space to its facility in Huntsville, Ala. Codex opened an 80,000-square-foot building in Canton, Mass., for the company's product operations. Canton is the site of Codex's future world headquarters.

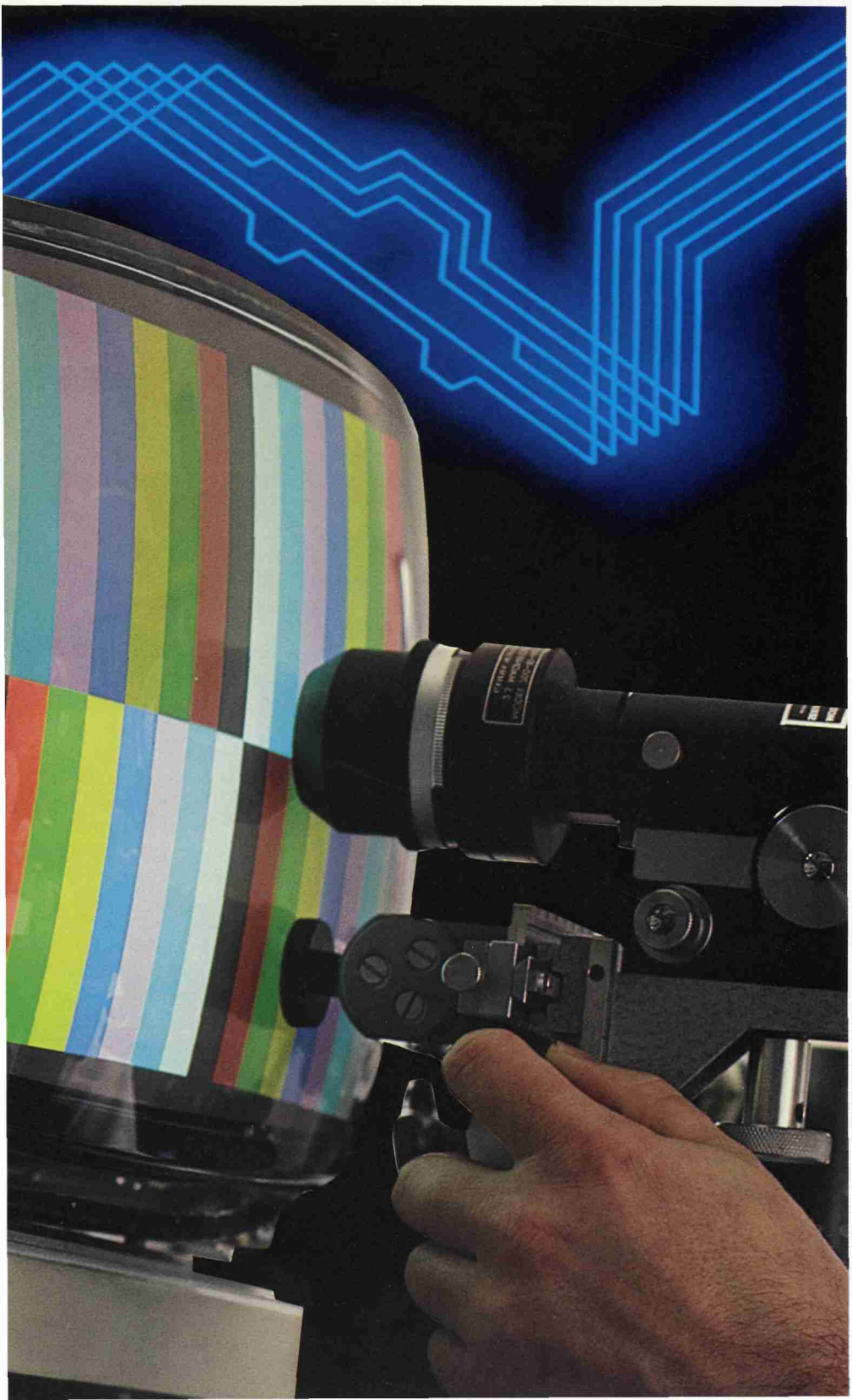
During 1982, Codex renewed its contract to supply modems and network control equipment for the Social Security Administration Data Acquisition and Response System. This on-line system connects some 2,000 terminals in Social Security offices to the computer center in Baltimore, Md.

The group, through ESE Limited in Canada, was awarded a contract from Infomart to supply data communication equipment for Teleguide, a public tourist information network. ESE also received an add-on contract from Bell Canada for the Circuit Access and Test System.

Motorola's Quality Awareness Campaign expanded in scope. ISG became part of Motorola's five-year, tenfold quality improvement program. A quality suggestion program resulted in significant cost savings.

The information industry will be among the fastest growing segments of the world economy for the next several decades. Pressure to improve productivity will continue, and the costs of information processing and networking equipment will decline. The Information Systems Group is well positioned to share in this growth.

The Four-Phase Series 5000 is designed to meet the office automation needs of large, multi-site customers. The system features a personal computing option, touch-sensitive screens, voice mail, business graphics and broadband local area networking.



AUTOMOTIVE AND INDUSTRIAL ELECTRONICS GROUP

BUSINESSES:

Automotive Electronics Division

Industrial Electronics Unit

Special Products

International Operations

Cost-control programs and success in new product areas contributed to the group's improved performance in 1982. Operating profit margin rose sharply on slightly higher sales, despite the deep recessionary conditions in major industries served by the group. Worldwide orders increased 8 percent and backlog was 31 percent greater than a year earlier.

Aggressive product cost reduction programs, stringent budgeted cost controls and pruning of unprofitable activities were major elements in the group's improvement in profitability. Allocating resources according to its strategic plan, AIEG made significant investments in the rapidly growing businesses of engine electronics, instruments, and display systems.

The group strengthened its position in the European automotive electronics market through an agreement with Valeo, S.A., the largest French manufacturer of mechanical and electromechanical automotive systems. As announced in September 1982, AIEG's alternator manufacturing facility, located in Angers, France, was acquired by a new company that is managed and is 60 percent owned by Valeo. Motorola maintains a minority interest, and is expected to supply Valeo with all its electronic module needs. Motorola is starting a new facility in Angers, France, which will build a

This high-performance color CRT display module is used in alphanumeric and graphic computer terminal applications.

variety of electronic modules using high-technology hybrid packaging techniques. In England, the group began production of CRT display units in its Stotfold plant to better participate in this growing market. The realignment and strengthening of its European supply capability will enable the group to adjust supply patterns with currency exchange fluctuations, thereby lessening the impact of the fluctuations on operating results.

Distinctive Products

New products in 1982 reflected the emphasis on distinctive competitive offerings with improved profit margins. Among the products introduced:

- A high-performance color terminal for computer business systems. This represents an entire new level of technology for the group in a very high growth area. Initial shipments were made to an OEM customer.
- Two heavy duty alternators, directed at the truck replacement market, added to the Load Handler® line.
- Transmission control units for trucks, delivered to a large OEM customer.
- A silicon capacitive absolute pressure (SCAP) transducer used with the EEC-IV engine control module for Ford Motor Co.

Design and development of the EEC-IV module was completed and shipments began during 1982.

The group established an engineering development center in Austin, Texas. This center, which was staffed early in the year, already has several major development programs underway to support new products for new OEM applications.

Emphasis on Quality

AIEG's formalized plan reflects Motorola's program for five-year tenfold improvement in overall quality. The 1982 results substantially exceeded the targets for the first year. Among the awards the group received during 1982:

- Q1 Preferred Quality Award—Ford's highest supplier rating for both the Seguin, Texas, and Arcade, New York, plants as self-certified suppliers.
- General Electric Top 100 Suppliers Award. The third year in a row for this recognition.

A majority of the personnel at the Seguin, Texas, plant took part in the Participative Management Program in 1982. The group plans to install the program at all its facilities in 1983.

Strategic Planning

The group is committed to emphasize engine electronics, display systems and instruments as the high growth potential businesses in its portfolio. Alternators and digital appliance controls continue to represent areas of profitable support to the higher growth business areas.

To provide a clear definition of the major areas of market emphasis, four distinct units were formed. They are the Automotive Electronics Division, the Industrial Electronics Unit, Special Products, and International Operations.

Quality control technician inspects EEC-IV engine control module to ensure proper application of moisture-resistant sealant.

GOVERNMENT ELECTRONICS GROUP

BUSINESSES:

Communications Division

Radar Operations

Tactical Electronics Operations

Strong demand for its state-of-the-art products helped the group achieve its most successful year. Sales for the year advanced 13 percent over 1981 and operating profit margin was up sharply. Each of GEG's three major business entities contributed to the record performance.

New order bookings increased 22 percent in 1982 and contributed to a 21 percent rise in the backlog at the end of the year.

