

Poised for the Eighties

1979 Annual Report



MOTOROLA INC.



Daniel E. Noble

On February 16, 1980, Dr. Daniel E. Noble died in his Scottsdale, Arizona, home at the age of 78.

Teacher, inventor, engineer, technological pioneer, leader, artist, colleague, friend, Dan Noble was for four decades, a giant in the electronics industry and in the heart and the spirit of Motorola.

His role in our history is now itself history. But his legacy of heart and spirit and genius endures and will endure. We are all in Dan's debt. We won't forget.

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Annual Meeting of Stockholders

The annual meeting will be held on Monday, May 5, 1980. A notice of the meeting, together with a form of proxy and a proxy statement, will be mailed to stockholders on or about March 20, 1980, at which time proxies will be solicited by the Board of Directors.

Transfer Agents and Registrars

Harris Trust and Savings Bank
111 W. Monroe Street
Chicago, Ill. 60690

Citibank, N.A.
111 Wall Street
New York, N.Y. 10015

Auditors

Peat, Marwick, Mitchell & Co.
222 S. Riverside Plaza
Chicago, Ill. 60606

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.

Financial Highlights

(Amounts in thousands, except per share data)	1979	1978
Sales and Other Revenues	\$2,713,795	\$2,219,744
Earnings before Special Charge and Income Taxes	269,606	220,390
% to Sales	9.9%	9.9%
Special Charge	10,286	—
Income Taxes	105,024	95,208
Net Earnings	154,296	125,182
% to Sales	5.7%	5.6%
Net Earnings per Share before Special Charge	5.21	4.04
Net Earnings per Share	4.96	4.04
Research and Development	167,000	133,000
Fixed Asset Expenditures	265,072	146,377
Depreciation	110,827	83,340
Working Capital	708,551	619,930
Current Ratio	2.35:1	2.20:1
Return on Average Invested Capital (stockholders' equity plus long- and short-term debt net of short-term investments)	13.5%	12.3%
% of Total Debt (long- and short-term) to Total Debt plus Equity	23.0%	24.1%
Book Value per Common Share	32.22	28.49
Year-end Employment (approximate)	75,000	68,000

The Company

Motorola, Inc., one of the world's leading manufacturers of electronic equipment and components, is engaged in the design, manufacture and sale, principally under the Motorola brand, of a diversified line of products. These products include two-way radios and other forms of electronic communications systems; semiconductors, including integrated circuits, discrete semiconductors and mi-

croprocessor units; electronic equipment for military and aerospace use; automobile radios; stereo tape players, citizens band radios and other automotive electronic equipment and data communications products such as high speed modems, multiplexers and network processors. Motorola's products are manufactured for both United States and international markets.

To Our Stockholders and Friends

1979 was another year of fine progress for Motorola with all but one of our major operations showing strong growth in sales and earnings. Of particular note were the continuing high level of demand for semiconductor components and the surpassing of \$1 billion milestones by the net worth of the corporation and the year's sales of the Communications Group.

For the fourth consecutive year, sales, earnings and dividends reached record highs. Sales and other revenues for 1979 were \$2.7 billion, a 22 percent increase over \$2.2 billion in 1978.

Earnings in the year were \$162.2 million, or \$5.21 per share, before a special charge of \$7.9 million, or 25 cents per share, to provide for the termination of the electronic timepiece component business, as well as certain other peripheral activities of the Semiconductor Group. Of the special charge, \$1.2 million, or four cents per share, had been recorded in earlier 1979 quarters. Net margin on sales in 1979 was 6.0 percent before the special charge.

In 1979, after the special charge, earnings were \$154.3 million, or \$4.96 per share, compared with \$125.2 million, or \$4.04 per share, in 1978. Net margin for 1979, after the special charge, was 5.7 percent compared with 5.6 percent for the year earlier.

Another important indicator of the company's earnings per-

formance is return on average invested capital (stockholders' equity plus long- and short-term debt net of marketable securities). For 1979, this return on capital reached 14.1 percent before the special charge and 13.5 percent after the special charge compared with 12.3 percent in 1978.

In December we increased the company's dividend rate per share from 30 cents to 35 cents per quarter. This is the tenth consecutive year that the declared dividend has been increased. Any future dividend increases will, of course, depend on the company's operating results and its financial needs.

Operations Overview

The Communications Group's sales increased by 17 percent and operating profit margins were improved. New equipment orders rose by 15 percent and backlog was ahead of the yearend 1978 level.

The Semiconductor Group, helped by a continuing high level of worldwide demand for semiconductor components and by the introduction of several major metal oxide silicon (MOS) products, had an outstanding year. Sales were up 38 percent with an improvement shown in the group's operating profit margin. New order bookings and backlog improved significantly over their 1978 levels, up more than 40 percent and 70 percent respectively. Growth in integrated circuits, in particular, was excellent.

The Government Electronics Division reported substantial growth in its sales, bookings and backlog levels, up more than 20 percent, 50 percent and 60 percent respectively. Operating profits were improved over 1978.

The Automotive Products Division, however, reported an operating loss with sales slightly below its 1978 level. These unsatisfactory results were primarily due to a reduction in automobile entertainment and citizens band radio sales volume which, in turn, necessitated inventory and pricing adjustments. In addition, the division continued to invest in new businesses and technologies.

The company's data communications operations, for which Codex has prime responsibility, continued to show strong growth. Sales and bookings for 1979 were up more than 40 percent, reflecting the sharp rise in demand in the U.S. for data communications equipment. Because of Codex's strategic investments, operating margin, as planned, was down from its 1978 level.

Senior Management Promotions

In January 1980 the Board of Directors elected William J. Weisz vice chairman of the board and John F. Mitchell president of Motorola, Inc. Both gentlemen continue in their roles as chief operating officer and assistant chief operating officer respectively.

The board's announcement

recognizes the long service and superior leadership and achievements of both men who have served Motorola in various positions from engineering to top management for their entire working careers.

Bill Weisz, who has been president and chief operating officer of Motorola, Inc., for the past ten years, will now have an additional responsibility, the management of strategy as a primary factor in the management of Motorola's business and operations. Associated with this is responsibility to effect new business directions and strategies. John Mitchell, who has been executive vice president and assistant chief operating officer for the past five years, will continue to concentrate his activities in the supervision of direct operations and the implementation of strategy.

New Directors

During the year two new members were elected to the Board of Directors, Mr. M. Joseph Lambert and Mrs. Charlotte T. Reid. Mr. Lambert is the chief financial officer of Kraft, Inc., and Mrs. Reid is a former member of the House of Representatives and former commissioner of the Federal Communications Commission.

Management and Organization Changes

In the third quarter the Communications and Semiconductor Groups announced important changes in their respective organizations in order to better serve grow-

ing markets and manage unprecedented technological change. This resulted in the Communications Group now having eight divisions in its structure and the Semiconductor Group six divisions.

Also announced with these changes was the election of seven executives as vice presidents of Motorola, Inc., by the Board of Directors. These included Bradford K. Kroha from the Communications Group, and Geno Ori, James A. Norling, Dr. James Fiebiger, Henri A. Jarrat, Andre Borrel and Charles E. Thompson, all from the Semiconductor Group.

The board also elected Arthur Carr, president of Codex Corporation, as a vice president of Motorola, Inc.

Research and Development

Major investments in research and development are necessary to maintain a competitive edge in a dramatically expanding electronics industry. In 1979 Motorola spent \$167 million on R&D, exclusive of government funded work, compared to \$133 million in 1978.

Outlook

Since early in the 1970s, Motorola's corporate strategy for profitable growth has undergone some fundamental changes. We have divested ourselves of certain operations that have not met profit standards and are investing in businesses that would benefit from our expertise in semiconductor technology and our direct marketing skills.

The most significant changes that have occurred are the substantially greater share of current sales revenues that are derived from the Communications and Semiconductor Groups and our entry into the rapidly expanding data communications market. We believe that today's mix of businesses positions Motorola well for the future.

Looking ahead into 1980 and beyond, we are optimistic about Motorola's prospects although, in the short term, there are many uncertainties in the economic climate. Maintaining profit margins with the current severe inflation of costs is an increasingly difficult task, which is receiving our constant attention. We do believe that the dynamics of the major markets we serve will provide the corporation the opportunity for further growth in revenues and earnings in 1980.

Yours very truly,



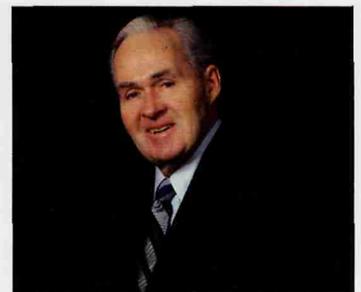
Robert W. Galvin
Chairman



William J. Weisz
Vice Chairman



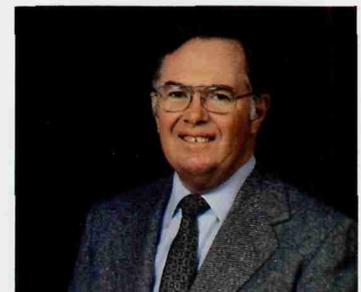
John F. Mitchell
President



Robert W. Galvin



William J. Weisz



John F. Mitchell



(Top) Motorola's MX300 series 800 MHz portable radio is the industry's first introduction of a portable designed to meet 800 MHz conventional systems communications needs.

(Below) The SYNTOR FM mobile two-way radio. Motorola's first synthesized mobile radio. eliminates the need for costly multiple channel elements.

Communications Group

In 1979 the Communications Group's sales passed the billion dollar mark, an increase of 17 percent over 1978's level. This is the first time a Motorola division or group has reached this milestone which is approximately equivalent to the company's entire sales in 1973. This fine performance also included an improved operating profit margin compared to 1978.

The group's backlog level at yearend was 15 percent higher than the previous yearend and worldwide new equipment orders have continued to grow, up 15 percent over last year.

Domestic order growth was particularly strong in the radio common carrier, industrial and telephone markets. Among the notable orders received were a contract from the City of Chicago Transit Authority Board for an above and below the ground radio communications system and from Amoco Production Company for a special 800 MHz wide area trunked system that uses simulcast technology to cover, by mobile radio, two of the company's petroleum production districts. In the state and local government market, among the orders received was one from the City of Mesa, Ariz., for a computer aided dispatch system for its police and fire departments and another from the State of Virginia for a vehicular repeater system that will facilitate communications with state policemen when they are out of their vehicles.

Orders from the Communications Group's international markets continued to grow at a faster rate than its domestic markets. Orders in Canada were up 17 percent over last year, which reflected improvements in the Canadian economy. In Europe the group had an excellent year with orders up by 61 percent above last year. Mexico and Australia also had strong growth compared to 1978.

Among the international contracts received during the year were a multimillion dollar add-on order for eight-function LED readout pagers from the Dutch Post, Telegraph and Telecommunications system, an improved mobile telephone service system from the Ivory Coast Government and an order from the Metro/Toronto ambulance system that included mobile radios, radio repeaters and mobile data terminal display units.

An underlying strength of the Communications Group's successful growth continues to be the extensive scope of its mobile radio, portable radio and paging product lines. Several new products were introduced for both the domestic and international markets which have excellent potential for the future. The Mitrek™ mobile radio line was expanded by three new models so that it now includes nearly all bands and all powers for domestic and international markets. A dual function digital tone radio pager was introduced to the market. This pager has two separate tones enabling the user to receive messages from two locations. Two new hand-held portable radios were also unveiled.

The group manufactures several product lines for use primarily in its international markets. During the year new product introductions included an FM two-way mobile radio, the European version of the Maxar® 80 mobile radio, an ultrahigh frequency hand-held portable two-way radio, and a mobile radio that has long distance communications capabilities.

In addition to its more traditional product lines, the Communications Group introduced three new data communications systems for the fire department, transit authority and fleet management markets. The fire dispatch processor, the general status processor and the transit dispatch software are tailored to meet the require-

ments of each of these markets, enabling dispatchers to know, among other things, the status of vehicles and their movements.

Significant structural changes were made to the Communications Group's divisional organization during the year. The former Communications Products Division was divided into three divisions—the Portable Products Division, the Mobile Products Division and the Communications Fixed Products Division. In addition, two other divisions were formed—the European Communications Division and the Communications Distribution Service Division.

Semiconductor Group

The Semiconductor Group's performance in 1979 was outstanding. This was due to the increased worldwide demand for semiconductor components, which remained at a high level throughout the year, and to Motorola's introduction of many additional state-of-the-art products, including several metal oxide silicon (MOS) devices which serve the needs of new applications and markets. Sales were up 38 percent over last year with an improvement shown in operating profit margin.

New order bookings increased by more than 40 percent over 1978 while backlog was up by more than 70 percent. Demand remained particularly strong in the U.S. automotive, computer, communications and industrial sectors. In two major international markets, Europe and Japan, the strongest segments were the telecommunications and business equipment markets.

The group made major changes in its divisional structure. The former Integrated Circuits Division was divided into two divisions—the MOS Integrated Circuits Di-

vision and the Bipolar Integrated Circuits Division. The former Discrete Semiconductor Division was also divided into two divisions—the High Frequency and Optical Products Division and the Power Products Division. A European Semiconductor Division was also created.

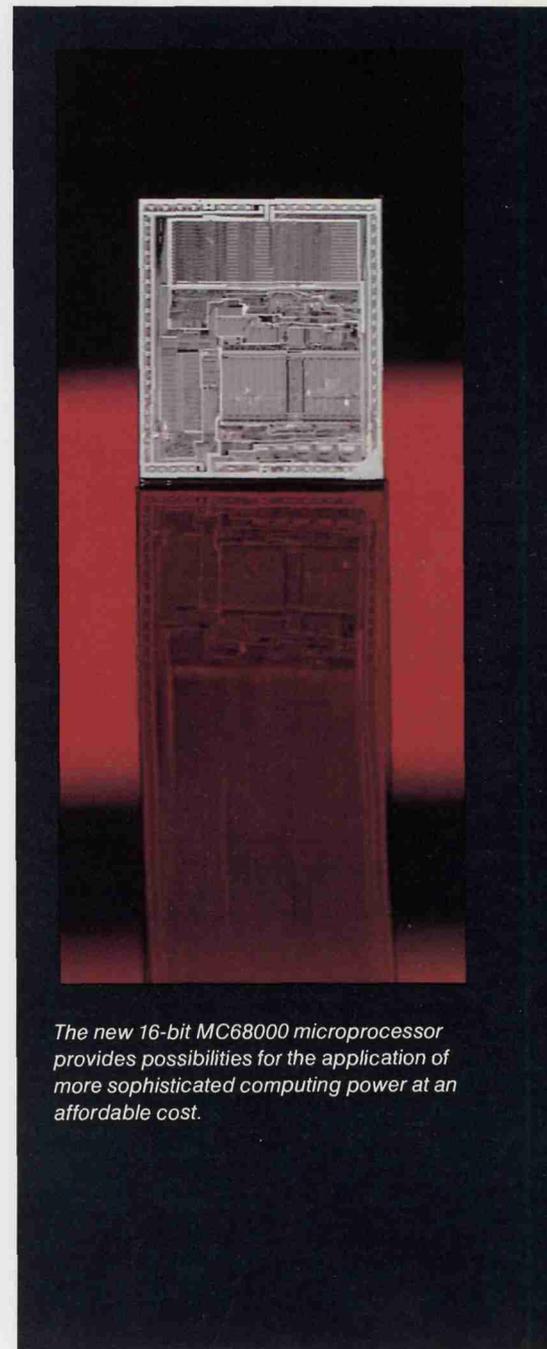
To meet the expanding demand for semiconductor components the Semiconductor Group is increasing its production capacity. The MOS plant in Austin, Texas, has been doubled in size to nearly half a million square feet and work has begun on the construction of an 85,000 square foot automated warehouse at the 52nd Street plant in Phoenix, Ariz.

