

IBM HIGHLIGHTS, 1970 -1984

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March 2003

1970

Business Performance

IBM gross income increases to \$7.50 billion and net earnings exceed \$1 billion for the first time, reaching \$1.01 billion. Gross income from World Trade operations approaches \$3 billion.

IBM has 269,291 employees and 586,786 stockholders.

Organization

Arthur K. Watson, vice chairman of IBM board and chairman of the board of IBM World Trade Corporation, resigns to become U.S. Ambassador to France.

Products & Services

In IBM's most important product announcement since the System/360 in 1964, the System/370 is introduced. Able to run System/360 programs, the new system includes Models 165, 155 and 145. The Model 145 is the first general-purpose business computer to use monolithic circuits in all memory and logic functions.

Also introduced are the IBM Copier, the company's entry into the photocopy business; a sensor-based System/7 for process, manufacturing and laboratory applications; and the System/4 Pi, Model Ap-101 aerospace computer. In addition, IBM launches a low-cost System/3 Model 6, with the ability to process standard ledger cards and switch easily from business applications to complex mathematical problem solving. (More than 1,500 low-cost System 3/Model 10s are installed during the first full year on the market.)

Among the new peripheral products rolled out are the 200-million-character 3330-01 disk file; the 3830/3420 magnetic tape subsystem; the 2,000 line-per-minute 3211 printer; the 129 card data recorder; and a keypunch with an electronic memory.

Science & Technology

IBM computers in Houston assist flight controllers in the dramatic rescue of the Apollo 13 astronauts.

IBM research scientists use electron beam to make electronic components.

Corporate Citizenship

Educational grants are given to schools with predominantly black, Hispanic, American Indian, physically handicapped, and female students.

Facilities

Nearly 10 million square feet of space is completed or under construction at IBM sites in the U.S. The World Trade Corporation expands its worldwide manufacturing space by 1.3 million square feet and announces plans to build major new manufacturing plants in Brazil, Canada, France, West Germany and Japan.

1971

Business Performance

IBM gross income grows to \$8.27 billion and net earnings increase to \$1.07 billion. IBM has 265,493 employees and 580,621 stockholders.

Organization

Thomas J. Watson, Jr., retires and becomes chairman of the executive committee, and T. Vincent Learson succeeds him as IBM chairman of the board. Frank T. Cary is elected president.

Products & Services

The System/370 Models 135 and 195 are announced. The Model 195 is the most powerful computer to date in IBM's product line. The first customer installations of System/370 are made seven months ahead of schedule. By year end, more than 1,300 System/370 deliveries are made worldwide.

New peripheral products introduced in 1971 include the 3270 information display system, which lets users choose from a family of display, printers and control units; the 3410 magnetic tape subsystem; the 3725 programmable buffered terminal; the 3670 brokerage communications system; the 2798 guidance display unit for manufacturing environments; the 2730 transaction validation terminal for checking credit at point of sale; the "Selectric" II Typewriter with dual pitch; and the Communicating Mag Card "Selectric" Typewriter.

A new IBM credit card service provides embossing, encoding and addressing under high-security conditions.

An IBM-built fare collection system is installed for San Francisco rapid transit system.

Science & Technology

IBM computers help guide Apollo 14 and 15 Moon landings and enhance photos taken by Mariner 9, the first spacecraft to orbit Mars.

The Zurich laboratory builds transistor amplifiers and oscillators operating at 18 billion cycles per second, the highest transistor circuit frequency to date.

IBM's first operational application of speech recognition enables customer engineers servicing equipment to "talk" to and receive "spoken" answers from a computer.

IBM develops an experimental terminal that prints computer responses in Braille for the blind.

Facilities

Seven million square feet of new construction are completed or under way at IBM sites in the United States. The Office Products Division moves to Franklin Lakes, N.J.

New IBM manufacturing plants are opened at Bromont, Canada; Sumare, Brazil; and Yasu, Japan.

1972

Business Performance

IBM gross income increases to \$9.53 billion and net earnings rise to \$1.27 billion. IBM has 262,152 employees and 558,332 stockholders.

Organization

Chairman T. Vincent Learson retires, and Frank T. Cary becomes chairman of the board

IBM realigns the Data Processing Product Group, forming the Systems Development, System Products and General Products Divisions.

The World Trade Corporation is reorganized into two operating groups, IBM Europe and the Americas/Far East.

Products & Services

IBM announces the System /370 Models 125, 158 and 168; the Mag Card “Executive” Typewriter; five new models of input word processing equipment; the IBM Copier II; and the 2991 Blood Cell Processor.

The first System/370 Model 135 is installed.