The group continued emphasis on research and development in 1982, further advancing its leading edge in technology.

Significant gains were achieved in the area of digital speech communications. In 1982, GEG developed a family of integrated circuits for speech processing which offers a very broad range of applications for military communications systems. These highly complex circuits, developed under a Navy contract, contain the equivalent of more than 100,000 transistors. The chips work together with the Motorola MC68000 microprocessor, and require minimal power, bandwidth and space.

GEG also developed a baseband processor for the National Aeronautics and Space Administration's 30/20 GHz satellite program, which is aimed at fulfilling future satellite communications needs. The Motorola baseband processor performs a variety of voice, video, and data communications functions, including message switching, routing

Final computerized test for the AN/URC-100/101 portable emergency transceiver.

and data regeneration. This results in expanded communications traffic capabilities within the available satellite frequency allocation. For example, the Motorola system can multiply a satellite's telephone handling capability from 24,000 to approximately 150,000 calls. The processor will be tested on an experimental communications satellite planned for launch in the late 1980s, and is expected to be used aboard operational communications satellites by the early 1990s.

Also in the communications area, the group continued development and production of the highly successful AN/URC-101 portable two-way communications transceiver family for military applications. Orders for this product line set a record in 1982.

GEG emphasized development of communications techniques for the extremely high frequency (EHF) band which is planned for military communications in the 1990s. The EHF band allows communications with low detectability and high resistance to enemy jamming.

Several other contract awards were received during 1982 for both research and development and production of high-technology electronic products for the Department of Defense. Significant contracts included:

- A $32 million production award for target detection devices for the Navy's Standard Missile.
- A $25 million award for additional Demand Assigned Multiple Access (DAMA) Systems for the U.S. Navy's Fleet Broadcast Program. This was supplemented later in the year by a $6.6 million order for spare parts for these systems.
- A $20 million production contract from the Army for electronic fuzes.

The group's International Operation continued deliveries of high reliability spacecraft electronic equipment for the Japanese space program. An order was also received from the British Aerospace Corporation for S-Band telemetry, tracking and command transponders—that country's Sky Net communications satellite program. Three SLAMMR™ (Side-Looking Airborne Multi-Mission Radars) were delivered to the Boeing Company for installation on 737 aircraft that will be delivered to Indonesia for use in maritime surveillance.

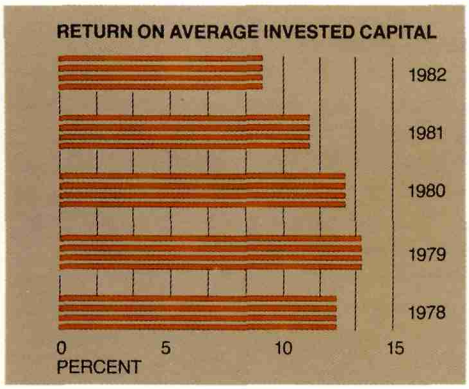
In 1982, GEG launched a Quality Awareness Program aimed at renewing the group's commitment to high quality.

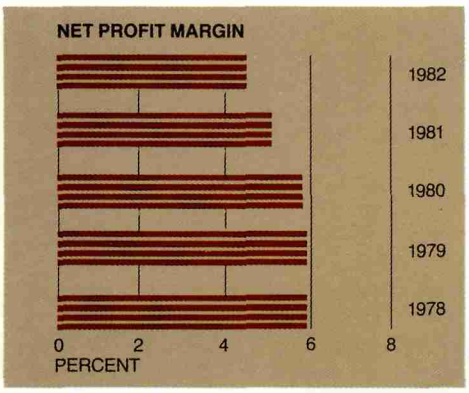
The Participative Management Program, or PMP, was expanded significantly in 1982. More than 2,100 employees have completed PMP training to date, with 70 percent of them eligible to receive wage or salary bonuses for improved productivity.

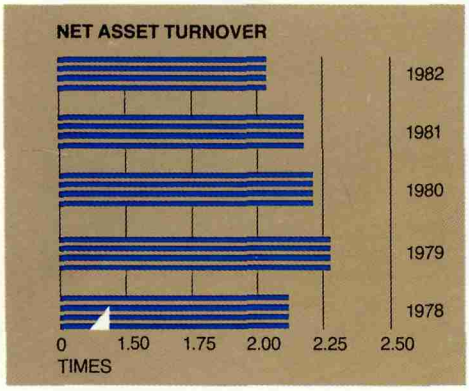
The group completed and occupied a 179,000-square-foot facility at its Radar Operations in Tempe, Ariz., and broke ground for the first phase of a new complex at its Scottsdale location to house its Tactical Electronics Operations. The first phase will be completed in June, with a second phase finished by the fourth quarter. These buildings will replace space presently leased and will provide for further expansion of the Tactical Electronics Operations.

The Mini-Ranger® satellite survey and positioning system provides highly accurate geodetic position.

FINANCIAL REVIEW







Balance Sheet

During 1982 Motorola took a major step to further strengthen its already strong balance sheet. In the fourth quarter, 2 million shares of new common stock were issued and distributed. Net proceeds to the company, including the par value of approximately $41 million of the company's outstanding debentures which were redeemed as part of the transaction, were $166 million. Consequently debt was reduced and net worth increased by this amount. At year-end the ratio between debt and debt plus stockholders' equity was 18.2 percent compared to 23.5 percent a year earlier. Net of marketable securities of $128 million, the 1982 ratio is 12.8 percent vs. 18.5 percent as 1981 ended. The specifics of outstanding debt are detailed in Note 5 to the financial statements on page 24.

The 1982 equity offering and continued emphasis on, and further improvements in, asset management reflect Motorola's long-standing and fundamental policy of maintaining a strong balance sheet so as to withstand difficult times and to have financial flexibility to take advantage of developing opportunities.

To support and possibly supplement the capital structure which appears in the current balance sheet, in the United States we maintain $288 million in revolving credit term loan commitments with 12 U.S. and European banks plus short term credit lines of $68 million. Additionally our non-U.S. operations have approximately $119 million in unused bank lines.

Quality of Earnings—1982 Results

In previous years these financial comments to the stockholders have included discussions of our earnings quality policies. We have, in 1982, continued to maintain appropriate provisions for potential losses from accounts receivable, identifiable future liabilities and inventory valuation. As in the past, we believe that no significant portion of our reported earnings is caused by inventory holding gains and/or inadequate (related to replacement cost) depreciation.

Our quality of earnings policies have also caused us to report our 1982 earnings, margins, and return on capital with the accounting gain resulting from the exchange of common stock for outstanding debentures recorded as an extraordinary item.

Because of recent Financial Accounting Standards Board preliminary proposals on pension accounting, the status of pension funding is becoming a subject of greater interest. Most retirement benefits for Motorola employees are via profit sharing plans for which company cost is accrued and funded annually as fixed percentages of pretax profits. The defined benefit pension plan for domestic employees is one of the best funded plans in the nation, as shown in Note 9 of the financial statements, with assets of $189 million, compared to the total actuarial present value (at a 7 percent interest rate) of accumulated plan benefits, both vested and non-vested, of $94 million.

While Motorola does not support current FASB proposals to put pension assets and liabilities on the balance sheet, we anticipate that these proposals, if eventually enacted, will not have a negative effect on the quality of our own balance sheet, because of the generously funded status described above.

Asset Management

Despite the generally unfavorable economic environment, we achieved further progress in turnover of accounts receivable and inventories.

At year-end accounts receivable represented 7.1 weeks of sales compared with 7.6 for 1981. Thus receivables increased less than 2 percent on a 6 percent increase in sales.

Motorola's inventory management program also bore additional fruit in 1982, with dollars of inventory staying virtually unchanged on the aforementioned 6 percent sales gain.

Funding Growth

It has been, and remains, our objective, over the long term, to earn and manage assets so as to support a reasonable dividend and limit added borrowings to an appropriate portion of retained earnings which in turn, can enable us to keep debt ratios within a reasonable—and conservative—limit.

Tax Rate

Motorola's effective tax rate for 1982, not including the extraordinary item, was 20 percent, down significantly compared to the 1981 rate of 29.8 percent. This decline is principally the result of increased tax credits related to somewhat lower overall pretax earnings. The credits arise from our continued greater investments in fixed assets qualifying for the investment tax credit as well as increased research and development expenditures. During 1982, The Tax Equity and Fiscal Responsibility Act (TEFRA) was passed. This Act provides for a permanent reduction in tax benefits related to fixed asset expenditures starting in 1983. We, therefore, expect some modest increase in our tax rate for 1983.