The bipolar and MOS integrated circuits (IC) wafer fabrication facilities in Mesa, Ariz., are also being enlarged. Two building sections have been refurbished and occupied this year and another two unfinished sections will be completed in 1980. Internationally, new capacity has been added to the facilities in East Kilbride, Scotland; in Seremban, Malaysia; and in Manila, Philippines. A new automotive laboratory to support sales to the Japanese automotive industry and an MOS final test facility were opened in Tokyo, Japan.

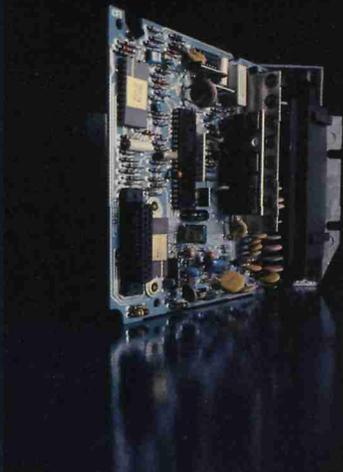
IC sales were at an all-time high and bookings showed substantial gains over last year. There was a significant increase in backlog levels.

Of particular importance in 1979 was the announcement of several new MOS products. Motorola's 64K dynamic random access memory (RAM) was evaluated by customers and is now in the early stages of production. The group also announced the 16K, 32K and 64K five volt erasable, programmable read only memories (EPROM). The 64K EPROM is believed by Motorola to be the first such device produced by the industry.

Major advances have been made in mi-



The new 16-bit MC68000 microprocessor provides possibilities for the application of more sophisticated computing power at an affordable cost.



(Top) A low cost, 12-inch CRT display module, developed for high volume OEM use in the small business terminal market.

(Below) Production of the EEC III, an electronic engine controller for Ford Motor Company's 1981 models, was begun in 1979. This microprocessor-based unit is designed to control the ignition timing, exhaust gas recirculation rate and air fuel ratio.

croprocessor design and development. Four new devices were introduced during the year which included the MC68000 and MC6809. The 16-bit MC68000 is probably the most complex microprocessor of its kind and greatly expands the processing capabilities of these devices to some two million calculations a second. The MC6809 microprocessor is an 8-bit device which, because of its internal 16-bit capabilities, bridges the gap between 8-bit and 16-bit microprocessors.

Production of the 16K RAM was begun in the last quarter of the year at the East Kilbride plant in Scotland. This additional production capability will help meet growing demand for this product in Europe.

Market demand for low power Schottky devices has continued to grow and, consequently, sales of this product rose significantly during the year. This line of logic products was also expanded with the introduction of 18 new devices. In addition, the Macrocell Array I, an advanced bipolar very large scale integrated (VLSI) device, has been well received by both mainframe and mini-computer manufacturers.

Discrete semiconductor sales, bookings and backlog levels increased in 1979.

The discrete operation continued its emphasis on yield improvements and cost reduction programs during the year. The quality of product shipped to customers improved over the previous year and was a result of further investment in mechanized assembly and testing systems.

Developments by Motorola in discrete component technology led to the introduction during the year of products for the consumer, communications, industrial and military markets. These included eight different microwave pulse-power transistors with an output power of up to 150 watts, expansion of a family of Switchmode power transistors, IC opto-

couplers used in the rapidly growing industrial controls markets and fiber optics components for such markets as computer, telecommunications and industrial controls.

Automotive and Display Systems Group

Automotive Products Division

The general downturn in U.S. new car sales and a further reduction in entertainment equipment business from original equipment manufacturers caused a significant reduction in sales of Auto-sound and citizens band radio products which was not fully offset by the Automotive Products Division's other activities. As a result, the division's sales volume was slightly below the 1978 level. The division incurred an operating loss for the year primarily due to the reduced Autosound and citizens band sales volume which, in turn, necessitated inventory and pricing adjustments. In addition, the division continued to invest in new businesses and technologies.

While continuing to serve its traditional markets, the division has been developing new businesses. In one of these, automobile engine electronics, production began in 1979 on an electronic engine controller for the Ford Motor Company. In addition, Ford has awarded a portion of its 1981 feedback carburetor module business to Motorola, the only outside vendor participating in this program.

Sales of alternators and instruments continued to grow, particularly in the aftermarket and the agricultural and industrial markets. A family of two alternators in the industrial market was introduced during the year. These 90 and 62 amp alternators have a high output and a substantially longer life than the conventional alternators their size.

The division's international markets, particularly in Europe, continued to play an important role in its overall sales performance. Sales of charging and ignition systems from the division's Angers, France, facility grew significantly in 1979 and that operation recorded an operating profit for the year.

An agreement was reached with a major German car manufacturer to supply 65 amp alternators for vehicles exported to the U.S. This same customer will use the division's all-electronic entertainment centers in its U.S. cars. In addition, a contract was awarded by another European manufacturer for the development and production of a four cylinder distributor-less ignition system.

In another new business, the first shipments of digital appliance controls have been made to two major appliance manufacturers. Consumer demand for microwave ovens remained strong throughout the year and, as a result, shipments of controls for this equipment were substantially ahead of plan. Further production contracts have been negotiated with these manufacturers for 1980.

Display Systems Unit

The Display Systems Unit's sales increased moderately over 1978. New order bookings and backlog levels were down somewhat for the year, caused by a softening in the unit's cathode ray (CRT) tube display business. This, combined with investment in new product design and the start-up of the production facility in Joplin, Mo., has resulted in a lower operating profit margin than last year.

In spite of the softening in new orders and backlog, sales of CRT displays to computer terminal manufacturers continued to grow during the year. A new 12" display module, introduced in 1979, has been well received by the manufacturers

of small home and business computer terminals and has provided Motorola with an important foothold in the low cost display market.

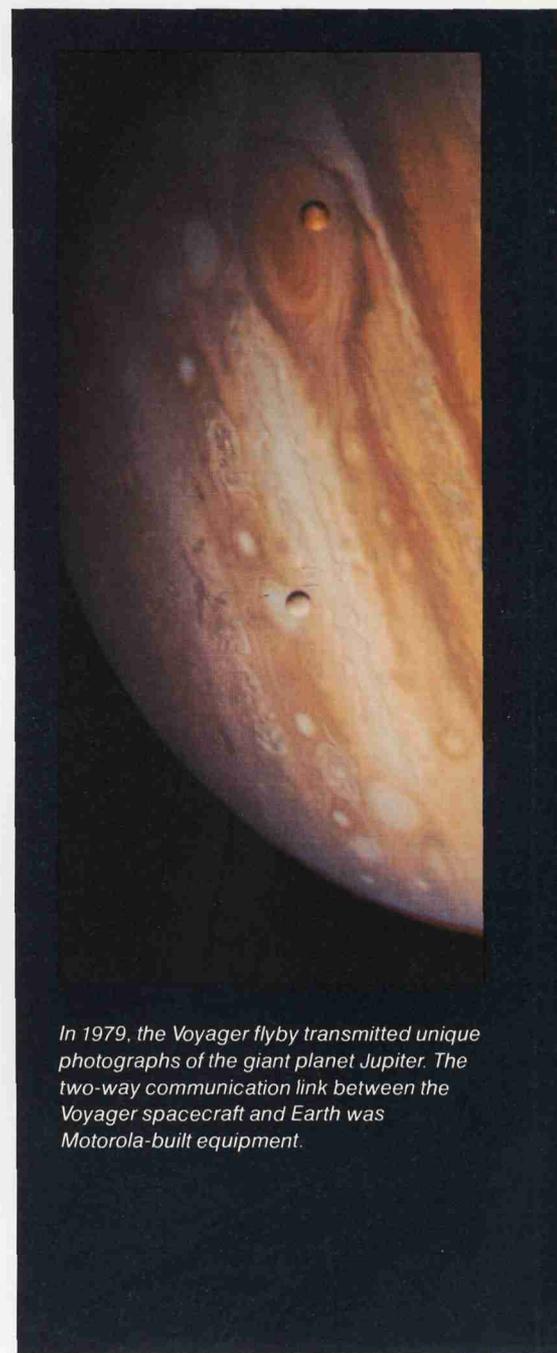
Government Electronics Division

The Government Electronics Division has completed a fine year with sales, bookings and backlog levels up substantially from 1978. Sales for the year rose more than 20 percent with bookings and backlog up by more than 50 percent and 60 percent respectively. Operating profits also increased.

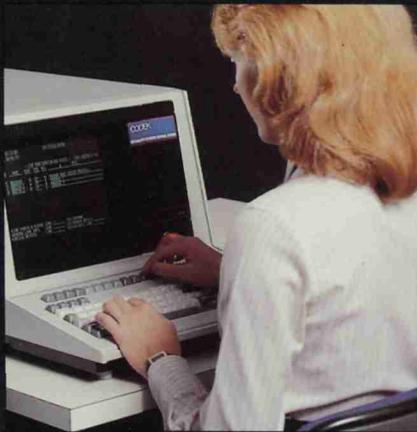
While the development of specific equipment has continued, one of the keys to the division's growth in recent years has been the expansion of its subsystems and systems business. The success of this strategy was particularly borne out this year when the U.S. Army awarded the division a \$55 million contract for the development of its Stand-Off Target Acquisition System (SOTAS). This is the single largest defense or space contract ever awarded to Motorola and has funding potential for follow-on production business.

Development of equipment for the U.S. space program continues to be an important feature of the division's business. Among the contracts received in 1979 were a Tracking and Data Relay Satellite System transponder for the Space Telescope Program due for launch in 1983; airborne command receivers and ground communications equipment for the Space Shuttle; and a radio frequency subsystem for the Galileo space orbiter and the radio transmitter for the probe to be sent deep into the atmosphere of Jupiter.

Motorola's traditional defense contract business also made an important contribution to the division's excellent results. Among the major contracts awarded were



In 1979, the Voyager flyby transmitted unique photographs of the giant planet Jupiter. The two-way communication link between the Voyager spacecraft and Earth was Motorola-built equipment.



Codex's highly advanced Distributed Network Control System monitors, tests and controls all elements of a dispersed data network from a convenient central site.

development of an optical target detector for high velocity anti-radiation missiles; production of MK-29 antenna assemblies for the Navy's Standard and Shrike Missiles; and development of an improved scoring system for use at the Pacific Missile Test Center at Point Mugu, California.

Several defense contracts received this year are likely to have long-term production potential in the 1980s. These included an award from the U.S. Army for the development of an 155mm projectile fuze and from the U.S. Air Force for the development of a protective countermeasures system and solid state transmitters for the defense avionics system for the B-52 strategic bomber.

The Department of Energy selected Motorola and the Arizona Public Service Company to build a 200 kilowatt solar power plant at the Phoenix Sky Harbor Airport. More than 5,000 photovoltaic solar concentrators will be manufactured for installation on 18 large arrays for the program.

In the international markets, the Mini-Ranger® position determining and navigation equipment is pacing the division's sales, although military radios and computer interactive displays are also finding increasing acceptance.

Data Communications

In 1979, Motorola consolidated its data communications operations under the management of Codex. These operations include ESE Limited (in Canada), a manufacturer of data communications subsystems, data modems and network control products; Universal Data Systems, Inc., a supplier of low and medium speed modems and data communications test equipment; and a new Codex operation in Phoenix which manufactures micro-

processor-based intelligent terminals and terminal subsystems.

Motorola's data communications operations had another strong year. Sales and bookings increased by more than 40 percent over 1978, reflecting sharp growth in demand for data communications equipment in the domestic market. International markets showed satisfactory growth although not at the same high rate as the domestic markets.

Codex's business strategy calls for combining Motorola's corporate-wide distinctive competence in semiconductor technology, communications technology, and those technologies gained through its own product and field experience, to provide quality data communications products and systems. In 1979 Codex began to demonstrate the successful implementation of this strategy through changes in its organizational responsibilities, new product introductions and expansion of its facilities. As a result of these strategic investments, operating profit margin for Motorola's data communications operations was down, as planned, from its 1978 level.

In line with its expansion plans, Codex broadened its equipment base by marketing several new products. Among these were an advanced network control system, a data security system, a voice digitizer and a family of "intelligent" terminals.

Construction of additional office and production facilities to meet current and future growth requirements was begun in July at Codex's Mansfield, Mass., headquarters. This 150,000 square foot addition is scheduled for completion in 1980.

Poised for the Eighties:
a special report



On the 1980s . . .

“As the electronics industry and world markets grow during the '80s, Motorola will be putting its major emphasis on the management of strategies . . . which calls for the best mix of products that can be managed and earn optimum company profit over multi-years, generate a competence distinctive from competition, and provide convincing benefits to worldwide customers.

- *There will be special demands on managing capital resources productively, on sourcing of materials, and dealing with shortages. Fixed asset needs will intensify. Profit margins must increase to meet all of these requirements of the '80s.*

Governments with an interest in future prosperity must appreciate the need for creating a healthier investment climate.

- *More than 75 percent of sales in 1979 came from products that have been developed within the past ten years, and as we move into the new decade, our technology has taken a turn into the realm of super sophistication affecting both hardware and software. It is accompanied by a much higher level of customer expectation of quality and reliability.*

- *Allowing for normal interruptions, there will be substantial growth opportunities in our types of businesses in the non-U.S. marketplaces. Therefore, during the '80s, we must be successful in influencing governments to apply the new international trade regulations fairly so there will be reciprocal foreign trade and investment opportunities.*

- *There will be vigorous attention to the training and development of people. Programs of participation on the part of all employees in the conduct of their company work will be expanded.*

- *One compelling element that has brought us to our present size and competency has been adherence to a philosophy which respects the dignity of each individual and which demands that every act and transaction of the corporation be governed to the highest standard of integrity. This will continue. ●●*

Robert W. Galvin

Poised for the Eighties

As we move into the '80s, Motorola is a premier company in a premier industry, electronics.

One characteristic of a premier industry is a positive response to the ever expanding needs of society. Another is the opportunity to serve these needs with distinctive competence and with unique specialization. This has been the history of the electronics industry, and the history of Motorola.

What lies before us in

the '80s is a continuation of the process that develops technology to serve people, but the pace will be quicker and the specialties more sophisticated.

Predictions abound today that we are entering a decade of stunning electronic innovation brought about mainly by the continuing rapid expansion and development of semiconductor technology, which has advanced more in the past five or six years than in the previous two decades combined. There is no doubt that elec-

tronics will continue to evolve, and serve the world's needs to communicate, to measure, to control, and to compute.

Motorola's hundreds of products in the communications, semiconductor, automotive electronics, government electronics, and data communications businesses serve directly or indirectly almost all of the possible functions of electronics.

We are the leader, or among the leaders, in many product and market areas of this diverse industry. But more than

that, Motorola is in a unique class of the industry because of the synergism developed within the company between semiconductor technology and equipment designed with microelectronic components and produced in huge volume. This specific distinctive competence makes even greater the opportunities and challenges of the '80s. It may well be, too, that the evolution in technology, and the exploding applications of complex and inexpensive electronic functions in the '80s, will make this



(Above) As part of the photoresist process of wafer fabrication in the Mesa, Ariz., HMOS clean room, the critical dimensions of individual chips on the wafer are measured.