New peripheral products introduced in 1972 include the 3705 communications controller; the 2976 mobile terminal system; the 3881 optical mark reader; the 2922 programmable terminal; the 3780 data communications terminal; the 2984 cash dispensing terminal; and the 3886 optical character reader.

More than 200,000 customers and customer executives attend IBM classes throughout the United States.

Science & Technology

IBM’s lunar orbital experiments team receives a NASA award for outstanding contributions to lunar science during Apollo 15. IBM Skylab units are accepted by NASA for mission use in 1973. Apollo 16 and Apollo 17, the final missions in the Moon-landing series, are supported by IBM personnel and products.

IBM receives patent on simple way of sensing magnetic bubbles — an experimental approach for storing and processing vast amounts of data.

IBM scientists develop the shortest wavelength laser to date.

Facilities

A total of three million square feet of construction is completed and two million square feet of construction is in progress at IBM sites in the United States. IBM dedicates its new 52-story Chicago office building.

Construction is completed on new headquarters buildings for IBM West Germany and IBM Mexico.

Corporate Citizenship

IBM receives *Business Week* award for business citizenship for its Bedford-Stuyvesant manufacturing plant in Brooklyn, N.Y.

The company announces the Adoption Assistance Plan and Fund for Community Service Program for employees.

1973**Business Performance**

IBM gross income passes the \$10 billion level for the first time, reaching \$10.99 billion, and net earnings grow to \$1.57 billion. Stock splits five-for-four. IBM has 274,108 employees and 574,887 stockholders.

Organization

Litigation between Control Data Corporation and IBM in Federal District Court is dismissed pursuant to an out-of-court settlement that includes sale of the Service Bureau Corporation to CDC.

Products & Services

IBM announces the System/370 Model 115 and System/3 model 15. Main storage is increased for System/370 Models 115, 125, 135, 158 and 168; and larger Model 145 processors are rolled out. A larger-capacity model of the IBM System/7 is introduced, along with several new industry-specialized products: the 3650 Retail Store System; the 3660 Supermarket System; the 3600 Finance Communication System; the 3890 Document Processor; the 5275 Direct Numerical Control Station; and the Energy Management System for utilities.

Other new products introduced in 1973 include the 3704 communications controller; the 3740 data entry system, using the IBM Diskette, a new storage medium; the 3340 direct access storage facility; the 3336 disk pack; the 3790 communication system; the Correcting "Electric" Typewriter; the Mag Card II Typewriter with an electronic memory; and the IBM Model 96 single-element typewriter, designed to meet Japanese Katakana alphabet requirements.

Science & Technology

Dr. Leo Esaki, an IBM Fellow, shares the 1973 Nobel Prize in physics.

NASA awards IBM a contract to support the Apollo-Soyuz joint U.S.-Soviet space venture scheduled for 1975, and other contracts to provide computers, displays and programs for NASA's Space Shuttle, scheduled for operation in the 1980s.

IBM scientists fabricate a Josephson Junction, an experimental electronic device that can be switched in about 10 trillionths of a second.

IBM researchers develop an amorphous film that may increase the versatility of magnetic bubble circuits for storing and processing information in future computers.

Corporate Citizenship

The company introduces a Dental Plan for employees and their families.

1974

Business Performance

IBM gross income increases to \$12.67 billion and net earnings grow to \$1.83 billion. IBM has 292,350 employees and 589,214 stockholders.

Organization

John R. Opel is elected president of IBM.

The Corporate Management Committee replaces the Management Review Committee and the Management Committee.

The Data Processing Division realigns into 14 regions to move marketing resources closer to branch offices and customers. The General Systems Division becomes responsible for marketing and servicing its own products.

IBM restructures its non-U.S. business into two new operating units: IBM World Trade Europe/Middle East/Africa Corporation and IBM World Trade Americas/Far East Corporation.

The Field Engineering Division celebrates its tenth anniversary. SRA marks its tenth anniversary as an IBM subsidiary.

Arthur K. Watson, the former Ambassador to France and former chairman of the IBM World Trade Corporation, dies.

Products & Services

IBM announces Systems Network Architecture (SNA), a networking protocol for computing systems; the Advanced Function for Communications, using the new 2767 terminal and the 3770 Data Communications System with System/370 for a unified teleprocessing network; the 3850 Mass Storage System; main storage enhancements for System 370 Models 115 and 145; the IBM Memory Typewriter that stores typed information and can recall previously typed material for revision; and a serial matrix printer.

IBM signs a contract with NASA to develop a telemetry online processing system (TELOPS) that will accept satellite experiment data, process it, and store up to one trillion bits of information. The company also receives a contract from the U.S. Navy to develop the LAMPS (Light Airborne Multipurpose System) MK III ship/air weapon system.