Currency Rate Changes

The Financial Accounting Standards Board has now revised its policy on translation of non-U.S. currencies and adopted SFAS 52 which provides two options on the treatment of changed currency values in financial statements. While we believe neither of these two choices adequately reflects the true economic impact of currency rate changes on Motorola's operations, we have selected the U.S. dollar functional currency option as better reflecting the predominant influence of the U.S. dollar on Motorola's worldwide operations plus our preference for keeping the total cost of doing business, including the impact of changing currency values, in the current year's earnings statement. The local currency option, which we did not select, allows certain currency rate change impacts to be directly charged or credited to net worth. Motorola will adopt SFAS 52 beginning with the first quarter of 1983, and it is anticipated that such adoption will not have a significant impact on the operations of Motorola.

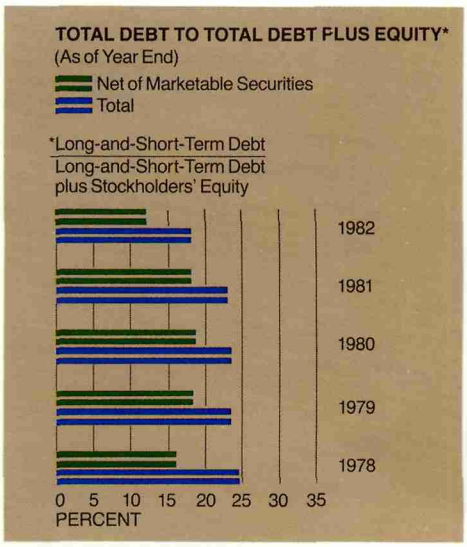
As reported over the past several years, Motorola's foreign currency exposure is defined and managed on an "economic" basis, which includes both the SFAS defined exposure plus that portion of our subsidiaries' inventories destined for sale in non-U.S. currencies. Our objective in exposure management is to minimize the financial risk of changing currency values where it is both feasible and economically justified to do so. This exposure strategy has served Motorola well over the past several years of volatile currency exchange markets and we believe it is the right strategy for 1983 and beyond.

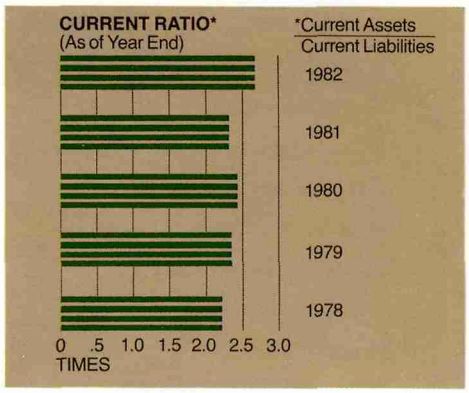
Consequently we are continuing to report the impact of changing currency values both under the FASB's accounting definition plus our own economic definition, which we believe better reflects the full impact of changing currency values on Motorola's operating results.

As Note 4 indicates, Motorola recorded a SFAS 8 gain of $10.4 million and an economic loss of $1.2 million in 1982.

Finance Company

As part of the acquisition of Four-Phase Systems, Inc. in 1982, Motorola acquired its wholly owned finance subsidiary, Four-Phase Finance, Inc. Four-Phase Finance finances Four-Phase Systems products, the large majority of which transactions are long-term leases. As of year end, Four-Phase Finance had about $90.7 million of debt outstanding with an equity base of $29 million for a conservative debt to equity ratio for a finance company of 3.13:1. Four-Phase Finance is consolidated on an equity basis, because it is engaged entirely in the financing business. Since the acquisition, Four-Phase Finance has been able to significantly lower its cost of funds and, in 1983, further improvement of the capital structure is anticipated.





CONSOLIDATED BALANCE SHEETS

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

Assets (In thousands of dollars)	**1982**	1981
Current assets:		
Cash	**$ 21,405**	$ 11,023
Short-term investments, at cost (approximating market)	**128,353**	113,702
Accounts receivable, less allowance for doubtful accounts (1982, $24,374; 1981, $27,679)	**553,134**	543,151
Inventories:		
Finished goods	**110,975**	83,757
Work in process and production materials	**541,769**	567,319
Future income tax benefits	**78,629**	74,218
Other current assets	**78,457**	71,932
Total current assets	**1,512,722**	1,465,102
Property, plant and equipment:		
Land	**43,727**	35,503
Buildings	**597,247**	507,885
Machinery	**1,160,860**	982,249
Accumulated depreciation	**(691,225)**	(571,759)
Property, plant and equipment, net	**1,110,609**	953,878
Equipment leased to others, net	**154,749**	137,592
Investment in nonconsolidated finance subsidiaries	**35,750**	27,131
Sundry assets	**19,364**	31,199
Total assets	**$2,833,194**	$2,614,902

Liabilities and Stockholders' Equity		
Current liabilities:		
Current maturities of long-term debt	**$ 8,658**	$ 6,596
Accounts payable	**223,897**	253,043
Accrued liabilities	**318,212**	306,689
Income taxes payable	**37,599**	65,677
Total current liabilities	**588,366**	632,005
Long-term debt	**369,063**	426,703
Noncurrent deferred taxes	**111,764**	91,700
Other noncurrent liabilities	**63,947**	55,513
Stockholders' equity:		
Common stock, $3 par value. Authorized 50,000,000 shares; Outstanding 1982—38,293,489 shares; 1981—35,883,297 shares	**114,881**	107,650
Preferred stock, $100 par value issuable in series. Authorized 500,000 shares (none issued)	**—**	—
Additional paid-in capital	**399,984**	235,527
Retained earnings	**1,185,189**	1,065,804
Total stockholders' equity	**1,700,054**	1,408,981
Total liabilities and stockholders' equity	**$2,833,194**	$2,614,902

See accompanying notes to consolidated financial statements.

STATEMENTS OF CONSOLIDATED EARNINGS AND RETAINED EARNINGS

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

(In thousands of dollars, except per share data)	1982	1981	1980
Sales and other revenues	**$3,785,847**	$3,569,677	$3,283,630
Manufacturing and other costs of sales	**2,269,198**	2,085,317	1,895,622
Selling, general and administrative expense	**1,012,425**	984,638	877,559
Depreciation of plant and equipment	**244,349**	205,225	172,617
Interest expense, net	**48,012**	35,025	43,274
Special charge	**—**	—	13,031
Total costs and other expenses	**3,573,984**	3,310,205	3,002,103
Earnings before income taxes and extraordinary gain	**211,863**	259,472	281,527
Income taxes	**42,371**	77,334	89,994
Net earnings before extraordinary gain	**169,492**	182,138	191,533
Extraordinary gain (note 3)	**8,469**	—	—
Net earnings	**177,961**	182,138	191,533
Retained earnings at beginning of year	**1,065,804**	934,087	787,894
Cash dividends declared (per common share: 1982, $1.60; 1981, $1.60; 1980, $1.45)	**(58,576)**	(50,421)	(45,340)
Retained earnings at end of year	**$1,185,189**	$1,065,804	$ 934,087
Net earnings per share before extraordinary gain (note 3)	**$4.64**	$5.10	$5.45
Net earnings per share	**$4.87**	$5.10	$5.45
Average shares outstanding (in thousands)	**36,506**	35,714	35,117

STATEMENTS OF CONSOLIDATED ADDITIONAL PAID-IN CAPITAL

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

(In thousands of dollars)	1982	1981	1980
Balance at beginning of year	**$ 235,527**	$ 216,178	$ 205,860
Share option and other employee share purchase plans	**13,814**	13,809	9,491
Conversion of convertible debentures	**443**	1,605	827
Acquisition by Four Phase Systems, Inc.	**—**	3,935	—
Common stock sold in public offering and exchanged for outstanding debentures	**150,200**	—	—
Balance at end of year	**$ 399,984**	$ 235,527	$ 216,178

See accompanying notes to consolidated financial statements.