(Right) One of the final phases of wafer fabrication is metallization. During metal evaporation, an interconnect metal is deposited on the wafer.



decade a pivotal period in history for industrialized society as a whole.

With continued growth at least equivalent of our historic rate, and with associated high standards of profit, turnover and return on net assets, we exceeded \$2.7 billion in sales in 1979 and expect to exceed \$10 billion by the turn of the next decade. We expect to generate attractive, consistent earnings. And, we expect to continue the process of innovation.

What follows is a look at the

next decade and an overview of how Motorola's people, products and technology are poised for the '80s.

The Microelectronic Revolution

Today, the driving force behind the electronic technology revolution is unquestionably large scale integration, of which the integrated circuit known as the microprocessor is but one outstanding example.

The implications of this technology, which in 1980 can

construct a complex complete computer system on a tiny chip of silicon, are incalculable to society. Critical world needs of the '80s and beyond in communications, transportation, energy savings, ecology, information processing and productivity will all be impacted by rapid change, as electronics becomes more pervasive to the needs of society.

Integrated circuits at present are about two-thirds of all semiconductor sales, and growing, according to industry sources. Memories and mi-

croprocessors together account for about 30 percent of total IC sales at present, but so rapid is the growth rate that the two devices are expected to make up about two-thirds of all IC sales at the end of the '80s.

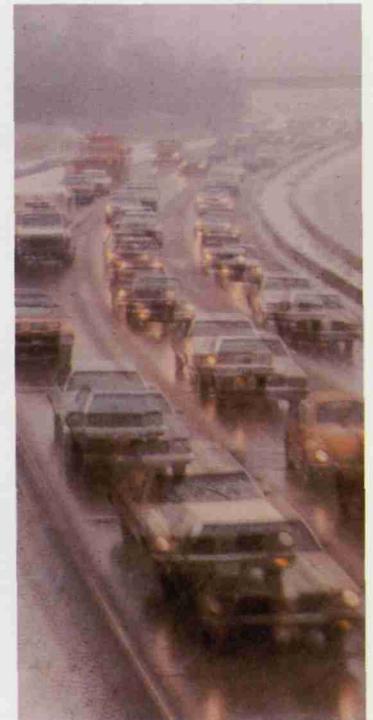
For Motorola, this technology revolution provides opportunities and challenges both extensive and exciting.

Electronic Systems for Cars

For example, in 1980 Motorola has become a leading designer and supplier of engine management elec-



In Ahwatukee, the House of the Future near Phoenix, Ariz., a microprocessor-based home management computer system, designed and built by Motorola, handles information storage, electrical load switching, environmental control, energy conservation and security functions. This experimental house is open to the public for viewing.



Products of microprocessor-based technology are helping the automotive industry build cars for the '80s.

tronics for General Motors Corp., through the Semiconductor Group, and for Ford Motor Co., through the Automotive Products Division. In Europe, where auto manufacturers are not as yet subject to rigid air pollution and fuel economy improvement regulations, Motorola is already delivering sophisticated devices to a major European auto manufacturer.

The automotive industry is one of the largest immediate markets for semiconductors, and is expected to be using

about \$1 billion worth annually by the mid-'80s. This surge in microelectronics and the enthusiasm of the world's auto manufacturers for electronic systems of increasing sophistication, should not diminish during the next ten years. It is supported at Motorola by developmental programs already in place for the future, and by a long-term commitment to being a major designer and supplier to the industry.

For the Automotive Products Division, experience in electronic engine manage-

ment and in developing and manufacturing high volume, high reliability, low cost electronic controls for use in adverse environments has opened up another opportunity. The industrial and agricultural off-the-road vehicle market, where the demand for electronic controls and instrumentation is growing, represents an important market potential for the future.

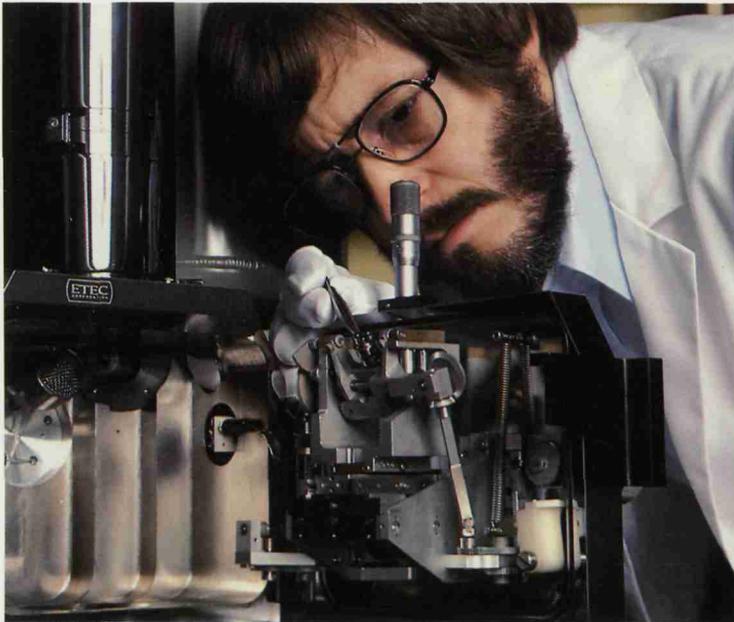
Semiconductor Technology Key

Advancements in industries

other than automotive electronics—telecommunications, instrumentation, entertainment products, and information processing to name just a few—will all move along in future years at a quickened pace because of that highly complex, mass-produced, extremely reliable and low cost wonder, the microprocessor.

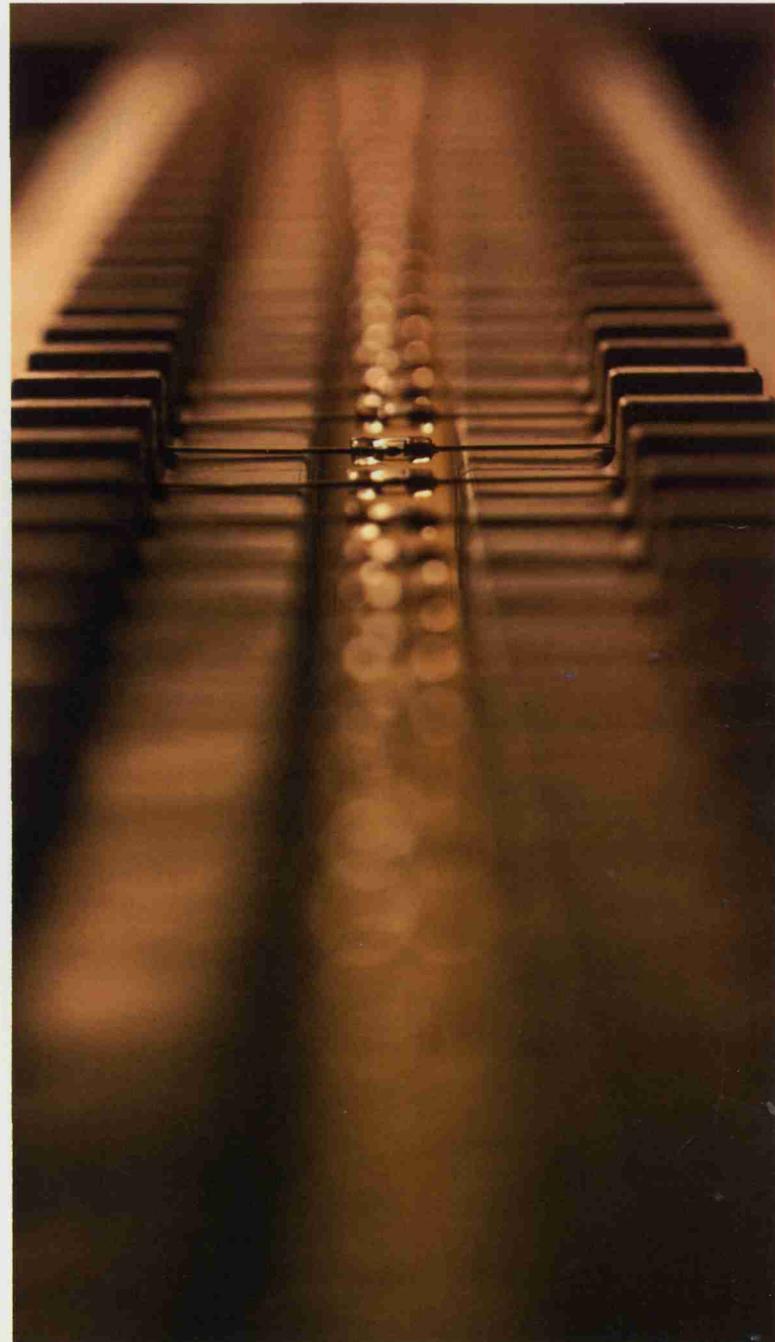
And Motorola is at the leading edge of this technology.

In 1979, the company introduced the MC68000, a state-of-the-art microprocessor which, when combined with



(Above) Electron microscopy makes it possible to pinpoint material flaws, imperfections that earlier would have escaped detection except by stress testing and that could grow into failure mechanisms under severe stress.

(Right) A recently installed process performs operating life for zener diodes. With this equipment, one operator can perform operating life and test about one million zener diodes a year.



peripheral parts, such as a memory unit, can perform some two million calculations in a single second. It is believed to be the most powerful and most complex of these devices on the market.

In the communications business, the microelectronic revolution will impact almost all of the two-way radio products of the future. Two examples of the more innovative uses will be microelectronic applications in computer aided dispatching together with radio user access to computers from

vehicles; and the radio telephone business, where the cellular radio-telephone system will become a reality during the '80s.

Advances in Mobile Radio Technology

Motorola's Communications Group is one of the world's leading producers of two-way radio systems and it has built its business in part over the years by applying mobile radio technology to those segments of the marketplace that have unique communications

needs. The strategy of custom sales, service, and manufacturing to meet special sophisticated communications needs is particularly pertinent to the '80s because of its thrust towards energy saving and productivity. In effect, markets continue to broaden—in part because effective means to communicate both data and voice cut transportation costs, and help manage human resources more efficiently.

Most of the mobile and portable radio and paging products are impacted by large

scale and very large scale integrated circuitry. For instance, providing mobile two-way radio users the ability to interface with computers while in their vehicles is an important need solved by microprocessor technology. Mobile terminals and printers are already available, but the advanced microprocessors, such as Motorola's MC68000, have the capability of providing more efficient use, and more innovative and flexible access to computers in the future. It is possible that



(Above) Public safety control centers employ computers in the assembly of information necessary to protect communities. State-of-the-art two-way communications systems, with computer aided dispatch and digital voice protection (shown here in the Salt Lake City, Utah, Police Department control center), help provide efficient, highly secure environments for these law enforcement services.

(Left) New economic feasibilities for energy exploration are assisting increasing energy independence. The use of mobile radios in remote areas provides economic advantages, enabling efficient use of time and fuel in these operations.

voice recognition and voice synthesis technology will permit the vehicle operator to talk to, and receive information in voice form from computers.

This radio technology will be a primary tool for creating new Motorola products in the '80s, and will hasten the era of widespread digital signal processing which converts signals (voice and data) into digits or numbers and modifies them for transmission via a particular communications link.

Cellular Systems

Cellular systems will be an extremely effective way to meet the growing demand for mobile telephones, and in 1975 the Federal Communications Commission (FCC) allocated 40 MHz of spectrum for the development of a nationwide mobile telephone system.

A cellular system employs the technique of frequency re-use, and at the heart of the cellular system are computers which handle various signaling, supervision and control functions. Re-use permits two

or more conversations to take place simultaneously in different parts of the city on the same channel.

The Dyna T'A'C® portable telephone, designed and demonstrated by Motorola some years ago, will accelerate even more the use of the radio telephone by providing communications for people on the move, in or out of a vehicle.

Two companies, Motorola and AT&T, have designed cellular systems. The Motorola system, which is being developed for the Washington,

D.C./Baltimore, Md. area, will be operated by American Radio Telephone Service. Operational development installations and tests are currently underway and full service is expected to commence in 1981-82.

The FCC has begun the regulatory process leading to final rules for cellular systems. Major questions are being addressed, including the services to be provided, limitations on the role of the wire line telephone companies, the degree of competition between cellu-



These antennas are used in Motorola's Dyna T'A'C® experimental cellular system, which supports the use of Dyna T'A'C® portable telephones.



lar systems and in the supply of subscriber equipment, technical standards for nationwide compatibility, and the required spectrum allocation.

WARC: Some Changes

The world's radio equipment market is significantly impacted periodically by the general World Administrative Radio Conference which meets to review the world's available radio spectrum and allocate its usage.

In the fall of 1979, WARC held its meeting in Geneva,

Switzerland, and for eleven weeks the world community reviewed and revised as necessary the radio regulations of the International Telecommunications Union. The conference reviewed the allocations of all portions of the radio spectrum and determined the amount of spectrum that will be available for each of the radio services.

As one of the world's largest designers and manufacturers of land mobile equipment, Motorola was pleased that the majority of countries of the

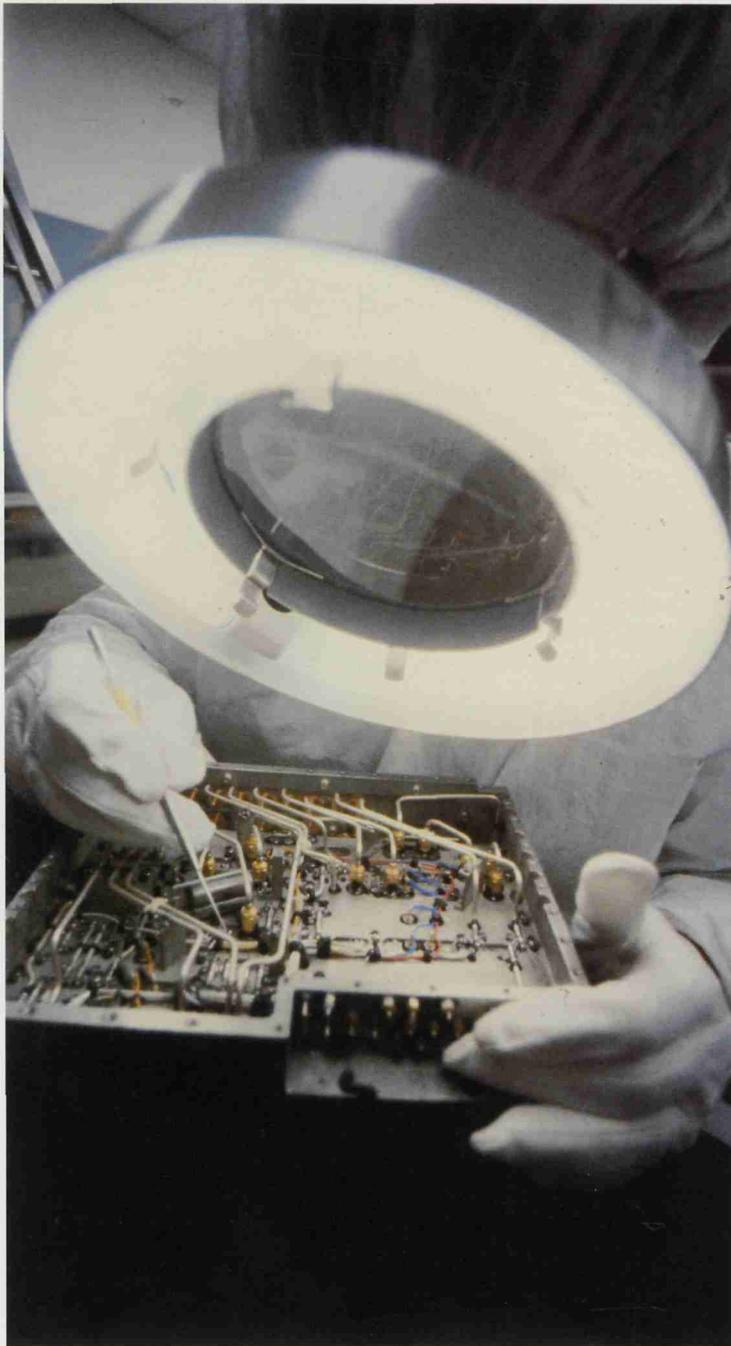
world expressed the need for expanded radio frequency allocations for both domestic and international mobile services. Specifically, the conference decided to increase mobile service allocations in all three regions of the world, Europe/Africa, Western Hemisphere, and the Far East.