A two-year IBM-funded data security study, done in cooperation with MIT, TRW Systems, and the State of Illinois, results in data security guidelines for users.

Alliances

IBM and COMSAT General ask the U.S. Federal Communications Commission for permission to join in a domestic satellite venture.

Science & Technology

IBM scientists develop Bubble Lattice Storage, to increase the storage capacity of bubble memory.

IBM develops a new computer technique for fast, high-resolution structural analysis of large molecules.

Corporate Citizenship

A job training center for the handicapped is established.

IBM's energy conservation programs produce fuel savings of 31.7 percent; electricity use for 1974 is 22.8 percent below the preconservation level.

1975

Business Performance

IBM gross income increases to \$14.43 billion and net earnings grow to \$1.99 billion. IBM has 288,647 employees and 586,470 stockholders.

Organization

The Systems Development Division becomes the System Communications Division.

Responsibilities of the Advanced Systems Development Division are assigned to the System Communications Division, the Data Processing Product Group staff and the Data Processing Marketing Group.

Some General Systems and Office Products responsibilities are restructured within the General Business Group. A new organization, General Business Group/International, is established, with marketing, service, manufacturing and overall performance responsibility for General Systems and Office Products operations in 17 countries outside the United States.

Products & Services

IBM announces enhanced versions of System/370 Models 168, 158, 125 and 115; the 3800 Printing Subsystem, which uses laser and electrophotographic technologies; the 3606 and 3608 financial service terminals; the 3760 dual key entry station; a key entry version of the 3660 Supermarket System; additions and enhancements to 3770 Data Communications System; the Mag Card/A Typewriter; the Electronic "Selectric" Composer; the 6:5 Cartridge System; the System/32; and the 5100 Portable Computer.

IBM sponsors Institute of Internal Auditors research project to strengthen control for computer users.

Alliances

Aetna Life & Casualty joins IBM and COMSAT General in the domestic satellite partnership named Satellite Business Systems.

Science & Technology

IBM's Research Division fabricates an 8,000-bit semiconductor memory chip with a storage density of five million bits per square inch, and discovers the first polymer to become superconducting and lose virtually all resistance to electric current flow.

The General Products Division at San Jose receives IBM's 1,000th patent.

A successful Apollo-Soyuz mission, supported by IBM equipment, concludes NASA's Apollo series of space flights.

Facilities

The World Trade Americas/Far East Corporation moves into new headquarters in Mount Pleasant, N.Y.

IBM announces plans to build a new plant in Bedford-Stuyvesant, in Brooklyn, N.Y., to replace a leased facility.

The System Communications Division completes a new facility at the Fujisawa, Japan, development laboratory.

The Arthur K. Watson International Education Center is dedicated at La Hulpe, Belgium. A new Office Products Division manufacturing plant begins operations in Guadalajara, Mexico, and a scientific center is established in Mexico City. Plans are announced for construction of a new Office Products plant in Wangaratta, Australia.

1976

Business Performance

IBM gross income increases to \$16.30 billion and net earnings grow to \$2.39 billion. IBM has 291,977 employees and 577,156 stockholders.

Organization

Responsibility for U.S. central programming service is transferred from the System Communications Division to the Field Engineering Division.

Products & Services

IBM announces the System/370 Models 138 and 148; an attached processor for Model 168-3; the Model 158 attached processor system; the 3838 array processor, designed to help pinpoint oil deposits; the Series/1; the 5937 industrial terminal; the Series III Copier/Duplicator; the 6640 Document Printer; the Word Processor/32; and the 2991 Model 2 Blood Cell Processor.

Science & Technology

The *Enterprise*, the first vehicle in the U.S. Space Shuttle program, makes its debut at Palmdale, Calif., carrying flight computers and special hardware built by the Federal Systems Division.

IBM Research scientists fabricate the world's narrowest experimental circuit lines, measuring less than one-fiftieth of the wavelength of visible light.

Facilities

The Santa Teresa, Calif., programming development laboratory is completed. IBM Brazil dedicates Gavea Residential Educational Center, the first on-site customer education facility in South America. IBM Columbia dedicates a new plant in Bogota.

Corporate Citizenship

IBM helps celebrate the U.S. Bicentennial by sponsoring "America on Stage: 200 Years of Performing Arts" at the John F. Kennedy Center for the Performing Arts, Washington, D.C., and by announcing grants to the traveling exhibition "The World of Franklin and Jefferson," and "Operation Sail," an international regatta involving some 150 historic and contemporary sailing vessels from 30 countries.