STATEMENTS OF CONSOLIDATED CHANGES IN FINANCIAL POSITION

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

(In thousands of dollars)	**1982**	1981	1980
Operations			
Net earnings before extraordinary gain	**$169,492**	$182,138	$191,533
Add (deduct) noncash items:			
Depreciation	**244,349**	205,225	172,617
Amortization of deferred debentures discount, expense and premium	**60**	275	159
Change in deferred taxes	**15,653**	8,100	(1,272)
Funds provided from net earnings before extraordinary gain	**429,554**	395,738	363,037
Funds provided by or (used for)			
Accounts receivable	**(9,983)**	(37,465)	10,924
Inventories	**(1,668)**	(77,201)	13,406
Other current assets	**(6,525)**	3,364	(19,479)
Accounts payable and accrued liabilities	**(17,623)**	69,883	(1,428)
Income taxes payable	**(28,078)**	17,634	(3,339)
Sundry assets	**11,775**	(274)	(14,524)
Other noncurrent liabilities	**8,434**	19,431	296
Net funds provided by operations	**385,886**	391,110	348,893
Financing			
Extraordinary gain (note 3)	**8,469**	—	—
Increase (decrease) in long-term debt and current maturities thereof	**(55,578)**	43,980	47,806
Issuance of common stock	**171,688**	21,123	11,268
Advances to nonconsolidated finance subsidiaries	**(8,619)**	(2,238)	(5,293)
Net funds provided by financing	**115,960**	62,865	53,781
Dividends Declared	**(58,576)**	(50,421)	(45,340)
Investments			
Fixed asset expenditures	**(355,066)**	(344,546)	(310,329)
Expenditures for equipment leased to others	**(80,134)**	(65,964)	(56,585)
Disposals and other changes to plant and equipment, net	**16,963**	17,677	20,111
Net funds used for investments	**(418,237)**	(392,833)	(346,803)
Net increase in cash and marketable securities	**$ 25,033**	$ 10,721	$ 10,531

See accompanying notes to consolidated financial statements.

ACCOUNTANTS' REPORT

PEAT MARWICK

Certified Public Accountants

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

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

We have examined the consolidated balance sheets of Motorola, Inc. and consolidated subsidiaries as of December 31, 1982 and 1981, and the related statements of consolidated earnings and retained earnings, additional paid-in capital and changes in financial position for each of the years in the three-year period ended December 31, 1982. 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, 1982 and 1981, 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, 1982, in conformity with generally accepted accounting principles applied on a consistent basis.

Peat, Marwick, Mitchell & Co.

February 3, 1983

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Motorola, Inc. and Consolidated Subsidiaries

1. Accounting Policies: 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 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 as a reduction of income tax expense in the year in which the related assets are placed in service.

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.

Reclassification: Certain inventories, previously reported as finished goods, have been reclassified as part of work in process.

2. Merger with Four-Phase Systems, Inc.: On March 2, 1982, the Company acquired Four-Phase Systems, Inc. whereby Motorola issued 4,345,152 shares of its common stock. This acquisition was accounted for as a pooling of interests. Accordingly, the consolidated financial statements for prior periods have been restated to include the acquired company with the following effects on previously reported amounts for 1981 and 1980:

(In thousands of dollars)	1981	1980
Sales and other revenues		
As previously reported	$3,335,868	$3,086,439
Four-Phase Systems, Inc.	233,809	197,191
Restated	$3,569,677	$3,283,630
Net earnings		
As previously reported	$ 174,990	$ 186,081
Four-Phase Systems, Inc.	7,148	5,452
Restated	$ 182,138	$ 191,533
Earnings per share		
As previously reported	$ 5.56	$ 5.96
Restated	$ 5.10	$ 5.45

The combination also caused the beginning balance in retained earnings and additional paid-in capital for 1980 to increase by $36,595,000 and $46,756,000, respectively.

During 1981, Four-Phase Systems, Inc. purchased a company for cash and its common shares. The results of operations of the purchased company prior to its acquisition are insignificant to Motorola.

3. Extraordinary Gain: During the fourth quarter 1982, pursuant to an underwriting agreement, the Company issued 2,000,000 new shares of common stock at $78.10 per share. Approximately 80 percent of these shares were sold for cash. The remaining shares were exchanged for $41,125,000 aggregate principal amount of the Company's 4¾% debentures and 8% sinking fund debentures, resulting in an extraordinary gain of $8,469,000, which is stated net of additional profit sharing expense and its related income tax effect.

4. International Operations: Under Statement of Financial Accounting Standard No. 8 (SFAS-8), sales are translated from other currencies to U.S. dollars at current exchange rates, while inventory must be translated at the historical rates in effect when the inventory was purchased. In accordance with SFAS-8, the Company recorded net foreign currency gains of $10,426,000 in 1982, $13,262,000 in 1981 and $4,967,000 in 1980. It is the Company's policy to attempt to neutralize its exposure to exchange rate fluctuations, including the value of non-U.S. inventory destined for sale in foreign currencies, where it is practical and economically justified. Had such inventory been translated at the rate for the currency in which the product is expected to be sold, the total impact on the Company of foreign currency rate changes would have approximated losses of $1,200,000 in 1982 and $800,000 in 1981 and a gain of $900,000 in 1980.

The equity in the net assets of non-U.S. subsidiaries amounted to $384,000,000 at December 31, 1982 ($337,000,000 at December 31, 1981).

5. Long-Term Debt and Lines of Credit: Long-term debt at December 31 consisted of the following:

(In thousands of dollars)	**1982**	1981
Floating Rate Debt:		
Notes payable (generally at prevailing prime rates) due in installments to 1991	**$ 25,614**	$ 17,977
Notes payable supported by revolving credit commitments from banks (generally at prevailing prime rates)	**170,221**	146,812
Commercial paper supported by revolving credit commitments from banks	**64,446**	104,028
Fixed Rate Debt:		
4¾% debentures due April 1, 1986	**6,371**	10,052
8% sinking fund debentures due October 1, 2007 (callable at 106.1% reducing to 100.0% of the principal amount)	**61,722**	99,743
Other notes payable and capital lease obligations (at interest rates from 7% to 14%) due in installments to 2007	**7,977**	12,841
Convertible Debentures:		
4½% convertible guaranteed debentures due July 1, 1983	**1,477**	1,846
9⅛% convertible subordinated debentures (at 14.9 shares per $ thousand principal amount) due June 15, 2001	**39,893**	40,000
	377,721	433,299
Less current maturities, included in current liabilities	**8,658**	6,596
Long-term debt	**$369,063**	$426,703

Floating Rate Debt and Lines of Credit: Motorola had total lines of credit of $613 million consisting of $288 million of revolving credit agreements and $325 million of annually renewable (but withdrawable at any time) lines of credit at December 31, 1982. $351 million of the available lines of credit remain unused at December 31, 1982. The Company pays commitment fees generally of ¼% of unused lines of credit. Borrowings are generally at the prevailing prime rate.

It is the Company's intention to maintain the availability of the revolving credit agreement during 1983, and therefore certain notes and commercial paper which would be classified as short-term absent these agreements, are classified as long-term as follows at December 31:

(In thousands of dollars)	**1982**	1981
Banks and other	**$170,221**	$146,812
Commercial paper	**64,446**	104,028
Amount classified as long-term	**$234,667**	$250,840

The revolving credit agreement requires the Company to maintain certain financial ratios and minimum levels of consolidated net working capital. Under the convenants, $873 million ($763 million in 1981) of retained earnings were not restricted as to dividend payments.

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

(In thousands of dollars)

1983	1984	1985	1986	1987
$8,658	$10,612	$54,141	$82,143	$114,300

In each of the years 1985, 1986 and 1987, maturities and sinking fund requirements include commercial paper and notes payable supported by revolving credit commitments.

6. Income Taxes: The Company provides for income taxes based on earnings reported for financial statement purposes. Income tax expense differs from amounts 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 and extraordinary gain are as follows:

(In thousands of dollars)	**1982**	1981	1980
U.S. and U.S. possessions	**$178,280**	$228,706	$225,184
Other nations	**33,583**	30,766	56,343
Total	**$211,863**	$259,472	$281,527

The components of the provision for income taxes are as follows:

(In thousands of dollars)	**1982**	1981	1980
Taxes currently payable:			
United States	**$ 12,369**	$53,120	$65,375
Other nations	**7,712**	5,412	16,498
State income taxes (U.S.)	**6,637**	10,702	9,393
Total currently payable	**26,718**	69,234	91,266
Total change in deferred taxes	**15,653**	8,100	(1,272)
Total income tax expense	**$ 42,371**	$77,334	$89,994

A reconciliation of the statutory U.S. Federal corporate income tax rate with the financial statement effective income tax rate (before the extraordinary gain) is as follows:

	1982	1981	1980
Statutory U.S. Federal corporate income tax rate	46.0%	46.0%	46.0%
Increase (decrease) in tax rate resulting from:			
Taxes on earnings in other nations and U.S. possessions	(10.1)	(8.5)	(5.7)
Investment tax credit	(13.8)	(9.1)	(6.5)
Qualified research and development tax credit	(6.0)	(1.3)	—
Special charge	—	—	(3.3)
State income taxes	2.0	2.3	2.1
Other	1.9	.4	(.6)
Effective tax rate	20.0%	29.8%	32.0%

Income taxes have generally been provided on aggregate earnings of the Company's Domestic International Sales Corporations. Income taxes have been provided on that portion of the Company's undistributed earnings of subsidiaries that is anticipated to be repatriated in the future. Income taxes have not been provided on the Company's undistributed earnings of subsidiaries ($150,277,000, $140,181,000 and $130,058,000 at December 31, 1982, 1981 and 1980, respectively), to the extent it is intended 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, 1982, certain non-U.S. subsidiaries had loss carryforwards of approximately $54 million.