By-Products of Space Age

Motorola's Government Electronics Division has had equipment on every manned and every major unmanned U.S. space mission since the

program began in the 1950s. For instance, the first voice from the Moon and the first pictures of Mars and Jupiter were transmitted to Earth by Motorola communications systems.

From this experience the company has derived expertise in a variety of technologies and disciplines. There are many examples of commercial products or competences that have come directly from this leading edge technology exposure: the Info-Guard® encryption device for secure data



(Above) The World Administrative Radio Conference, held in Geneva in 1979 and attended by Motorola representatives, reviewed the world's available radio spectrum and allocated its usage for the future.

(Left) For the upcoming Galileo probe of Jupiter, Motorola is building electronic subsystems to keep the spacecraft in two-way communication with NASA. In the Galileo clean room at the Government Electronics Division, modules for the radio frequency subsystem are being prepared for tests.

applications; a sophisticated Communications System Analyzer; applications of side-looking radar technology to aerial mapping and resource management; and the Mini-Ranger®, a radar positioning device used by oil explorers and others.

Less visible are other spin-off benefits from both space and military contracts which will, in the long term, affect our lives. Satellite communications is but one example. Tomorrow's ultra-sophisticated satellites, employing digital

technology and utilizing advanced data processing techniques with electronic switching and coding plus high speed data transmission, could be used to bypass ground telephone networks and go directly from user to user anywhere on Earth. Transmission of up to several billion bits of data per second is now possible compared to a tenth of that a decade ago. And microprocessors will help provide the high speed electronic switching and digitizing capability required for these

future "switchboards in the sky."

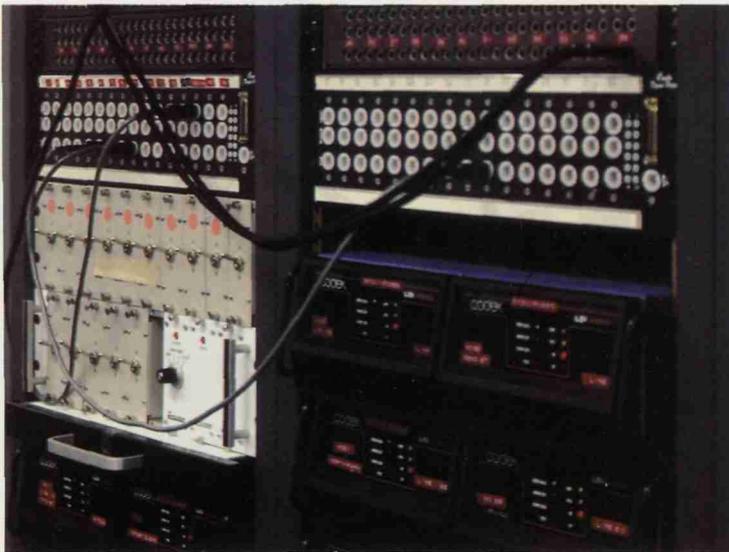
High Growth Opportunity

The dramatic growth in the numbers of computers and remote terminals used in business, industry and other organizations has created an equally dramatic demand for these computers and terminals to communicate with each other.

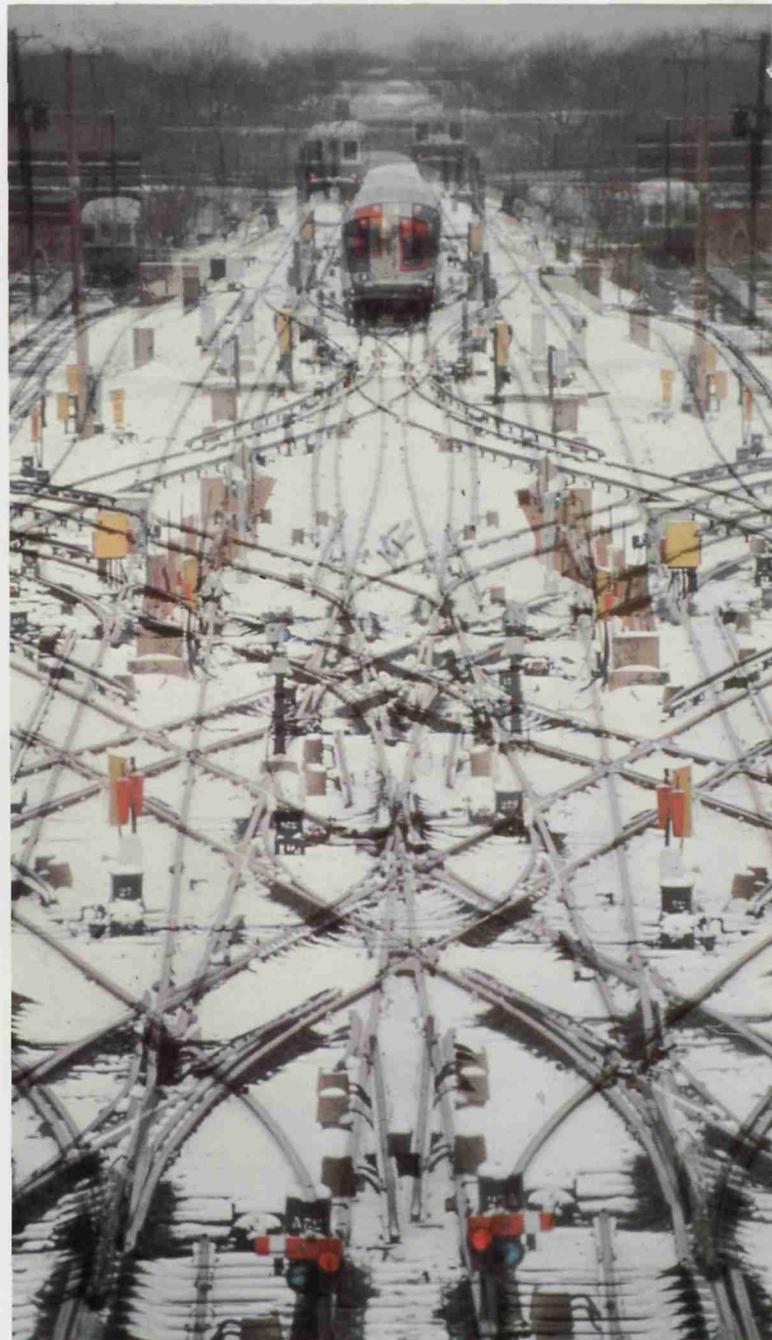
When the Codex Corporation joined Motorola several years ago and was followed by Universal Data Systems, Inc.,

it led to the formation of a data communications activity which is managed by Codex, and which broadens Motorola's technology portfolio by providing distinctive competence in this field.

Data communications is another industry where electronics is all important to the needs of an information-oriented society. Up until recently, communications networks were extensions of basic data processing application functions—accounting, record keeping, the normal



The transportation industry represents a major market opportunity for data communications equipment. In the communications room of the Chicago Transit Authority Board, sophisticated monitoring and control equipment ensures network reliability.



transactions of business.

In the very near future, a single network will carry data and voice and facsimile. It can now carry word processing information which becomes, in a sense, electronic mail, where there is communications between two geographically separated word processors within a network. There will also be increasing use of teleconferencing and video conferencing.

For example, there are computer networks dedicated to health care information, and networks which connect police stations throughout a state into one single data communications system. Practically every major industry in the world depends upon reliable computer networks to run its business efficiently.

Motorola's growing opportunity in data communications is to become a supplier of systems and network elements, with the exception of the transmission media itself.

International Trade

No discussion of the '80s would be complete without focusing on international trade practices, which promise to be an increasingly critical issue from the competitive, economic and political points of view. International pressures acting to squeeze fair trade, and governments acting in their perceived individual national interests to optimize economic advantage, will meet head on with the philosophy of open, free and fair trade.

We begin the '80s, however, with an encouraging sign for businesses engaged in world trade. During the latter half of the '70s, more than 100 countries of the world participated in multi-lateral trade negotiations that were intended to reduce tariffs, eliminate non-tariff barriers, prevent unfair trade practices and improve the remedies available for

violations. Motorola executives were among industry advisors who participated in these negotiations.

The negotiations produced far-reaching agreements that have been enacted into law by the U.S. Congress and which should, if properly enforced, help ensure fairer trade in the '80s. But, even though the negotiations produced certain substantial tariff reductions overall, the reductions achieved in high technology industries, such as the semiconductor industry, were unsatisfactory. Motorola will continue to seek further reductions of tariffs in order to provide true equivalency in commerce between trading partners.

The agreements, which are designed to halt such unfair export practices as dumping, predatory pricing, government subsidies of exports; and import barriers, such as stepped-up customs valuations, unique specifications, quotas, and restrictions on government procurement, will solve problems only if backed by constant monitoring and firm enforcement.

Motorola has urged the U.S. Government to assign to its economic attachés in the U.S. embassies and consulates around the world, the specific task of dealing directly with the host governments regarding those violations of the trade agreement that limit exports of the United States. Further, in the public arena, we will press for the establishment of more efficient on-going agencies at the world level so that business and government can continue to work on certain of the unsolved or inadequately solved parts of the trading problem.

A Worldwide Identity

Non-U.S. markets have never been viewed at Motorola as an alternative to a lagging domestic economy. Rather,

the world demands for electronic products and technology and the company's long-term plans and objectives for growth have expanded our participation in the international arena to the position in 1979 where almost one-third of all sales are international.

We have made substantial investments required for long-term operations outside of the U.S., and now have 27 major facilities located around the world in Europe, Asia, Australia, the Middle East, Africa,

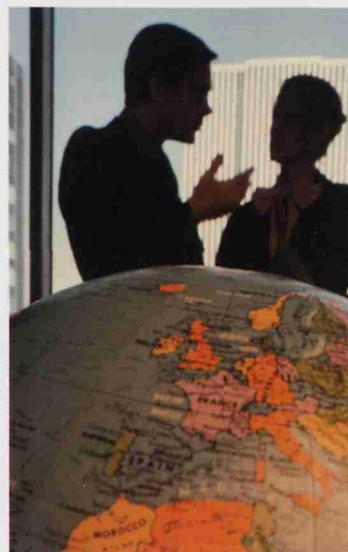
Mexico, Latin America and Canada, and approximately 85 non-U.S., sales offices.

The cultural and business practices of our host countries, and the vitality of Motorola employees worldwide (who speak at least 25 different languages as their native tongues) have done much to broaden our perspective.

As the world of international marketing grows smaller, emphasis on research, product adaptation, price competition, and service grows larger. Being price competitive in



Motorola products leave O'Hare International Airport in Chicago on a Flying Tigers 747, destined for customers abroad.



markets outside of the U.S., and managing domestic costs requires unique business management skills, and, ideally, a healthy and viable economy. But adherence to the basic tenets in the free enterprise system of free and fair trade that are a deciding factor between success and failure, is where governments and business must work together, not at odds, for general economic well being. Nowhere is that task more urgent than in the area of international trade practices.

People: The Real Leading Edge

During the '80s, the key to maintaining leadership in high technology electronics will lie with the expertise and resourcefulness of the people who work in the industry. On the surface, this is not so different than it has always been. But, a good many people now realize that the ever widening range of consumer and industrial applications of electronic functions will put ever greater demands on management and technical skills.

The electronic development pace will continue to accelerate, and therein lies the historic difference between the '80s and previous decades.

Our greatest resource, therefore, is the people who work at Motorola.

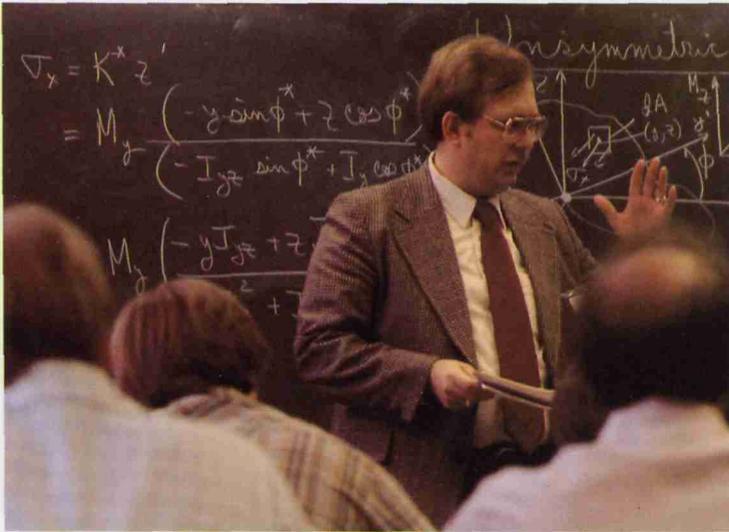
There are approximately 75,000 Motorolans around the world, each with his or her own talent, ideas and ambitions. As we enter the '80s, we are committed to meeting their expectations of job satisfaction and career growth. There will be a broadening of people in-

volvement within the company which recognizes the human need to know oneself and function effectively within a chosen working environment.