IBM gives grants to a national merit fellowship program for handicapped students.

Energy usage at IBM U.S. locations is reduced 36 percent from 1973 preconservation levels, for a savings of more than \$58 million.

1977**Business Performance**

IBM gross income climbs to \$18.13 billion and net earnings grow to \$2.71 billion. A stock tender offer results in the repurchase of 2.6 million shares of IBM stock for \$721 million. A Dividend Reinvestment Plan, providing for optional additional investments by stockholders, is announced. IBM has 310,155 employees and 581,513 stockholders.

Organization

The General Technology Division is formed to meet technology requirements of other divisions within the General Business Group.

IBM changes its mode of business operations in India in response to equity requirements of the Indian government. The Indonesian government accepts in principle an IBM reorganization plan, enabling IBM to continue offering its products and services there. IBM Mexico celebrates its 50th anniversary.

Products & Services

IBM announces the 3033 processor, a top-of-the-line, high-capacity computer for customers requiring large scale systems; the 3031 and 3032 processors for users who need increased computing power but not the capacity and performance of the 3033; the 3895 Deposit Processing System for banks; the 3250 graphics display system, offered to help shorten product design and manufacturing time; the Cryptographic Subsystem programming to safeguard information stored and sent by computer; and the System/34, a low-cost data processing system with multiple workstations, designed for both experienced and first-time data processing users.

Also introduced in 1977 are the Office System/6 Information Processors, Models 450, 440 and 430; the 6240 Mag Card Typewriter; and the 2997 Blood Cell Separator.

Science & Technology

The first Space Shuttle vehicle successfully completes approach and landing test phase, demonstrating onboard computers and programming provided by the Federal Systems Division.

An enciphering and deciphering algorithm, developed by the IBM Research and System Communications Divisions, is accepted as a standard by National Bureau of Standards.

Research scientists produce experimental solar cells of gallium arsenide to increase solar cell efficiency.

Facilities

Circuit development facilities in Burlington, Vt., and Manassas, Va., become part of the General Technology Division.

A new General Systems Division headquarters building in Atlanta, Ga., is dedicated, as is the Santa Teresa Laboratory in Calif.

Demolition of the original 590 Madison Avenue IBM building begins. Construction begins on the Management Development Center in Armonk, N.Y.

Corporate Citizenship

U.S. locations surpass the goal of an additional five percent reduction in energy use, and the value of energy savings since 1973 preconservation level is approximately \$90 million.

1978**Business Performance**

IBM gross income climbs to \$21.07 billion and net earnings grow to \$3.11 billion. A block stock purchase is completed totaling 2.4 million shares for \$624 million. IBM has 325,517 employees and 580,572 stockholders.

Organization

The System Products Division reorganizes into two divisions: the Data Systems Division with responsibility for large, complex systems; and the System Products Division, with responsibility for intermediate performance products.

Products & Services

IBM announces the 8100 Information System; the 3730 Distributed Office Communication System; the 3630 Plant Communications System; the 3033 Multiprocessor Complex; the 3031 Attached Processor Complex; the System/38, a general purpose computer that incorporates new semiconductor technology; the Electronic Typewriter Models 50 and 60, both using microprocessors to provide electronic control of certain typing tasks; the Mag Card Composer; the Office System 6/420, a low cost, stand-alone processor; and the 5880 electrocardiograph system, as an aid in the physician's diagnostic decisions.

Science & Technology

The Research Division reports on experimental silicon microcircuit technology that achieves a nearly tenfold increase in circuit density over existing silicon circuits. Experiments show that 1/16 inch-square chips can contain up to 10,000 logic switches or 250,000 bits of memory.

Facilities

IBM starts construction of a 43-story, five-sided office building at 590 Madison Avenue in New York City; a plant and laboratory near Charlotte, N.C.; a development laboratory and materials distribution center in Austin, Texas; and an automated materials distribution center for worldwide supply for the Office Products Division in Greencastle, Ind.

1979**Business Performance**

IBM gross income grows to \$22.86 billion and net earnings decline to \$3.01 billion. IBM stock splits four-for-one, the largest such split in IBM history. IBM has 337,119 employees and 696,918 stockholders.

Products & Services

IBM announces the 4300 processor, featuring multilayer ceramic packaging and 64K-bit memory chips that provide the densest packaging of memory and logic circuits available in intermediate-sized IBM systems, and using a new disk storage device; the 3279 color display terminal; the 3287 color printer; the 3101 display terminal; the 3102 printer; the 3863, 3864 and 3865 modems; the 3033N attached processor; the 3680 programmable store system; the 3604

model 7 administrative terminal for financial institutions; the 5260 retail point-of-sale terminal; and the 5520 Administrative System.