The Internal Revenue Service has examined the Federal income tax returns for Motorola, Inc. through 1978 and the returns have been settled through 1975. While the Company has not agreed to all proposed adjustments for the years 1976 through 1978, it is the opinion of management that any adjustments will have no material adverse effect.

An analysis of the changes in deferred taxes is as follows:

(In thousands of dollars)	**1982**	1981	1980
Difference between depreciation recorded for income tax purposes and financial statement purposes	**$ 8,365**	$ 7,024	$ 7,940
Income tax on profits of Domestic International Sales Corporations	**7,804**	3,707	6,936
Withholding tax on Puerto Rico earnings anticipated to be repatriated in the future	**4,501**	3,033	4,718
Earnings of foreign subsidiaries anticipated to be repatriated in the future	**4,683**	6,128	6,033
Difference between research and development costs recorded for income tax purposes and financial statement purposes	**(3,687)**	(5,340)	(3,740)
Difference between income from long-term lease of equipment recorded for income tax purposes and financial reporting purposes	**14,763**	1,285	4,589
Investment tax credits recognized as increases (reductions) in deferred taxes	**(9,276)**	576	(1,199)
IRS audit adjustments expected to reverse in subsequent years	**(2,524)**	—	(3,596)
(Increase) decrease in:			
Inventory valuations	**(6,946)**	(4,842)	(7,423)
Future employee benefits	**3,240**	(4,194)	(4,514)
Other, net	**(5,270)**	723	(11,016)
Total change in deferred taxes	**$15,653**	$ 8,100	$(1,272)

7. Contingencies: The Company is one of 22 defendants in a 1974 lawsuit brought by Zenith Radio Corporation ("Zenith") in which Zenith alleges conspiracies and violations of antitrust and antidumping laws and also challenges the purchase by Matsushita Electric Industrial Co., Ltd. of Japan ("MEI") of certain of the assets and business of Motorola's former home television business.

The suit claims damages in excess of $300 million (and the trebling of that amount) against the defendants jointly and individually plus costs and attorneys fees. It also seeks divestiture by MEI of the assets purchased from Motorola.

If MEI is assessed with litigation damages as a result of their purchase, or if divestiture is ordered, Motorola has agreed to share to a limited extent any loss incurred by MEI up to a maximum of $20 million.

In 1981 a U.S. District Court granted the Company's motion for summary judgment and dismissed all charges against the Company and all other defendants. Zenith has appealed that decision to the U.S. Court of Appeals, Third Circuit. Management believes that the Company acted properly throughout and has denied any conspiracy or other violation of law alleged by Zenith.

The Company is a defendant in various other 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.

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. Leases

Lease Commitments: Although the Company owns most of its major facilities, it does lease certain office, factory and warehouse space, land, data processing and other sundry equipment.

Total rental expense (including taxes, insurance and maintenance when included in rent) for all noncapital leases (including those with terms of less than one year) reduced by sublease rental income (not considered to be material) was $72,806,000 in 1982, $60,996,000 in 1981 and $47,104,000 in 1980.

Minimum future obligations on all noncancellable leases, net of minimum sublease rentals, with initial terms of one year or more in effect at December 31, 1982, are as follows for the period ending December 31:

(In thousands of dollars)

Year	Amount
1983	$ 50,031
1984	35,094
1985	26,507
1986	17,430
1987	11,865
Later	103,611

Some of the leases contain renewal options for varying periods. Certain leases include options to purchase during or at the end of the lease term.

Lease Revenues: Minimum future lease revenues of the Company's equipment for lease under noncancellable operating leases in effect at December 31, 1982, are as follows for the periods ending December 31:

(In thousands of dollars)

Year	Amount
1983	$44,387
1984	17,415
1985	8,424
1986	1,945
1987	165

9. Employee Benefit 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. Amounts of $5,068,000 in 1982, $10,899,000 in 1981 and $13,064,000 in 1980 were provided for incentive awards for those years.

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 $22,037,000 in 1982, $36,148,000 in 1981 and $43,630,000 in 1980.

The Company has a noncontributory pension plan covering substantially all domestic employees after one year of service. The Company's policy is to fund pension costs as accrued. Expense for the plan under the aggregate cost valuation method was the following:

1982	1981	1980
$11,219,000	$12,341,000	$13,860,000

On January 1, 1982, the Company changed certain of its actuarial assumptions, which had the effect of reducing 1982's pension cost by $4,300,000. As of January 1, 1981, the Company began utilizing the multiple decrement approach of calculating its pension cost, which is preferred by its actuaries. In connection with the change to the more precise multiple decrement approach, some revised actuarial assumptions were made, including employee turnover changes. The effect of these changes was a reduction in the Company's 1981 pension cost of $3,900,000.

Actuarial valuation and plan asset data is set forth below.

	As of January 1 **1982**	1981
Net plan assets available to pay benefits	**$189,000,000**	$185,000,000
Actuarial present value of accumulated plan benefits	**94,000,000**	91,000,000
Vested accumulated plan benefits	**78,000,000**	76,000,000
Interest rate assumed	**7%**	6%

Certain foreign subsidiaries have varying types of retirement plans providing benefits for substantially all of their employees. Essentially all of the cost of these plans is borne by the Company. Amounts charged to earnings for these plans were $3,981,000 in 1982, $3,214,000 in 1981 and $3,611,000 in 1980.

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

Shares subject to option under these plans during 1982 and 1981 are as follows:

	1982	1981
Options outstanding beginning of year (shares)	**2,057,871**	1,716,101
Additional options granted	**276,591**	793,807
Options exercised	**(427,684)**	(269,535)
Options terminated, cancelled or expired	**(66,558)**	(182,502)
Options outstanding at end of year	**1,840,220**	2,057,871
Shares reserved for possible future options grants	**1,334,597**	52,441
Total shares reserved	**3,174,817**	2,110,312
Total options exercisable	**938,025**	1,005,873

Options exercised during both 1982 and 1981, including options previously granted to employees of Four-Phase, were at per share prices of $14.42 to $68.31. Options outstanding at December 31, 1982 were at per share prices of $19.83 to $89.44.

10. 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 thousands of dollars):

	TOTAL SALES AND OTHER REVENUES			OPERATING PROFIT		
	1982	1981	1980	**1982**	1981	1980
Communications products	**$1,503,445**	$1,422,280	$1,256,521	**$134,231**	$162,017	$144,370
Semiconductor products	**1,297,183**	1,278,047	1,208,782	**103,562**	131,289	186,680
Information Systems products	**484,935**	412,106	329,231	**31,109**	42,968	34,671
Other products	**588,788**	539,777	556,367	**41,041**	22,310	6,403
Adjustments and eliminations	**(88,504)**	(82,533)	(67,271)	**(5,673)**	(4,472)	2,476
Industry Totals	**$3,785,847**	$3,569,677	$3,283,630	**304,270**	354,112	374,600
General corporate expenses				**(46,892)**	(56,299)	(36,768)
Interest expense, net				**(48,012)**	(35,025)	(43,274)
Equity in net earnings (loss) of nonconsolidated subsidiaries				**4,832**	(2,286)	—
Adjustment to comply with Statement of Financial Accounting Standard No. 8				**(2,335)**	(1,030)	—
Special charge				**—**	—	(13,031)
Earnings before income taxes and extraordinary gain				**$211,863**	$259,472	$281,527

	ASSETS			PROPERTY, PLANT AND EQUIPMENT Fixed Asset Expenditures		
	1982	1981	1980	**1982**	1981	1980
Communications products	**$ 900,693**	$ 852,909	$ 735,396	**$109,578**	$ 88,240	$ 78,187
Semiconductor products	**1,008,983**	922,297	814,270	**160,077**	184,460	176,536
Information Systems products	**424,503**	358,947	279,891	**36,762**	31,530	23,876
Other products	**301,668**	297,924	284,122			
Adjustments and eliminations	**(19,420)**	(21,349)	(18,536)			
Industry Totals	**2,616,427**	2,410,728	2,095,143			
General corporate assets	**181,017**	176,846	168,578			
Equity in net assets of nonconsolidated subsidiaries	**35,750**	27,328	27,807			
Consolidated Totals	**$2,833,194**	$2,614,902	$2,291,528			

	DEPRECIATION		
	1982	1981	1980
Communications products	**$ 48,115**	$ 42,053	$ 35,778
Semiconductor products	**97,278**	86,922	71,687
Information Systems products	**17,858**	13,058	9,235