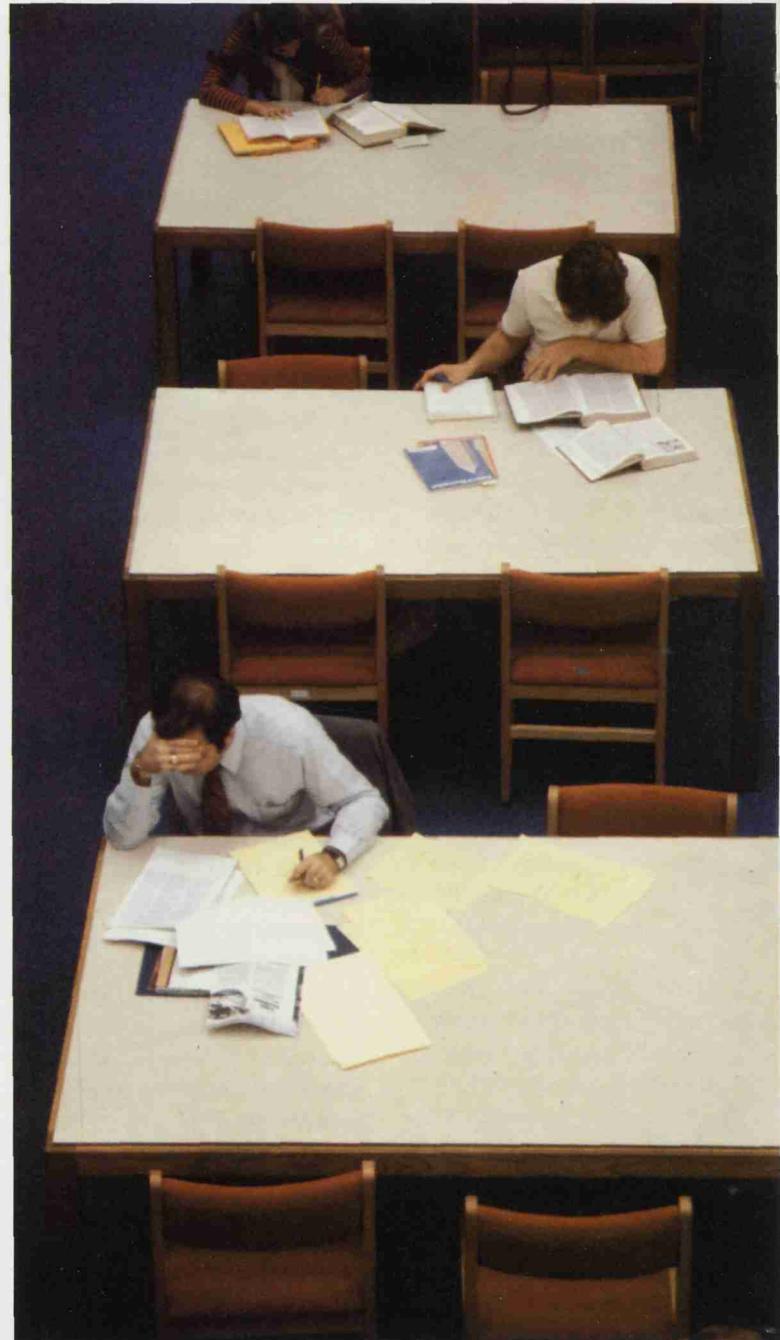
At the heart of management's commitment to people involvement is the need for effective communications, broadening a dialogue among all Motorolans.

Formalizing Dialogues

This two-way process was begun in 1951 by Motorola's founder Paul V. Galvin, when he set up the first advisory



Engineering talent currently emanating from universities is at a premium as the world demand for the products of advanced technology increases.



council composed of employees. This council, still in existence and now expanded, makes suggestions and recommendations to the Board of Directors on improvements to various aspects of Motorola's businesses. Since 1951, the number of employee councils and committees has been greatly expanded at all levels within the company to include groups concentrating on profit sharing, employee benefits, personnel policies, affirmative action, and compensation, among others.

In addition to formal organizations which function routinely, employees are encouraged to speak out on company matters and personal concerns through department "rap" sessions and "speak out" and telephone programs, where the company gives quick answers to things people want to know. Senior managers of groups/divisions hold regular briefing sessions, and Motorola has approximately 40 plant newspapers and other publications which communicate broadly across company lines. Throughout the company, too, career counseling and posting of job opportunities and associated salary benefits are maintained.

Ten years ago, a Science Advisory Board (SAB) comprised of senior members of the technical staff, was formed to foster innovative engineering. SAB's primary goal is to develop support for original and innovative ideas and to identify and single out exceptional individual achievement.

Among its activities, SAB communicates significant technical developments among groups and divisions, publishes a quarterly newsletter and technical magazine, and organizes technical seminars.

Our Learning Process

During the '80s, education

and training at all levels of the corporation will be expanded. Training programs will range from management development, strategic planning and manufacturing to supervisory management, materials management and sales and marketing training.

This decade at Motorola will also bring more emphasis on the participative management program (PMP) started in 1974. PMP involves employees in the management of their work, and through PMP, an employee can receive productivity sharing bonuses based on a percentage of costs saved through improving the output of products, reducing costs or improving quality and delivery. The program puts employees squarely in the decision-making process pertinent to their work.

Skills Needed

One of the major concerns of the '80s and beyond is the limited number of skilled people available who can contribute to the continuing growth of technology around the world. The U.S. Department of Labor, for instance, forecasts that there will be a minimum increase of 146,250 jobs in engineering and science technician fields by 1985. These statistics, put against the current shortage of experienced engineers, is causing increasing concern in the advanced technology industries.

The electronics industry, which by the end of the decade may equal the size of the giant automotive and steel industries, needs a large infusion of bright technology-oriented people to take advantage of the almost limitless opportunities ahead.

Clearly, the problem will require an approach led by educators and backed by industry. Motorola is already working with many universities on various programs to prepare students for

future science careers.

Equal

The '80s will see vigorous attention to the employment and promotion of minorities and women. The programs, and, importantly, the commitments are in place and moving rapidly forward.

But, it is not attention to social shifts in society, or compliance with the law, that motivates the company to take this path. Nor do we maintain that nothing has changed.

There is at Motorola, how-

ever, an historic tradition of equitable treatment of all employees; people have not been defined by their differences. The reality of today and tomorrow is that what is just must be made real in conjunction with the changing cultural expectations people have for their own future.

It is the company's commitment to provide the climate for coalition and opportunity for men and women, majority and minority, and to do it with the historic principle of equal opportunity that has not changed



fundamentally at Motorola from decade to decade.

The 1980s:

The Journey Continues

Motorola's competitive distinction over the years has been state-of-the-art technology, quality products, service to our customers, and the ability to create a high level of synergism among Motorola's operating entities. This particular combination of strengths is what makes us different from most of our competitors around the world.

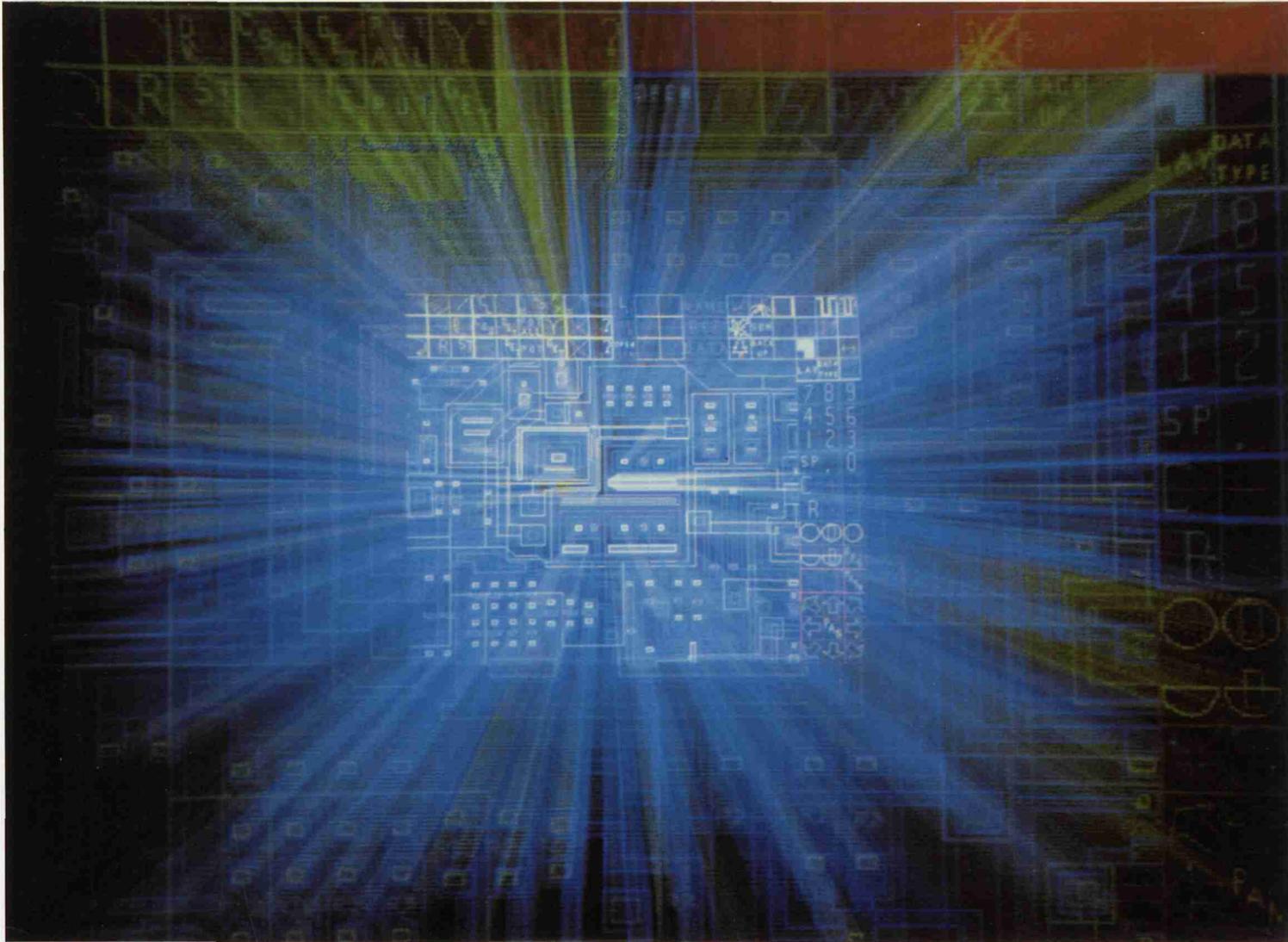
The '80s will see more emphasis on this synergism, more development of distinctive competences.

The '80s, like all preceding decades, will also be a journey through problems as yet unidentified. As the social, economic, political and competitive imbalances in the world become more pronounced, the need will increase to give close attention to strategies and to concentrate on long-range objectives.

All in all, it is a journey well worth taking for Motorola be-

cause the stakes are high for people everywhere, and the opportunities for the electronics industry are almost limitless.

And, no small point, there is the sheer adventure of being part of the electronic revolution.



The computer-assisted design of integrated circuits is expected to contribute to the innovation and accuracy of electronic products in the '80s.

Financial Review

Balance Sheet

As discussed with the stockholders in prior annual reports, strong financial condition and conservatively stated asset and earnings figures are important elements in Motorola's culture and operating policy.

At December 31, 1979, total borrowings, long and short term, were \$299 million, up from \$281 million a year earlier and represented 23.0% (down from 24.1% in 1978) of total borrowings plus stockholders' equity. The current ratio at year-end 1979 was 2.35 vs. 2.20 for 1978. During the year working capital increased to \$709 million from \$620 million. Despite sales and other revenue increasing by 22%, dividend payments up by 21%, and 1979 fixed asset expenditures of \$265 million vs. depreciation of \$111 million, the above indicators of financial strength were achieved because of several actions taken and programs pursued during the year, as follows.

... Increased emphasis on the management of assets, particularly accounts receivable and inventories. While inventories grew apace with sales volume, accounts receivable were up only 8.3% on a 22% increase in sales and, at year-end, represented 8.4 weeks of sales (vs. 9.2 weeks a year earlier), the best receivable turnover Motorola has

achieved in over a decade.

This was a particularly noteworthy accomplishment considering 1979's high interest rates, and the fact that currently 26% of our sales are outside the United States where payment practices are typically somewhat slower. For 1980 we intend to continue this asset management emphasis and expect to see improvement in inventory turns.

... During the year, and as the pace of fixed asset commitments accelerated, we negotiated increases in our revolving credit agreement with seven U.S. banks from \$56 million to \$220 million, and also negotiated increases in our U.S. short-term lines of credit from \$95 million to \$111 million. At the start of 1980, \$265 million of U.S. credit facilities were not being used for borrowing or for commercial paper backup. Additionally, \$100 million of unused non-U.S. bank lines were available.

... In 1979 we accomplished repatriation of \$81 million of the accumulated earnings of subsidiaries in Puerto Rico. Adequate provision for the Puerto Rican withholding (tollgate) tax having previously been made in our accrued tax accounts, the 1979 repatriation had no direct impact on earnings. Accruals for other expected repatriations have also been made.

Exposure Management

The foreign exchange exposure management figures in Note 3 include for the first time in this report the after-tax foreign currency translation loss as well as management's estimate of the gains realized during each year and to be realized in subsequent years as non-U.S. inventories flow through the cost of sales. Statement of Financial Accounting Standards No. 8 (SFAS-8) provides, incorrectly we believe, that non-U.S. inventories be translated into U.S. dollars at historical rates even though such inventories have already been sold or are destined for sale at exchange rates in effect at the time of sale.

It is our objective to neutralize, insofar as feasible—economically and otherwise—foreign currency exposure on a total, or "economic", basis including the estimated gain or loss on inventories. Accordingly, we present the foreign exchange translation data both as SFAS-8 provides and with indication of the total economic gain or loss resulting from non-U.S. assets and liabilities held when currency rates change. We continue to support the Financial Accounting Standards Board's indicated intent of studying significant modification of SFAS-8.

Price Change Reporting

Note 14 to the financial statements contains Motorola's compliance with Statement of Financial Accounting Standards No. 33 (SFAS-33) issued by the Financial Accounting Standards Board in September 1979. SFAS-33 requires large publicly reporting companies to disclose certain information adjusted for the effects of inflation and thereby indicate the effect of changing prices on the net asset values as well as stated sales, earnings and dividends of the reporting corporations. Unfortunately, we believe that the data in Note 14, which is furnished as prescribed in SFAS-33, seriously fails to meet this objective and, in some instances, suggests incorrect conclusions.

SFAS-33 provides for disclosure of data adjusted both for the effects of general inflation ("Constant Dollar") and for replacement cost of inventories and fixed assets ("Current Cost"). Because the "Current Cost" method properly includes an adjustment for the expected increased productivity of replacement fixed assets, which is very difficult for many large companies, including Motorola, to calculate, SFAS-33 only requires that the "Constant Dollar" data be supplied in 1979 reports. The rapid rate of technological

change in the electronics industry does cause substantial productivity improvements in many of the new fixed assets Motorola acquires—making the task of calculating the "Current Cost" data extremely difficult to accomplish with reasonable accuracy. Accordingly, Note 14 in this report only contains the "Constant Dollar" information.

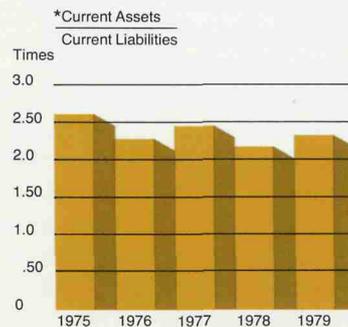
SFAS-33 requires that the adjustments in "Constant Dollar" data all be made by using the U.S. Consumer Price Index for All Urban Consumers (CPI-U), which index we believe has very limited relationship to the effects of changing prices on Motorola's net asset values, sales and/or earnings. For but one example, declining prices and inventory unit costs have long been characteristic of semiconductor products as

productivity improvements yield cost savings which are passed on to the customer. The data furnished in Note 14 is based on the assumption (false, we believe) that the inflation rate reflected in the CPI-U represents the effect of changing prices on semiconductor products, when in reality the effect has been substantially opposite.