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

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

	TOTAL SALES AND OTHER REVENUES			OPERATING PROFIT		
	1982	1981	1980	**1982**	1981	1980
United States	**$3,572,063**	$3,381,010	$3,011,753	**$254,077**	$314,466	$313,873
Non U.S.	**1,230,471**	1,223,340	1,191,575	**58,045**	57,308	76,190
Adjustments and eliminations	**(1,016,687)**	(1,034,673)	(919,698)	**(7,852)**	(17,662)	(15,463)
Geographic Totals	**$3,785,847**	$3,569,677	$3,283,630	**304,270**	354,112	374,600
General corporate expenses				**(46,892)**	(56,299)	(36,768)
Interest expense, net				**(48,012)**	(35,025)	(43,274)
Equity in net earnings (loss) of nonconsolidated subsidiaries				**4,832**	(2,286)	—
Adjustment to comply with Statement of Financial Accounting Standard No. 8				**(2,335)**	(1,030)	—
Special charge				**—**	—	(13,031)
Earnings before income taxes and extraordinary gain				**$211,863**	$259,472	$281,527

	ASSETS Years ended December 31		
	1982	1981	1980
United States	**$1,979,829**	$1,891,774	$1,598,236
Non U.S.	**688,394**	614,800	579,019
Adjustments and eliminations	**(51,796)**	(95,846)	(82,112)
Geographic Totals	**2,616,427**	2,410,728	2,095,143
General corporate assets	**181,017**	176,846	168,578
Equity in net assets of nonconsolidated subsidiaries	**35,750**	27,328	27,807
Consolidated Totals	**$2,833,194**	$2,614,902	$2,291,528

Motorola 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. For the three years of industry segments presented above, communications, semiconductor and information systems products represent the Company's significant industry segments. 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 sales and other revenues or total assets.

Operating profit was computed as total revenues less operating expenses. In computing operating profit, none of the following items have been included: general corporate expenses, net interest, income taxes, a special charge for termination of certain operations in 1980 and the extraordinary gain from the exchange of debt for stock in 1982. The Company adjusts its segments' reported operating profits for the impact of foreign currency rate changes in a manner consistent with that described in note 4. 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 are principally semiconductor components, which amounted to $66,150,000 for 1982, $57,520,000 for 1981 and $38,793,000 for 1980. 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 $516 million during 1982. No other single customer (or group of customers under common control) accounted for 10% or more of the Company's sales.

11. Other Financial Data

(In thousands of dollars)	1982	1981	1980
Interest expense	**$ 68,439**	$ 64,237	$ 56,446
Interest income	**(15,248)**	(20,150)	(13,172)
Interest capitalized	**(5,179)**	(9,062)	—
Net interest	**$ 48,012**	$ 35,025	$ 43,274
Research and development expense	**$278,000**	$251,000	$216,000
Accrued liabilities (at December 31)			
Taxes (other than income taxes)	**$ 40,631**	$ 39,367	
Contribution to employees' pension and profit-sharing funds	**31,972**	41,741	
Accrued compensation	**83,928**	81,794	
Dividends payable	**15,420**	12,682	
Other	**146,261**	131,105	
Total accrued liabilities	**$318,212**	$306,689	

12. Nonconsolidated Finance Subsidiaries: Following is a summary of financial information for the Company's finance subsidiaries:

(In thousands of dollars)	1982	1981	1980
Total revenues	**$ 17,719**	$ 17,501	$ 13,080
Net income	**3,316**	2,928	2,470
(at December 31)			
Total assets	**$127,469**	$111,869	
Total liabilities	**(98,489)**	(86,204)	
Stockholder's investment	**$ 28,980**	$ 25,665	

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

Management's Discussion and Analysis of Financial Condition and Results of Operations

Major Trends: During the current year, the Company completed its acquisition of Four-Phase Systems, Inc. This acquisition (described in Note 2 to the consolidated financial statements) was accounted for as a pooling of interests. Four-Phase was combined with the Company's Data Communications businesses to form the Information Systems Group. This acquisition represents a significant expansion by the Company into the distributed data processing and office automation markets. This strategic move represents a significant step in the augmentation of the Company's competitive position via the synergistic relationship between Four-Phase, the Data Communications businesses and the semiconductor operations.

Operations: The Company's principal operations are the Communications, Semiconductor and Information Systems products segments. Note 10 to the consolidated financial statements indicates these segments' relative contribution to the Company's overall sales and operating profit for the last three years.

Sales for the Communications segment increased only modestly from 1981, which had a significant increase over 1980, but continue to account for approximately 40 percent of the Company's consolidated sales during the past three years. Operating profit for this segment declined from the prior years.

Sales for the Semiconductor segment again grew only slightly from the previous year. Operating profit declined for the second year in a row.

Sales for the Information Systems segment increased again from the previous year. However, operating profit declined from the previous year, which had been up significantly from 1980.

In both the case for the Company as a whole and for each of the segments described above, the impact of the world recession has slowed down the 1982 growth in sales. Such slowdown only affected certain of the Company's businesses in 1981. During the past three years, the Company has continued to make significant and increasing

strategic investments in new products, technologies, quality and fixed assets. Additionally, the Company continues to be adversely affected by the generally strong U.S. dollar's impact on foreign operations. The Company's earnings before income taxes and extraordinary gain has thus declined over the current three-year period. The Company's net profit has also declined, but not as significantly. This situation is a consequence of the Company's declining tax rate, which arises principally from increased investment tax credits and research and development tax credits when related to lower pretax earnings.

Liquidity and Capital Resources: As disclosed in Note 5 to the consolidated financial statements, total debt at December 31, 1982, was down over $55 million from year-end 1981. The decline in debt was the result of a sale and exchange of stock for cash and outstanding debentures of the Company. Details of this equity financing are described in Note 3 to the consolidated financial statements.

At year-end 1982 and in comparison to the previous year end, working capital had increased $91 million, the current ratio increased to 2.57 from 2.32, and the percent of net debt (less marketable securities) to net debt plus stockholders' equity had improved to 12.8 percent from 18.5 percent. Despite the generally unfavorable economic conditions, asset management programs have resulted in further decreases in accounts receivable weeks of sales outstanding, declining to 7.1 weeks from 7.6 weeks, and inventories have remained virtually flat.

As a consequence of the Company's current year financing activities and net funds provided by operations, further increases were made from prior years in fixed asset expenditures and equipment leased to others. Note 10 to the consolidated financial statements details by segment the majority of the Company's fixed asset expenditures. The Company owns the majority of its manufacturing and productive resources and has only a minimal amount of such resources under lease. Management believes the Company is well poised to emerge from the current unfavorable economic climate to one of economic recovery with sufficient capital resources to meet the needs of its customers.

SUPPLEMENTARY INFORMATION ON THE EFFECTS OF CHANGING PRICES

The Financial Accounting Standards Board (FASB) issued Statement of Financial Accounting Standards No. 33 (SFAS-33) requiring disclosure of selected information describing certain effects of changing prices on companies' financial statements. SFAS-33 prescribes presentation of certain information adjusted for the effects of specific price changes as adjusted for equivalent service potential of replacement assets (current cost method) and as adjusted for the effects of general inflation as measured by the United States Consumer Price Index for All Urban Consumers (CPI-U; constant dollar method). For the constant dollar method, the effects of inflation were determined by adjusting the historical cost of inventories, property, plant and equipment, cost of sales and depreciation expense to average 1982 dollars based on the CPI-U. With respect to the current cost method, inventories were estimated based on quantities on hand at year-end 1982 adjusted to reflect current replacement cost. Cost of sales, on a current cost basis, was estimated by adjusting the historical cost of sales to reflect a LIFO (last-in, first-out) inventory valuation. The current cost of property, plant and equipment was estimated by adjusting historical cost by externally generated industrial price indices relevant to the plant and equipment of Motorola. Depreciation expense, on a current cost basis, was computed assuming straight-line depreciation using the same indices used to develop the estimated current cost of property, plant and equipment.

Motorola, like other companies, has experienced increases in the cost of its production resources. However, 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 cost of products sold beyond the increase in the costs of production resources. Thereby, over time, selling prices generally decrease. Productivity gains in Motorola's other business have reduced the effects of increased production resource costs, resulting in price increases over time at rates significantly less than general inflation.

In consideration of the two methods required to be used to portray the effects of changing prices, the Company believes, with some reservations, the current cost method more appropriately represents the impact of inflation on the Company, as it at least considers equipment related productivity. This method ignores, however, both productivity gains available from engineering and labor as well as inflationary pressures in selling, general and administrative costs. The required constant dollar method of presentation for this information contradicts the experience of the Company, as it completely ignores the effects of productivity. Accordingly, management believes that the constant dollar information presented on the following page and in the five-year comparison afterwards, with the exception of the dividends declared per common share adjusted by the CPI-U, does not correctly describe the effects of changing prices on the operations of the Company and is therefore misleading.