Accordingly, we state our opinion that the data in Note 14, furnished in accordance with SFAS-33, seriously fails to indicate the effects of changing prices on the asset values, sales and/or earnings of Motorola, Inc. Since dividend distributions to some stockholders do, directly or indirectly, become consumer income, the adjusted dividend figures in Note 14 may be thusly somewhat meaningful.

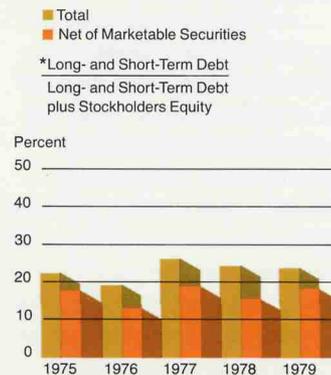
Current Ratio*

(As of Year End)



Total Debt to Total Debt plus Equity*

(As of Year End)



Consolidated Balance Sheets

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

Assets	(Dollars in thousands)	1979	1978
Current Assets:			
Cash and short term investments, at cost (approximating market)		\$ 99,630	\$ 157,405
Accounts receivable, less allowance for doubtful accounts (1979, \$30,148; 1978, \$23,775)		491,857	454,245
Inventories:			
Finished goods		156,893	146,117
Work in process and production materials		390,819	292,724
Future income tax benefits		40,169	43,762
Other current assets		54,340	40,739
Total Current Assets		1,233,708	1,134,992
Property, Plant and Equipment:			
Land		25,499	23,651
Buildings		349,714	287,249
Machinery and equipment		666,674	503,499
Accumulated depreciation		(388,146)	(310,602)
Property, Plant and Equipment, Net		653,741	503,797
Sundry Assets, Net		16,047	17,768
Total Assets		\$1,903,496	\$1,656,557
Liabilities and Stockholders' Equity			
Current Liabilities:			
Notes payable—banks and other		\$ —	\$ 78,502
Current maturities of long-term debt		3,549	4,461
Accounts payable		230,233	183,339
Accrued expenses		240,828	188,378
Income taxes payable		50,547	60,382
Total Current Liabilities		525,157	515,062
Long-Term Debt		295,628	198,091
Other Noncurrent Liabilities		78,835	57,866
Stockholders' Equity:			
Common stock, \$3.00 par value			
Authorized: 40,000,000 shares			
Outstanding: 1979—31,157,719 shares; 1978—31,085,178 shares		93,473	93,256
Preferred stock, \$100.00 par value issuable in series			
Authorized: 500,000 (none issued)		—	—
Additional paid-in capital		159,104	156,376
Retained earnings		751,299	635,906
Total Stockholders' Equity		1,003,876	885,538
Total Liabilities and Stockholders' Equity		\$1,903,496	\$1,656,557

See accompanying notes to consolidated financial statements

Statements of Consolidated Earnings and Retained Earnings

Motorola, Inc., and Subsidiaries, Years Ended December 31

(Dollars in thousands, except per share data)	1979	1978
Sales and Other Revenues	\$2,713,795	\$2,219,744
Manufacturing and other costs of sales	1,624,966	1,339,806
Selling, general and administrative expense	672,282	548,667
Depreciation of plant and equipment	110,827	83,340
Interest and amortization of debenture discount, expense and premium, net	36,114	27,541
Special charge (see Note 2)	10,286	—
Total Costs and Other Expenses	2,454,475	1,999,354
Earnings before income taxes	259,320	220,390
Income taxes	105,024	95,208
Net Earnings	154,296	125,182
Retained earnings at beginning of year	635,906	542,899
Cash dividends declared (per common share: 1979, \$1.25; 1978, \$1.05)	(38,903)	(32,175)
Retained earnings at end of year	\$ 751,299	\$ 635,906
Net Earnings Per Share		
based on average daily shares outstanding (see Note 2)	\$ 4.96	\$ 4.04
Average shares outstanding (in thousands)	31,112	31,019

Statements of Consolidated Additional Paid-in Capital

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

(Dollars in thousands)	1979	1978
Balance at beginning of year	\$ 156,376	\$ 152,322
Share option plans	1,847	2,962
Conversion of 4½% convertible guaranteed debentures	881	1,092
Balance at end of year	\$ 159,104	\$ 156,376

See accompanying notes to consolidated financial statements

Statements of Consolidated Changes in Financial Position

Motorola, Inc., and Subsidiaries, Years Ended December 31

Accountants' Report

(Dollars in thousands)	1979	1978
Sources of Funds		
Net earnings from operations	\$154,296	\$125,182
Add non-cash charges:		
Depreciation	110,827	83,340
Amortization of deferred debentures discount, expense and premium, net	167	204
Funds provided from operations	265,290	208,726
Increase in accounts payable	46,894	48,079
Increase in accrued expenses	43,528	56,405
Increase in notes payable and current maturities of long-term debt	—	5,245
Disposals and other changes of plant and equipment (and tooling), net	19,330	12,113
Issuance of common stock	2,945	4,487
Increase in income taxes payable	—	20,340
Decrease in future income tax benefit	3,593	—
Increase in long-term debt	97,537	—
Decrease in sundry assets, net	1,554	7,599
Other sources, net	16,290	6,783
Total Sources of Funds	496,961	369,777
Uses of Funds		
Increase in receivables	37,612	73,080
Increase in inventories	108,871	52,340
Fixed asset expenditures	265,072	146,377
Increase in equipment rented to others, at cost	15,029	10,418
Decrease in long-term debt	—	2,188
Decrease in notes payable and current maturities of long-term debt	79,414	—
Dividends	38,903	32,175
Decrease in income taxes payable	9,835	—
Increase in future income tax benefits	—	11,607
Total Uses of Funds	554,736	328,185
Net Increase/(Decrease) of Funds	(57,775)	41,592
Cash and short-term investments beginning of period	157,405	115,813
End of Period	\$ 99,630	\$157,405

Peat, Marwick, Mitchell & Co.
Certified Public Accountants
222 South Riverside Plaza
Chicago, Illinois 60606

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

We have examined the consolidated balance sheets of Motorola, Inc., and Subsidiaries as of December 31, 1979 and 1978 and the related statements of consolidated earnings and retained earnings, additional paid-in capital and changes in financial position for the years then ended. 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 Subsidiaries at December 31, 1979 and 1978 and the results of their operations and changes in their financial position for the years then ended, in conformity with generally accepted accounting principles applied on a consistent basis.

Peat, Marwick, Mitchell & Co.
February 14, 1980

See accompanying notes to consolidated financial statements

Notes to Consolidated Financial Statements

1. Accounting Policies: Following is a summary of significant accounting policies used in the preparation of these consolidated financial statements, which policies are in accordance with generally accepted accounting principles.

Consolidation: The consolidated financial statements include the accounts of the company and all majority-owned subsidiaries. All significant intercompany accounts and transactions have been eliminated in consolidation.

Inventories: Inventories are valued at the lower of average cost (which approximates a first-in, first-out basis) or market. Market value of work in process and production materials is represented by replacement cost and for finished goods by net realizable value.

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: Property, plant and equipment is stated at cost. The cost and accumulated depreciation of items of property, plant and equipment sold, retired or fully depreciated are removed from the related accounts and any gain or loss on disposition is reflected in earnings. Maintenance and repairs are expensed as incurred, while major renewals or betterments are capitalized.

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. For income tax purposes, the company has selected the provisions of the Class Life Asset Depreciation Range System (ADR) permitting accelerated depreciation. The tax effect of the difference between book and tax depreciation has been provided as deferred income taxes.

2. Special Charge: During 1979, the company decided to terminate operations in its electronic timepiece components business as well as certain other peripheral activities of the semiconductor products group. A special charge was recorded during the year of \$10,286,000 before applicable tax benefit of \$2,404,000 for termination of these operations. The effect on earnings per share of the special charge was a reduction of \$.25.

3. Foreign Exchange: 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 both practical and economically justified to do so. Under Statement of Financial Accounting Standards No. 8 (SFAS-8) sales and other revenue are translated from

other currencies into U.S. dollars at prevailing exchange rates while inventory must be translated at the rates in effect at the time of purchase. The inventory gains separately indicated below reflect management's best estimates of the impact of currency rate changes on manufacturing and other cost of sales. The effects of foreign currency exchange rate changes, after applicable income taxes, occurring in 1979 and 1978 were as follows:

(Dollars in thousands)	1979	1978
Exchange (loss) included in earnings from operations before income taxes	\$(3,573)	\$(1,126)
Related income taxes	236	(964)
Loss included in net earnings as determined in accordance with SFAS-8	(3,337)	(2,090)
Management's estimate of the gain on non-U.S. inventories due to exchange rate changes arising only in the respective years (unaudited):		
Estimated amount realized during the year included in manufacturing and other costs of sales	2,091	5,003
Estimated amount to be realized on year-end inventory in the subsequent year in manufacturing and other costs of sales	1,308	414
Total estimated gain (unaudited)	3,399	5,417
Result of the company's foreign currency exposure management (unaudited)	\$ 62	\$ 3,327

4. International Operations: The net earnings from non-U.S. subsidiaries included in earnings from operations are \$25,824,000 and \$22,232,000 for 1979 and 1978, respectively.

The company's equity in net assets of non-U.S. subsidiaries at December 31 consisted of the following:

(Dollars in thousands)	1979	1978
Current assets	\$ 345,046	\$ 291,722
Property, plant and equipment, net	150,964	109,621
Current liabilities	(117,990)	(162,721)
Other assets (liabilities), net	(109,663)	(40,911)
Equity in net assets of non-U.S. subsidiaries	\$ 268,357	\$ 197,711

The company's equity in undistributed earnings of profitable non-U.S. subsidiaries at December 31, 1979, amounted to \$130,466,000 (\$91,525,000 at December 31, 1978).

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

(Dollars in thousands)	1979	1978
Debt outside the United States:		
Notes supported by revolving credit commitments from banks (generally at prevailing prime rates)	\$ 78,387	\$ 14,632
Notes payable (generally at prevailing prime rates) due in installments to 1991	29,957	22,924
4½% convertible guaranteed debentures due July 1, 1983	4,540	5,583
Debt in the United States:		
8% sinking fund debentures due October 1, 2007	\$ 99,723	\$ 99,713
Commercial paper supported by revolving credit commitments from banks	66,423	41,368
Notes (generally at prevailing prime rates) supported by revolving credit commitments from banks	6,889	—
4¾% debentures due April 1, 1986 (net of debentures held by the company for sinking fund payments: \$5,242 at December 31, 1979; \$4,739 at December 31, 1978)	13,258	15,261
Capitalized lease obligations retired in 1979	—	3,071
	299,177	202,552
Less current maturities, included in current liabilities	3,549	4,461
Net long-term debt	\$295,628	\$198,091

The 4½% convertible guaranteed debentures (issued by Motorola International Development Corporation) are convertible into common stock of Motorola, Inc., at the rate of 25.2 shares for each one thousand dollar principal amount, subject to adjustment in certain events, and are guaranteed as to the payment of principal and interest by Motorola, Inc. The debentures are redeemable at various dates at redemption prices reducing from 100.5% to 100% of the principal amount thereof. For the year ended December 31, 1979, \$1,043 thousand in debentures (\$1,325 thousand for the year ended December 31, 1978), were converted into 26,279 shares (33,386 in 1978). At December 31, 1979, there were 114,505 shares (140,784 at December 31, 1978) of Motorola, Inc., common stock reserved for issuance upon conversion of these debentures.

The 8% sinking fund debentures due October 1, 2007, are redeemable at various dates at redemption prices reducing from 107.1% to 100% of the principal amount thereof. Annual sinking fund payments are required beginning October 1, 1988, in installments of \$5 million sufficient to retire 95% of the issue prior to maturity.

Under the terms of the revolving credit agreement, which were amended in 1979, the full amount of the agreement (\$220 million) extends through June 30, 1983, with \$31 million in equal semi-annual reductions thereafter. Any borrowings through June 30, 1982, will be at the prevailing prime commercial rate of interest, for the next two years at the prevailing prime commercial rate of interest plus ¼% and for the last two years at the prevailing prime commercial rate of interest plus ½%. It is the intention of the company to maintain the availability of the revolving credit agreement during 1980, and therefore the debt, both domestic and foreign, is classified as long-term. Domestic debt refers to outstanding commercial paper and other short-term borrowings, whereas foreign debt refers to short-term borrowings undertaken for interest arbitrage or foreign currency exposure management considerations, the repayment of which is not subject to domestic or foreign exchange control limitations.

The revolving credit agreement restricts retained earnings available for payment of cash dividends. At December 31, 1979, approximately \$445 million (\$329 million at December 31, 1978) of retained earnings were not restricted for dividend payments. The revolving credit agreement also requires the company to maintain a ratio of consolidated current assets to consolidated current liabilities of not less than 1.75:1.00 (actual was 2.35:1.00 at December 31, 1979) and consolidated net working capital (as defined) of not less than \$325 million (actual was \$709 million at December 31, 1979).

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

1980	1981	1982	1983	1984
\$3,549	\$4,971	\$5,103	\$9,351	\$32,444

In 1984 maturities and sinking fund requirements include \$24.7 million of commercial paper and foreign 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 the provision for income taxes are as follows:

(Dollars in thousands)	1979	1978
Taxes currently payable:		
United States	\$ 60,815	\$70,720
Other countries	19,798	18,526
State income taxes (U.S.)	9,640	7,539
Total currently payable	90,253	96,785
Deferred taxes arising from:		
Difference between depreciation recorded for income tax purposes and financial statement purposes	4,096	2,767
Income tax on profits of Domestic International Sales Corporations	5,848	2,387
Withholding tax on Puerto Rican earnings anticipated to be repatriated in the future (included in currently payable for 1978)	8,938	—
Current earnings of foreign subsidiaries anticipated to be repatriated in the future	4,179	5,035
(Increase) decrease in:		
Future warranty obligations	(799)	(1,215)
Inventory valuations	(2,634)	(8,088)
Future employee benefits	(1,639)	(1,022)
Allowance for doubtful accounts	(1,859)	(3,827)
Other countries	(1,269)	2,739
Other—net	(90)	(353)
Total deferred	14,771	(1,577)
Total income tax expense	\$105,024	\$95,208

Income taxes have 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 share of the undistributed earnings of subsidiaries that are anticipated to be repatriated in the future. Income taxes have not been provided on the company's share of other undistributed earnings of subsidiaries (\$105,078,000 and \$82,179,000 at December 31, 1979 and 1978, respectively), where 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, 1979, certain non-U.S. subsidiaries of the

company had loss carryforwards of approximately \$13.9 million.

The company's federal income tax returns have been examined and settled through 1973 with the Internal Revenue Service.

A reconciliation of the statutory corporate tax rate with the financial statement effective income tax rate is as follows:

	1979	1978
Statutory U.S. Federal rate	46.0%	48.0%
Increase (decrease) in tax rate resulting from:		
Taxes on earnings in other countries and possessions	(3.9)	(3.2)
Investment tax credits	(5.5)	(4.1)
State income taxes	2.0	1.8
Other	1.9	.7
Effective tax rate	40.5%	43.2%

7. Contingencies: The company is one of 23 defendants named in a lawsuit commenced on September 20, 1974, by Zenith Radio Corporation ("Zenith") in the United States District Court for the Eastern District of Pennsylvania. Zenith's complaint alleged conspiracies and other violations of the United States antitrust and anti-dumping laws.