STATEMENT OF CONSOLIDATED EARNINGS ADJUSTED FOR CHANGING PRICES

Year ended December 31, 1982

(In millions of dollars)	Historical Cost	Constant Dollar (avg. 1982 $'s)	Current Cost
Sales and other revenues	$3,786	$3,786	$3,786
Manufacturing and other costs of sales	2,269	2,292	2,228
Selling, general and administrative expense	1,013	1,013	1,013
Depreciation of plant and equipment	244	261	235
Interest, net	48	48	48
Income taxes	43	43	43
Total costs and expenses	3,617	3,657	3,567
Net earnings before extraordinary gain	$ 169	$ 129	$ 219
Gain from decline in purchasing power of net amounts owed		$ 12	$ 12
Increase in specific prices (current cost method) of inventories and property, plant, and equipment held during the year*			$ 302
Increase in general price level (constant dollar method)			$ 115
Excess of current cost method over constant dollar method			$ 187

*At December 31, 1982, the current cost of inventories was $669 million and the current cost of property, plant and equipment, net of accumulated depreciation was $2,099 million.

The Company uses accelerated methods of depreciation in its historical cost financial statements in part to conservatively value earnings as a result of the increasing prices the Company will have to pay to replace these assets. The depreciation expense above for both constant dollar and current cost is based on calculations made using the straight-line method with asset lives grouped to approximate those used in historical cost presentation. Also, historical cost income tax expense has not been adjusted. Had depreciation expense under the current cost method been computed using accelerated methods, the depreciation charged would have approximated $340 million for 1982.

Below is a five-year summary of selected information which has been denominated in dollars of average purchasing power for the year 1982.

Five-year Comparison of Certain Supplementary Financial Data Adjusted for the Effects of Changing Prices.

(In millions of dollars, except per share data)	Years Ended December 31				
	1982	1981	1980	1979	1978
Sales and other revenue	**$3,786**	$3,789	$3,847	$3,067	$3,474
Historical cost information *adjusted by the constant* dollar method:					
Net earnings before extraordinary gain	**129**	115	121	145	—
Net earnings per common share	**3.53**	3.22	3.45	4.16	—
Net assets at year end	**2,223**	1,959	1,859	1,803	—
Historical cost information *adjusted by the current cost method:*					
Net earnings before extraordinary gain	**219**	212	214	237	—
Net earnings per common share	**6.00**	5.93	6.09	6.89	—
Net assets at year end	**2,503**	1,971	1,892	1,818	—
Other Information:					
Excess of current cost method over constant dollar method for inventory and property, plant and equipment, net	**187**	24	(127)	47	—
Gain from decline in purchasing power of net amounts owed	**12**	18	27	13	—
Cash dividends declared per common share	**1.60**	1.70	1.70	1.66	1.55
Market price per common share at year end	**85.87**	59.12	80.77	63.83	56.56
Average consumer price index	**289.1**	272.4	246.8	217.4	195.4

TEN YEAR FINANCIAL SUMMARY

(In thousands of dollars, except per share data)

Operating Results	**1982**	1981	1980
Sales and other revenues	**$3,785,847**	$3,569,677	$3,283,630
Manufacturing and other costs of sales	**2,269,198**	2,085,317	1,895,622
Selling, general and administrative expense	**1,012,425**	984,638	877,559
Depreciation and amortization of plant and equipment	**244,349**	205,225	172,617
Interest expense, net of interest income	**48,012**	35,025	43,274
Special charge	**—**	—	13,031
Total costs and other expenses	**3,573,984**	3,310,205	3,002,103
Earnings from continuing operations before income taxes and extraordinary item	**211,863**	259,472	281,527
Income tax	**42,371**	77,334	89,994
Net earnings from continuing operations before extraordinary item	**169,492**	182,138	191,533
Percent of sales	**4.5%**	5.1%	5.8%
Discontinued operations	**—**	—	—
Extraordinary item	**8,469**	—	—
Net earnings	**$ 177,961**	$ 182,138	$ 191,533
Per Share Data			
Earnings from continuing operations before extraordinary item	**$ 4.64**	$ 5.10	$ 5.45
Net earnings	**4.87**	5.10	5.45
Dividends declared	**1.60**	1.60	1.45
Balance Sheet and Other Data			
Total assets	**$2,833,194**	$2,614,902	$2,291,528
Working capital	**$ 924,356**	$ 833,097	$ 787,621
Current ratio	**2.57:1**	2.32:1	2.45:1
Short-term debt	**$ 8,658**	$ 6,596	$ 6,060
Long-term debt	**369,063**	426,703	383,259
Stockholder's equity	**1,700,054**	1,408,981	1,256,141
Less short-term investments	**128,353**	113,702	94,155
Total invested capital	**$1,949,422**	$1,728,578	$1,551,305
Return on average invested capital	**9.1%**	11.2%	12.9%
Return on average stockholders' equity from continuing operations	**11.3%**	13.7%	16.3%
Year-end employment (approximate)	**78,800**	80,800	75,200
Average shares outstanding (in thousands)	**36,506**	35,714	35,117

1979	1978	1977	1976	1975	1974	1973
$2,878,855	$2,347,605	$1,938,327	$1,597,326	$1,386,234	$1,420,593	$1,222,379
1,672,015	1,371,315	1,161,044	956,499	872,394	896,930	762,209
755,468	616,820	471,485	384,146	343,647	306,730	252,781
131,939	98,850	82,272	65,204	58,774	48,375	35,645
26,916	23,524	20,593	15,742	21,906	25,766	15,917
10,286	—	—	—	—	—	—
2,596,624	2,110,509	1,735,394	1,421,591	1,296,721	1,277,801	1,066,552
282,231	237,096	202,933	175,735	89,513	142,792	155,827
111,208	99,718	86,839	79,351	42,740	64,762	72,689
171,023	137,378	116,094	96,384	46,773	78,030	83,138
5.9%	5.9%	6.0%	6.0%	3.4%	5.5%	6.8%
—	—	—	(2,470)	—	(2,184)	(3,477)
—	—	—	3,090	1,066	500	—
$ 171,023	$ 137,378	$ 116,094	$ 97,004	$ 47,839	$ 76,346	$ 79,661
$ 4.91	$ 3.99	$ 3.42	$ 2.95	$ 1.50	$ 2.53	$ 2.73
4.91	3.99	3.42	2.97	1.54	2.47	2.62
1.25	1.05	.88	.735	.70	.60	.45
$2,069,461	$1,786,192	$1,504,926	$1,259,277	$1,078,837	$1,144,804	$1,029,889
$ 752,680	$ 650,783	$ 584,367	$ 459,567	$ 416,917	$ 437,124	$ 432,103
2.37:1	2.22:1	2.46:1	2.30:1	2.60:1	2.33:1	2.38:1
$ 8,001	$ 87,477	$ 79,197	$ 65,952	$ 58,052	$ 92,241	$ 71,597
333,512	229,986	227,272	130,928	162,869	192,775	166,117
1,098,680	958,709	839,399	737,183	631,354	598,193	530,271
84,141	121,429	85,681	60,972	38,116	26,336	21,982
$1,356,052	$1,154,743	$1,060,187	$ 873,091	$ 814,159	$ 856,873	$ 746,003
13.5%	12.4%	11.9%	11.9%	5.7%	9.6%	12.8%
16.6%	15.4%	15.4%	14.5%	7.8%	13.8%	17.0%
78,400	70,800	62,100	57,400	48,100	52,000	64,600
34,835	34,418	33,912	32,619	31,129	30,873	30,399

Quarterly Financial Data

(In thousands of dollars, except per share data)

	1982				1981			
	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.
Sales and other revenue	$913,436	$965,123	$912,350	$994,938	$858,897	$901,385	$876,094	$933,301
Gross profit before depreciation	378,566	392,315	333,634	412,134	366,124	378,392	348,092	391,752
Net earnings before extraordinary gain	34,622	45,262	34,498	55,110	46,920	50,473	41,196	43,549
Net earnings per share before extraordinary gain	.96	1.26	.96	1.46	1.32	1.41	1.15	1.22
Dividends:								
Declared	.40	.40	.40	.40	.40	.40	.40	.40
Paid	.40	.40	.40	.40	.40	.40	.40	.40
Stock prices:								
High	58.38	65.38	81.25	93.50	73.25	90.50	69.75	73.88
Low	49.25	56.88	59.00	71.50	56.88	67.63	60.00	55.75

DIRECTORS

ROBERT W. GALVIN

WILLIAM J. WEISZ

JOHN F. MITCHELL

JOHN J. ANTALEK
Retired; formerly Vice President, TRW Inc.