The complaint also challenges, under the U.S. antitrust laws, the purchase by subsidiaries of Matsushita Electric Industrial Co., Ltd., of Japan (collectively with such subsidiaries, "MEI") of certain assets and business of Motorola's Consumer Products Division home television receiver business. Prior to the consummation of such purchase, the U.S. Department of Justice, at the request of Motorola and MEI, investigated the antitrust implications of the transaction. During such investigation, the Department of Justice took no legal action to prevent the sale.

For all such alleged violations, Zenith claims monetary damages in the aggregate of more than \$300 million (and the trebling of that amount). It seeks judgment against the defendants jointly and individually in that amount plus costs and plaintiff's attorney's fees. It also seeks divestiture by MEI of the assets purchased from Motorola.

In the event a divestiture is ordered or litigation damages are assessed against MEI arising out of such purchase, Motorola has agreed to share to a limited extent the loss, if any, incurred by MEI. The maximum loss for which Motorola could be responsible to MEI under this agreement is \$20 million. Management believes that the company has 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 October 1979, the Federal Court for the Northern District of Illinois issued its Final Order and Decree in favor of the Equal Employment Opportunity Commission and a certified class plaintiff that they had prevailed upon the issue of liability for all blue-collar positions (operative, crafts workers, laborers and service workers) with respect to hiring of blacks at Motorola locations in that District from November 6, 1968, to December 31, 1975, except as to one manufacturing facility in 1972. The Court's order permanently enjoined Motorola in that District from discriminating on the basis of race in hiring practices, provided for notice to the members of the class, guidelines for damage hearings at a later date, and certain recordkeeping requirements. On February 1, 1980, Motorola filed a Notice of Appeal, seeking a reversal by the U.S. Court of Appeals, Seventh Circuit, of the lower Court's order and decision and entry of judgment for Motorola. The plaintiffs have filed cross appeals. Subsequent to the filing of the Notice of Appeal, the U.S. Court of Appeals, Seventh Circuit, granted Motorola's motion to stay, during the pendency of the appeal, the District Court's order enjoining Motorola and providing for notice to the members of the class.

Motorola is currently defending two other certified class actions, together with a lawsuit brought by the EEOC, in the Federal Court for the Northern District of Illinois. These suits allege discrimination in the hiring of females and persons of Spanish surname for certain jobs and the promotion and certain employment practices relating to blacks in the Northern District of Illinois for various time segments beginning in 1965. These suits have not been tried. Motorola employs approximately 10,500 persons in northern Illinois.

Motorola is also defending a suit brought as a class action in Federal Court for the Northern District of Georgia wherein the plaintiff claims discrimination with respect to maternity leaves of absence. On February 7, 1980, the court certified the class to include past or present female employees whose employment was involuntarily terminated between February 9, 1972 and August 7, 1972 at the conclusion of a mandatory maternity leave or whose mandatory maternity leave ended either by reinstatement or cessation of employment between February 9, 1972 and August 7, 1972.

In each of these class actions the plaintiffs are seeking

injunctive relief together with damages in the form of back pay.

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. Share Option Plans: 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 may not be less than 100% of market value on date of grant. Shares subject to option under these plans during 1979 and 1978 are shown:

	1979	1978
Options outstanding beginning of year (shares)	1,295,369	1,449,849
Additional options granted	375,605	1,340,640
Options exercised	(46,262)	(110,712)
Options terminated for cancellation and regrant and discontinued employment	(59,669)	(1,382,550)
Options expired	—	(1,858)
Options outstanding end of year	1,565,043	1,295,369
Shares reserved for possible future option grants	489,360	811,680
Total shares reserved	2,054,403	2,107,049
Total options exercisable (shares)	843,778	785,808

Options exercised during 1979 were at per share prices of \$9.96 to \$38.25 (\$2.00 to \$53.81 in 1978). Options outstanding at December 31, 1979, were at per share prices of \$21.00 to \$53.13.

In 1978, the company authorized the Compensation Committee to request the mutual cancellation of certain of the company's share options previously granted, and the granting of replacement share options at 100% of the market price on the date of grant. Qualifying tendered share options were replaced with share options at the rate of three shares for every four shares offered for cancellation, which are exercisable to the extent at the times, and in the manner of the cancelled share options. Share options for the one share out of every four shares offered for cancellation that was not regranted were granted to eligible employees in a new share option grant.

9. Employee Benefit Plans: The company may provide up to 7% of its annual consolidated pre-tax earnings, as defined in the Motorola Executive Incentive Plan, for the payment of cash incentive awards to key employees. The awards are payable in full or in installments, or may be otherwise deferred at the

option of the participant and with approval of the Compensation Committee. Amounts of \$12,171,000 in 1979 and \$8,426,000 in 1978 were provided for incentive awards for those years. The amounts awarded under this plan are subject to the guidelines established by the Council on Wage and Price Stability.

The company and certain subsidiaries have contributory profit sharing plans in which all eligible employees participate. The contributions to profit sharing funds in the United States and other nations, based upon percentages of pre-tax earnings from total operations, as defined, were \$39,954,000 in 1979 and \$36,123,000 in 1978.

The company has a non-contributory 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 was \$16,579,000 in 1979 and \$14,114,000 in 1978. Vested benefits for the domestic plan were fully funded as determined by the latest actuarial valuation, December 31, 1978.

In the event that the amount actually payable annually under

the Pension Plan to any officer of the company elected by the Board of Directors does not amount to a specified percentage, as defined, of such elected officer's rate of salary at retirement, it is the intention of the company (subject to certain qualifications and conditions), to make supplementary payments so that the total annual payments to such officer will aggregate a maximum of 50% of such officer's rate of salary at retirement, or a minimum of 40% of such officer's rate of salary at retirement, depending upon such officer's seniority as of January 1, 1978, and the year in which such officer attains age 60 (or 30%, in the case of payments to the surviving spouse, of an elected officer's rate of salary upon the officer's death during employment by the company or after retirement from such employment). The company is accruing for these supplementary payments on a current basis.

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 \$2,818,000 in 1979 and \$2,118,000 in 1978.

10. Information by Industry Segment and Geographic Region. Information about the company's operations in different industry segments for the years ended December 31, 1979, 1978 and 1977 is summarized below:

	REVENUES			OPERATING PROFIT		
	For the years ended December 31			For the years ended December 31		
	Total Sales and Other Revenues			Fixed Asset Expenditures		
	1979	1978	1977	1979	1978	1977
Communications products	\$1,127,221	\$ 964,930	\$ 823,495	\$ 148,514	\$ 110,954	\$ 130,890
Semiconductor products	992,439	718,055	582,300	172,012	107,346	79,977
Automotive products	203,018	205,452	198,927	(16,338)	9,511	11,237
Other products	452,186	376,422	288,804	33,682	41,548	11,161
Adjustments and eliminations	(61,069)	(45,115)	(40,899)	(3,246)	318	(1,491)
Industry Totals	\$2,713,795	\$2,219,744	\$1,852,627	\$ 334,624	\$ 269,677	\$ 231,774
General corporate expenses				(28,904)	(21,746)	(18,098)
Interest expense				(36,114)	(27,541)	(22,943)
Special charge				(10,286)		
Equity in net earnings of 50% owned affiliate			\$ 887			887
Consolidated Totals				\$ 259,320	\$ 220,390	\$ 191,620

	ASSETS			PROPERTY, PLANT AND EQUIPMENT		
	For the years ended December 31			For the years ended December 31		
	Fixed Asset Expenditures			Fixed Asset Expenditures		
	1979	1978	1977	1979	1978	1977
Communications products	\$ 744,726	\$ 703,052	\$ 598,463	\$ 57,110	\$ 45,633	\$ 55,445
Semiconductor products	643,726	474,793	389,946	158,751	72,062	53,137
Automotive products	146,577	145,291	144,282	11,200	13,022	9,676
Other products	302,845	225,661	196,271			
Adjustments and eliminations	(8,044)	(5,034)	(3,550)			
Industry Totals	1,829,830	1,543,763	1,325,412			
General corporate assets	73,666	112,794	92,052			
Equity in net assets of 50% owned affiliate			2,395			
Consolidated Totals	\$1,903,496	\$1,656,557	\$1,419,859			

	Depreciation		
	1979	1978	1977
Communications products	\$ 31,602	\$ 25,667	\$ 21,275
Semiconductor products	50,387	33,820	28,237
Automotive products	10,138	8,785	8,532

Information about the company's operations in different geographic regions for the years ended December 31, 1979, 1978 and 1977 is summarized below:

	REVENUES			OPERATING PROFIT		
	For the years ended December 31			For the years ended December 31		
	Total Sales and Other Revenues					
	1979	1978	1977	1979	1978	1977
United States	\$2,448,588	\$2,039,857	\$1,673,984	\$277,590	\$234,426	\$202,291
Foreign	1,060,244	815,793	598,092	69,241	49,678	41,170
Adjustments and eliminations	(795,037)	(635,906)	(419,449)	(12,207)	(14,427)	(11,687)
Geographic Totals	\$2,713,795	\$2,219,744	\$1,852,627	\$334,624	\$269,677	\$231,774
General corporate expenses				(28,904)	(21,746)	(18,098)
Interest expense				(36,114)	(27,541)	(22,943)
Special charge				(10,286)		
Equity in net earnings of 50% owned affiliate			\$ 887			887
Consolidated Totals				\$259,320	\$220,390	\$191,620

	ASSETS		
	For the years ended December 31		
	1979	1978	1977
United States	\$1,346,469	\$1,159,015	\$1,005,427
Foreign	541,736	428,227	346,775
Adjustments and eliminations	(58,375)	(43,479)	(26,790)
Geographic Totals	1,829,830	1,543,763	1,325,412
General corporate assets	73,666	112,794	92,052
Equity in net assets of 50% owned affiliate	—	—	2,395
Consolidated Totals	\$1,903,496	\$1,656,557	\$1,419,859

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 communication systems; semiconductors, including integrated circuits and microprocessor units; data communication equipment and systems; electrical components and designs for the U.S. government; display products and automotive electronic equipment. Within this industry, communications product, semiconductor product and automotive product sales account for approximately 84% of total revenues from unaffiliated customers.

The company operates manufacturing and distribution facilities outside the United States. No single facility or 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 added or deducted: general corporate expenses, interest expenses, income taxes, equity in net earnings of a 50% owned affiliate in 1977, which equity was sold in 1978 and a special charge for termination of certain operations (see Note 2) in 1979. Included in operating profit and sales and other revenue for the automotive segment was a gain on the sale of the interest in the aforementioned affiliate. 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 were principally semiconductor components, which amounted to \$49,271,000 for 1979, \$31,276,000 for 1978 and \$31,189,000 for 1977. Inter-industry

segment 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 \$291 million during the year ended December 31, 1979. No other single customer (or group of customers under common control) accounted for 10% of the company's sales.

With respect to the years 1976 and 1975, the following table sets forth sales and other revenue information for each class of similar products or services which accounted for 10% or more of the total sales and revenues of Motorola for those years.

Sales and Other Revenues (in millions)	1976	1975
Communications products	\$680	\$614
Semiconductor products	447	348
Automotive products	162	126

The sales shown in the foregoing table do not include products manufactured by Motorola and incorporated into other products manufactured and sold by Motorola.

The classes of products indicated above for lines of business information are essentially equivalent to those used to present the industry segment information for 1979, 1978 and 1977.

11. 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 non-capital leases (including those with terms of less than one year) reduced by sublease rental income (not considered to be material) was \$32,836,000 in 1979 and \$25,727,000 in 1978.

Minimum future obligations on all noncancelable leases, net of minimum sublease rentals, with initial terms of one year or more in effect at December 31, 1979, are as follows for the periods ending December 31:

(Dollars in thousands)	
1980	\$17,406
1981	13,677
1982	10,624
1983	5,492
1984	3,177
Later	21,202

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.

12. Quarterly Financial Data (unaudited): Selected unaudited quarterly financial data for 1979 and 1978 are as follows: (Dollars in thousands, except per share data)

1979	Three Months Ended			
	March 31	June 30	Sept. 29	Dec. 31
Sales and other revenues	\$612,561	\$676,931	\$661,529	\$762,774
Gross profit before depreciation (a)	\$247,487	\$281,577	\$260,419	\$299,346
Net earnings (b)	\$ 36,135	\$ 43,408	\$ 38,494	\$ 36,259
Net earnings per share (b)	\$ 1.16	\$ 1.40	\$ 1.24	\$ 1.16

1978	Three Months Ended			
	April 1	July 1	Sept. 30	Dec. 31
Sales and other revenues	\$495,976	\$551,031	\$537,179	\$635,558
Gross profit before depreciation (a)	\$199,495	\$225,808	\$212,301	\$242,334
Net earnings	\$ 27,997	\$ 33,366	\$ 30,342	\$ 33,477
Net earnings per share	\$.90	\$ 1.08	\$.98	\$ 1.08

(a) Profit after manufacturing and other costs of sales exclusive of depreciation expense.

(b) During the year the company recorded a special charge to net earnings of \$7,882,000 (see Note 2) or \$.25 per share. \$6,641,000 of this amount, or \$.21 per share, was recorded in the fourth quarter.

Peat, Marwick, Mitchell & Co., made a limited review of the 1979 and 1978 quarterly data in accordance with standards established by the American Institute of Certified Public Accountants. Since Peat, Marwick, Mitchell & Co., did not audit the quarterly data for either year, they express no opinion on such data.

13. Research and Development Expenditures: Company funded research and development expenditures, which are charged against operations as incurred, were \$167 million in 1979 and \$133 million in 1978.

14. Information on the Effects of Changing Prices (unaudited): 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. For the current year, SFAS-33 prescribes presentation of certain information adjusted for the effects of

general inflation as measured by the United States Consumer Price Index for All Urban Consumers (CPI-U). Unfortunately, the methods prescribed for presentation of this information contradict the experience of the company. Productivity gains in the production of semiconductor products have more than offset increased input costs and have resulted in price declines, and productivity gains in Motorola's other businesses have substantially reduced the effects of increased input costs, resulting in price increases at rates significantly less than general inflation. Principally for these reasons, management believes that the information presented below and in the five year comparison afterwards, with the exception of the dividends declared per common share adjusted by the CPI-U, does not describe the effects of changing prices on the operations of the company.

Statement of Income From Continuing Operations Adjusted, as Required, by Changes in the CPI-U Applied to Certain Costs
Year ended December 31, 1979
(Dollars in thousands)

Earnings before income taxes as reported in the statement of consolidated earnings	\$259,320
Adjustments to restate costs for changes in the CPI-U:	
Manufacturing and other costs of sales	(57,329)
Depreciation	(532)
Earnings before income taxes adjusted for changes in the CPI-U applied to certain costs	201,459
Income taxes	(105,024)
Net earnings adjusted for changes in the CPI-U applied to certain costs	\$ 96,435
Gain from decline in purchasing power of net amounts owed	\$ 6,425

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 adjustment above is based on calculations made using the straight line method with asset lives grouped to approximate those used in the historical cost presentation. Also, historical cost income tax expense has not been adjusted.

Below is a five year summary of selected information which has been denominated in dollars of average purchasing power for the year 1979.