JAMES W. BIRKENSTOCK
President, Intercal, Inc.
Management consulting firm

JOHN T. HICKEY

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

STEPHEN L. LEVY

HOMER L. MARRS
Retired; formerly Senior Vice President, Motorola, Inc.

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

CHARLOTTE T. REID
Business consultant; formerly Commissioner, Federal Communications Commission; and member, U.S. House of Representatives

WILLIAM G. SALATICH
Business consultant and Trader, Chicago Mercantile Exchange; formerly Vice Chairman, Gillette Company

ELMER H. SCHULZ
Director Emeritus,
IIT Research Institute

WALTER B. SCOTT
Retired; formerly Vice President, Motorola, Inc.

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

B. KENNETH WEST
President, Harris Bankcorp, Inc., and Harris Trust and Savings Bank

DIRECTOR EMERITUS

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

OFFICERS OF MOTOROLA, INC.

		Age	As of 12/31/82 Years of Service
CORPORATE			
Robert W. Galvin	*Chairman of the Board and Chief Executive Officer*	60	42
William J. Weisz	*Vice Chairman of the Board and Chief Operating Officer*	55	34
John F. Mitchell	*President and Assistant Chief Operating Officer*	54	29
Stephen L. Levy	*Senior Vice President, Japanese Operations*	61	18
Levy Katzir	*Vice President and General Manager, New Enterprises*	50	26
FINANCE			
John T. Hickey	*Senior Vice President and Chief Financial Officer*	57	35
Donald R. Jones	*Vice President, Assistant Chief Financial Officer and Treasurer*	52	32
Kenneth J. Johnson	*Vice President and Controller*	47	11
Richard H. Weise	*Vice President, General Counsel and Secretary*	47	14
STAFF			
John R. Welty	*Senior Vice President and Chief Corporate Staff Officer*	60	25
Martin Cooper	*Vice President and Corporate Director of Research and Development*	54	28
L. Curtis Foster	*Vice President and Corporate Director of Engineering*	57	8
Jack Germain	*Vice President and Corporate Director of Quality*	56	32
Earl R. Gomersall	*Vice President and Corporate Director of Operational Support*	52	11
R. James Harring	*Vice President and Corporate Director of Planning*	58	31
C. Travis Marshall	*Vice President and Corporate Director of Government Relations*	56	12
Vincent J. Rauner	*Vice President for Patents, Trademarks and Licensing*	55	12
PERSONNEL			
Robert N. Swift	*Senior Vice President and Corporate Director of Personnel*	59	30
James D. Burge	*Vice President and Director of Personnel, United States*	48	24
James Donnelly	*Vice President and Director of Personnel, International*	43	13
COMMUNICATIONS SECTOR			
Rhesa S. Farmer, Jr.	*Senior Vice President and General Manager, Communications Sector*	56	25
David K. Bartram	*Vice President and General Manager, Government Markets Division*	46	22
John W. Battin	*Vice President and General Manager, Portable/Paging/Systems Group*	45	24
Arnold S. Brenner	*Vice President and General Manager, Communications International Group*	45	23
R. LaVance Carson	*Vice President and General Manager, Special Markets Division*	53	28
Gordon Comerford	*Vice President and Sector Director of Business Management*	46	8
George M. C. Fisher	*Vice President and General Manager, Paging Division*	42	6
Kenneth R. Hessler	*Vice President and General Manager, Commercial Markets Division*	49	25
Bradford K. Kroha	*Vice President and General Manager, European Division*	56	28
Theodore Saltzberg	*Vice President and General Manager, Fixed Division*	55	27
Edward F. Staiano	*Vice President and General Manager, Systems Division*	46	9
Arthur P. Sundry	*Vice President and General Manager, Communications Distribution Group*	54	25
Morton L. Topfer	*Vice President and General Manager, Fixed and Mobile Group*	46	11
Ira W. Walker	*Vice President and General Manager, Distribution Service Division*	59	27
SEMICONDUCTOR PRODUCTS SECTOR			
Gary L. Tooker	*Senior Vice President and General Manager, Semiconductor Products Sector*	43	20
James R. Fiebiger	*Vice President and Assistant General Manager, Semiconductor Products Sector*	41	5
Andre Borrel	*Vice President and General Manager, European Semiconductor Division*	46	15
Weldon D. Douglas	*Vice President and General Manager, High Frequency and Optical Products Division*	45	22
Thomas D. George	*Vice President and General Manager, Internal Operations Group*	42	3
David W. Hickie	*Vice President and Sector Director of Finance*	49	20
William G. Howard, Jr.	*Vice President and Director of Technology and Planning*	41	13
Henri A. Jarrat	*Vice President and General Manager, Bipolar Integrated Circuits Group*	44	6
Gary M. Johnson	*Vice President and General Manager, MOS Integrated Circuits Group*	38	15
James A. Norling	*Vice President and General Manager, International Semiconductor Group*	40	17
Geno Ori	*Vice President and General Manager, Discrete Semiconductor Group*	45	20
Charles E. Thompson	*Vice President and Sector Director of World Marketing*	53	13
INFORMATION SYSTEMS GROUP			
Arthur Carr	*Vice President and General Manager, Information Systems Group*	51	5
AUTOMOTIVE AND INDUSTRIAL ELECTRONICS GROUP			
Carl E. Lindholm	*Senior Vice President and General Manager, Automotive and Industrial Electronics Group*	53	15
GOVERNMENT ELECTRONICS GROUP			
James R. Lincicome	*Vice President and General Manager, Government Electronics Group*	57	32

MOTOROLA PRODUCTS

Communications Sector
Communications control centers
Component products
Digital voice-protection systems
Electronic command and control systems
Emergency medical communications systems
Microwave communications systems
Mobile and portable data communications systems
Mobile and portable FM two-way radio communications systems
Mobile and portable radiotelephone systems
Precision instruments
Radio paging systems
Signaling and remote control systems

Semiconductor Products Sector
Add-in memory systems
Bipolar and MOS integrated circuits
Bipolar VLSI Macrocell arrays
Custom circuit design service
Custom MOS and bipolar circuits
Electronic materials
Fiber optic devices
Field-effect transistors
Mass Memory Systems
Microcomputer board-level products
Microcomputer system development support products
Microprocessors
Microwave components
NMOS, CMOS and bipolar memories
Optoelectronics
Power and small signal transistors
Pressure and temperature sensors
Rectifiers
RF modules
RF power and small signal transistors
Single-board computers
Suppressors
Telecommunications digital switching
Thyristors
Triggers
Varactors
Zener and tuning diodes

Information Systems Group
Circuit access and test systems
Diagnostic and test equipment
Distributed data processing equipment
Electronic data switches
Integral modems
Intelligent network processors
Intelligent terminal systems
Low-, medium- and high-speed modems
Multifunction computer systems
Multiplexers
Network control and management systems
Software for data entry, word processing, office management
Systems processors
Technical control facilities
Telephone line conditioning equalizers
Telephone traffic accounting and control systems
Video operator stations
Voice digitizers

Automotive and Industrial Electronics Group
Alternator charging systems
Automatic scoring systems for bowling
Automotive and industrial digital instrumentation (Tachometers, speedometers, odometers, hourmeters)
Automotive and industrial digital monitoring systems
Automotive and industrial sensors
Automotive stereo systems
Citizens band radios
CRT display modules (5" to 23")
Digital appliance controls
Electronic engine controls
Electronic engine governors
Electronic ignition systems
Electronic regulators
Engine management systems

Government Electronics Group
Advanced seeker systems
Antenna and microwave systems
Data security modules
Drone command and control systems
Electronic countermeasures systems
Electronic positioning and tracking systems
Fixed and satellite communications systems
Fuze systems
Intelligent display terminals and systems
Military radios
Missile and aircraft instrumentations
Missile guidance systems
Satellite survey and positioning systems
Satellite terminals
Secure communications
Space communications systems
Surveillance radar systems
Tracking and command transponder systems
Video processing systems and products

MOTOROLA WORLDWIDE

Major facilities in:

Australia
Melbourne
Canada
Ontario
Rexdale
Willowdale
France
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
South Africa
Johannesburg
Switzerland
Geneva
United Kingdom
Basingstoke
East Kilbride
Stotfold

United States
Alabama
Huntsville
Arizona
Mesa
Phoenix
Scottsdale
Tempe
California
Cupertino
Novato
Florida
Boynton Beach
Fort Lauderdale
Illinois
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 Alta
Vega Baja
West Germany
Munich
Taunusstein

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