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

(In thousands of average 1979 dollars except per share data)	Years Ended December 31				
	1975	1976	1977	1978	1979
Sales and other revenue	\$1,805,856	\$1,960,467	\$2,220,132	\$2,469,664	\$2,713,795
Historical cost information adjusted by the CPI-U:					
Income from continuing operations	—	—	—	—	\$96,435
Income from continuing operations per common share	—	—	—	—	\$3.10
Net assets at year-end	—	—	—	—	\$1,261,883
Other information:					
Cash dividends declared per common share	\$ 0.94	\$ 0.94	\$ 1.05	\$ 1.17	\$ 1.25
Market price per common share at year-end	\$53.86	\$70.27	\$42.66	\$42.54	\$48.14
Average consumer price index	161.2	170.5	181.5	195.4	217.4

In addition to the above, the company has included in its annual report to the Securities and Exchange Commission on form 10-K, a copy of which is available upon request, information on estimated replacement costs of inventories and fixed assets pursuant to SEC requirements.

Management's Discussion and Analysis of Statements of Consolidated Earnings

1979 Versus 1978

Sales and other revenues for 1979 increased by \$494.1 million (22.3%) from 1978. Increased unit sales volume accounted for most of this change. Sales and other revenue of communications products increased \$165.2 million (17.2%) with orders in the international markets outpacing the domestic sector and sales and other revenue of semiconductor products increased \$256.4 million (37.3%) following a continuing high level of worldwide demand for semiconductor components plus the introduction of several major metal oxide silicon products. Automotive products sales were essentially unchanged from their 1978 level.

Manufacturing and other costs of sales increased \$285.2 million (21.3%), thus keeping pace with the higher level of sales.

Selling, general and administrative expenses increased \$123.6 million (22.5%) due to the consistent and expected rise in selling expenses associated with higher sales level and the inflationary pressures on general and administrative expenses.

Depreciation of plant and equipment increased \$27.5 million (33.0%) as a result of fixed asset expenditures of \$265 million, reflecting the company's continued investment required to keep pace with the rising volume of sales.

Interest and amortization for 1979 increased \$8.6 million (31.1%) principally due to increased interest rates, although total borrowing did increase \$18 million.

The company's overall effective tax rate decreased from 43.2% in 1978 to 40.5% for 1979, principally as a result of the reduction of the U.S. statutory rate from 48% to 46%, additional investment tax credit arising from the increased level of equipment expenditures and additional tax benefits in the United Kingdom emanating from a change in tax laws.

Net earnings increased \$29.1 million (23.3%) despite a special charge of \$7.9 million for termination of electronic timepiece components business and other peripheral activities of the semiconductor products segment. The increase in net earnings was principally a result of increased volume and margin on both semiconductor and communications products which more than offset the loss incurred by the automotive products segment and the aforementioned special charge.

1978 versus 1977

Sales and other revenues for 1978 increased by \$366.2 million (19.8%) over 1977. Improved unit sales volume accounted for substantially all of the sales increase. This sales increase was primarily due to the sales of communications products and semiconductor products which increased approximately 16.8% and 24.6%, respectively, over 1977. Sales of automotive products increased 2.8% reflecting business mix changes in demand from the automotive industry.

Manufacturing and other costs of sales increased \$199.9 million (17.5%) over 1977. This increase reflects the mixed effects of increases in gross margins for the semiconductor segment and data communications business offset by a decline in the gross margin for the communications segment. The decline in the communications segment's gross margin is attributable to additional write-offs for cost overruns evident on certain systems contracts, extra unanticipated warranty obligations, additional technical and manufacturing problems incurred in starting production of certain advanced state-of-the-art new products, and a continuing high rate of engineering and other costs invested in major new business opportunities.

Selling, service and administrative expense for 1978 increased \$122.4 million (28.7%) over 1977. This change was higher than the 19.8% increase in sales and was attributable to higher distribution costs, higher costs associated with improved pension and profit sharing programs for the company, and a greater than normal adjustment in the communications segment for additional accounts receivable write-offs that became apparent during the year.

Depreciation of plant and equipment for 1978 increased \$10.6 million (14.5%) over 1977, as a result of fixed asset expenditures during the past three years of \$146 million in 1978, \$128 million in 1977 and \$98 million in 1976.

Interest and amortization for 1978 increased \$4.6 million (20.0%) over 1977. This change was the result of increased borrowings and higher interest rates.

The company's overall effective tax rate decreased from 44.2% in 1977 to 43.2% in 1978, due principally to significant reduction in losses from certain foreign operations which had provided no tax benefit.

Net earnings from continuing operations increased \$18.2 million (17.0%) in 1978. The increased earnings were due primarily to higher sales volume, improved margins in the semiconductor segment and data communications business, and significantly improved operating results for citizens band radio, watch module and watch crystal programs and Autovox, an Italian subsidiary.

Ten Year Financial Summary

(Dollars in thousands, except per share data)

Operating Results from Continuing Operations (1)	1979	1978	1977
Sales and other revenues	\$2,713,795	\$2,219,744	\$1,853,514
Manufacturing and other costs of sales	1,624,966	1,339,806	1,139,877
Selling, general & administrative expense	672,282	548,667	426,304
Depreciation and amortization of plant and equipment	110,827	83,340	72,770
Interest & amortization of debenture discount, expense and premium, net	36,114	27,541	22,943
Special charge (3)	10,286	—	—
Total costs and other expenses	2,454,475	1,999,354	1,661,894
Earnings from continuing operations before income taxes	259,320	220,390	191,620
Income taxes	105,024	95,208	84,669
Earnings from continuing operations	154,296	125,182	106,951
Return on sales	5.7%	5.6%	5.8%
Discontinued operations—profit (loss)	—	—	—
Net earnings	\$ 154,296	\$ 125,182	\$ 106,951
Per Share Data			
Earnings from continuing operations	\$ 4.96 (3)	\$ 4.04	\$ 3.46
Net earnings	4.96	4.04	3.46
Dividends declared	1.25	1.05	.88
Balance Sheet and Other Data (2)			
Working capital	\$ 708,551	\$ 619,930	\$ 567,044
Current ratio	2.35:1	2.20:1	2.47:1
Short-term debt	\$ 3,549	\$ 82,963	\$ 77,718
Long-term debt	295,628	198,091	200,279
Stockholders' equity	1,003,876	885,538	788,044
Less short-term investments	84,141	121,429	85,681
Total invested capital	\$1,218,912	\$1,045,163	\$ 980,360
Return on average invested capital	13.5%	12.3%	11.8%
Return on average stockholders' equity from continuing operations	16.3%	15.0%	14.3%
Year-end employment (approximate)	75,000	68,000	60,000
Average shares outstanding (in thousands)	31,112	31,019	30,933

(1) In May 1974, Motorola sold its home television receiver business. Consequently, the 1970 through 1973 operating results have been adjusted to remove the effect of the television business.

(2) The 1970 through 1973 data has not been restated to exclude the home television receiver business.

(3) During 1979, the company decided to terminate operations in its electronic timepiece components business as well as certain other peripheral activities of the semiconductor products segment. A special charge was recorded during the year of \$10,286,000 before applicable tax benefit of \$2,404,000 for termination of these operations. The effect on earnings per share of the special charge was a reduction of \$.25.

	1976	1975	1974	1973	1972	1971	1970
	\$1,537,533	\$1,339,025	\$1,389,429	\$1,213,795	\$ 907,020	\$ 719,186	\$ 672,378
	940,389	859,035	886,556	759,920	609,810	472,292	456,017
	354,602	319,401	289,153	242,859	168,233	156,453	124,195
	57,916	52,947	44,564	33,825	28,665	25,175	21,865
	16,967	20,974	27,686	16,415	10,460	7,808	9,521
	—	—	—	—	—	—	—
	1,369,874	1,252,357	1,247,959	1,053,019	817,168	661,728	611,598
	167,659	86,668	141,470	160,776	89,852	57,458	60,780
	75,661	41,484	64,222	72,689	41,187	29,879	33,180
	91,998	45,184	77,248	88,087	48,665	27,579	27,600
	6.0%	3.4%	5.6%	7.3%	5.4%	3.8%	4.1%
	(2,470)	—	(2,184)	(3,477)	4,477	2,202	(6,277)
	\$ 89,528	\$ 45,184	\$ 75,064	\$ 84,610	\$ 53,142	\$ 29,781	\$ 21,323
	\$ 3.00	\$ 1.49	\$ 2.56	\$ 2.95	\$ 1.67	\$.97	\$.99
	2.92	1.49	2.49	2.83	1.83	1.05	.77
	.735	.70	.60	.45	.312	.30	.288
	\$ 439,181	\$ 408,336	\$ 424,845	\$ 431,543	\$ 326,414	\$ 255,539	\$ 222,405
	2.27:1	2.62:1	2.33:1	2.42:1	2.36:1	2.30:1	2.37:1
	\$ 64,578	\$ 54,458	\$ 90,191	\$ 69,326	\$ 53,957	\$ 48,696	\$ 35,233
	101,388	124,369	154,960	151,088	81,052	64,530	66,098
	706,482	627,072	596,626	529,993	443,380	376,204	345,747
	60,972	38,116	26,336	21,982	30,092	4,230	6,070
	\$ 811,476	\$ 767,783	\$ 815,441	\$ 728,425	\$ 548,297	\$ 485,200	\$ 441,008
	11.8%	5.7%	9.8%	13.8%	9.3%	6.0%	6.3%
	13.9%	7.4%	13.6%	18.1%	12.0%	7.7%	8.2%
	56,000	47,000	51,000	64,000	56,000	49,000	37,000
	30,699	30,384	30,178	29,865	29,117	28,388	27,853

Stock Price and Dividend Data

The table (right) sets forth the high and low sales price per share for Motorola Common Stock on the New York Stock Exchange and the dividends declared and paid for the periods indicated:

1979	Stock Prices		Dividends		1978	Stock Prices		Dividends	
	High	Low	Declared	Paid		High	Low	Declared	Paid
1st Quarter	\$42.00	\$36.00	\$.300	\$.300	1st Quarter	\$39.38	\$35.00	\$.250	\$.250
2nd Quarter	46.38	38.25	.300	.300	2nd Quarter	51.88	38.00	.250	.250
3rd Quarter	52.50	40.00	.300	.300	3rd Quarter	54.88	44.88	.250	.250
4th Quarter	55.50	42.63	.350	.300	4th Quarter	45.63	38.38	.300	.250
			\$1.250	\$1.200				\$1.050	\$1.000

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

*Deceased February 16, 1980.

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 Gary L. Tooker

DATA COMMUNICATIONS

Arthur Carr

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 Senior Vice President and
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 Vice President and Deputy to the
 Chief Executive Office

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 Vice President and Assistant Chief Financial Officer
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 Research and Development
 Vice President and Corporate Director of Engineering
 Vice President and Corporate Director of
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 Vice President and Corporate Director of Planning
 Vice President and Corporate Director of
 Government Relations
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 Vice President and Corporate Director of
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 Communications Group

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 Communications Systems Division

Vice President and General Manager,
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Vice President and General Manager,
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Vice President and General Manager,
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 Government Electronics Division

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Vice President and General Manager,
 MOS Integrated Circuits Division

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 High Frequency and Optical Products Division

Vice President and General Manager,
 International Semiconductor Division

Vice President and Director of World Marketing,
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Vice President and General Manager, Discrete
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Vice President and President of Codex Corporation

	Age	Years of Service
Robert W. Galvin	57	39
William J. Weisz	52	32
John F. Mitchell	51	27
Homer L. Marrs	63	42
Ralph W. Elsner	59	31
John T. Hickey	54	32
Donald R. Jones	49	29
Edward J. Harty	64	28
William P. Meehan	44	10
Richard H. Weise	44	11
Stephen L. Levy	58	16
Martin Cooper	51	25
L. Curtis Foster	54	6
Earl R. Gomersall	49	8
R. James Harring	55	28
C. Travis Marshall	53	9
Vincent J. Rauner	52	10
Walter B. Scott	64	34
Robert N. Swift	56	28
Carl E. Lindholm	50	13
Levy Katzir	47	24
Joseph F. Miller, Jr.	55	28
Jack Germain	53	30
John W. Battin	43	21
Rhesa S. Farmer	53	22
Bradford K. Kroha	53	25
Arthur P. Sundry	51	23
Ira W. Walker	56	24
James R. Lincicome	54	29
John R. Welty	57	22
Alfred J. Stein	46	4
Andre Borrel	43	12
James R. Fiebiger	38	3
Henri A. Jarrat	41	3
James A. Norling	37	14
Geno Ori	42	17
Pasquale Pistorio	43	13
Charles E. Thompson	50	10
Gary L. Tooker	40	18
Arthur Carr	48	11

Communications Group

Car telephone systems
 Communications control centers
 Component products
 Electronic command and control systems
 Health care communications systems
 Microwave communications systems
 Mobile and portable data communications systems
 Mobile and portable FM two-way radio communications systems
 Precision instruments
 Radio paging systems
 Signaling and remote control systems

Semiconductor Group

Bipolar and MOS integrated circuits
 Bipolar VLSI macrocell arrays
 Custom MOS and bipolar circuits
 Electronic materials
 Fiber-optic devices
 Field-effect transistors
 Hobby components
 Memory systems
 Microprocessor support systems
 Microprocessors
 Microwave components
 NMOS, CMOS and bipolar memories
 Optoelectronics
 Power and small signal transistors
 Rectifiers
 RF modules
 RF power and small signal transistors
 Semiconductor chips
 Solar energy components
 Solar energy systems
 Surge suppressors
 Thyristors
 Triggers
 Varactors
 Zener and tuning diodes

Automotive and Display Systems Group

Alternator charging systems
 AM, AM/FM antennas
 AM, AM/FM car radios
 Automotive power amplifiers
 Automotive sensors (pressure and position)
 Automotive sound equalizers
 Automotive speaker systems
 Automotive stereo 8-track tape and cassette players
 Citizens band radios and antennas
 Closed circuit TV systems
 CRT display modules
 Digital appliance controls
 Electronic engine controls
 Engine management systems
 Information display systems
 Regulators
 Solid-state ignition systems
 Tachometers, speedometers, odometers, hourmeters

Government Electronics Division

Advanced seeker systems
 Data security products
 Drone communications control and scoring system
 Electronic countermeasures systems
 Energy systems, including solar photovoltaics
 Fixed and satellite communications systems
 Fuze systems
 Intelligent display terminals and systems
 Military radios
 Missile and aircraft instrumentations
 Missile guidance systems
 Positioning, navigation and tracking systems
 Radar surveillance systems
 Secure communications
 Space communications systems

Data Communications

Data communications equipment (modems, multiplexers, intelligent network processors, network control equipment, terminals)

Other Businesses

Industrial process controls
 Plasma processing systems

Major facilities in:

Australia	United States
Melbourne	Alabama
Canada	Huntsville
Rexdale, Ontario	Arizona
Willowdale, Ontario	Mesa
Costa Rica	Phoenix
San Jose	Scottsdale
Denmark	Tempe
Frederikssund	Florida
France	Fort Lauderdale
Angers	Illinois
Toulouse	Carol Stream
Great Britain	Franklin Park
Basingstoke	Lombard
East Kilbride	Schaumburg
Stotfold	West Chicago
Hong Kong	Iowa
Kowloon	Mount Pleasant
Israel	Massachusetts
Tel-Aviv	Mansfield
Italy	Missouri
Rome	Joplin
Japan	New Mexico
Tokyo	Albuquerque
Korea	New York
Seoul	Arcade
Malaysia	Texas
Kuala Lumpur	Austin
Penang	Fort Worth
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Guadalajara	Munich
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