Also introduced in 1979 are the 3270 Kanji Display Terminal; the 6670 Information Distributor; the 6640 Dual-Speed Document Printer; the Electronic Typewriter 75; the Audio Typing Unit for sight-impaired typists; the System 34 with an ideographic feature, which processes more than 11,000 Japanese and Chinese characters; and the IBM 1750 Telephone Switching System, to be marketed in five European countries.

The Field Engineering Division offers round-the-clock telephone assistance for customer software problems.

The first IBM retail shops, called IBM Product Centers, open in London and Buenos Aires.

Alliances

DiscoVision Associates, a joint venture with MCA, Inc., is formed to develop, manufacture and market video discs and video disc players.

Facilities

The company has more than 11 million square feet of new space under construction worldwide.

Corporate Citizenship

A Washington, D.C., center opens for job training of economically disadvantaged persons, made possible in part through IBM loan of equipment and personnel.

IBM's energy saving measures at major U.S. locations result in a five percent savings per square foot over the past year. In World Trade countries, energy savings per square foot total 40 percent at major IBM locations from 1973 through to 1979. Computerized energy management at IBM facilities shows a savings of 10 to 15 percent through the control of electrical heating and cooling equipment.

1980

Business Performance

IBM gross income grows to \$26.21 billion and net earnings increase to \$3.39 billion. IBM has 341,279 employees and 737,230 stockholders.

Organization

IBM President John R. Opel is elected chief executive officer, effective January 1, 1981; Frank T. Cary continues as Chairman of the Board.

The General Business Group is realigned, including the formation of the Information Systems Division. The General Technology Division becomes part of the Data Processing Group.

IBM Japan commemorates the 55th anniversary of business in Japan, and the 30th anniversary of the resumption of operations after World War II.

Products & Services

Two processors are added to IBM's top-of-the-line system: the 3081, the most powerful to date, which features Thermal Conduction Modules, offers up to twice the internal performance of the 3033, and significantly reduces space, cooling, and power requirements; and the 3033 Model Group S, an entry-level 3033 processor that easily expands to larger systems.

Among the other products announced in 1980 are the Distributed Office System, which expands information processing capability of the IBM 8100 to include text and word processing; enhancements to IBM's primary large-system control program, Multiple Virtual Storage, which provides more efficient management of data within the processor and overall system; new models of 4331 processor offering twice the internal performance and up to four times the main memory capacity of earlier models; additional models of 3850 Mass Storage System; the 3848 Cryptographic Unit; the 5120, a new desktop computer; enhancements to 5520 Administrative System; and the 5280, a low-cost Distributed Data System consisting of "intelligent" terminals.

New office products introduced in 1980 include five new models of IBM "Electric" Typewriter; the Displaywriter, a low-cost, easy-to-use desktop text processing system; and two new microprocessor-equipped models of Series III Copier/Duplicator.

The Series/1 Energy Conservation System, a programming system that enables users of Series/1 to conserve energy while performing business applications, is announced.

IBM Instruments Inc., a new subsidiary, introduces a line of analytical instruments. The first IBM Product Centers in the United States open in Philadelphia and Baltimore. Seven additional IBM Product Centers open in Europe and South America.

Alliances

The U.S. Court of Appeals in Washington, D.C., upholds the Federal Communications Commission's 1977 authorization for Satellite Business Systems to construct and operate a domestic satellite communications system.

Science & Technology

IBM researchers use a computer to transcribe human speech drawn from a 1,000-word vocabulary. Text is read and converted to print form with 91 percent accuracy.

Facilities

The Management Development Center in Armonk and 1.7 million square feet of space in Tucson, Ariz., are completed. More than four million square feet of plant and laboratory space is completed by year-end.

1981**Business Performance**

IBM gross income grows to \$29.07 billion and net earnings increase to \$3.61 billion. IBM has 354,936 employees and 742,162 stockholders.

IBM's four basic business goals for the 1980s are: growth, product leadership, efficiency and profitability.

Organization

The worldwide marketing structure is realigned to permit sale and distribution of the entire product line to customers by a single marketing team.

The Data Processing, General Systems and Office Products Divisions are consolidated into two new divisions: National Accounts and National Marketing.

General Business Group/International operations are transferred to the IBM World Trade Americas/Far East and IBM World Trade Europe/Middle East/Africa Corporations.

The customer engineering arms of General Systems and Office Products Divisions are consolidated into a new Customer Service Division.

IBM Credit Corporation is established as a wholly-owned subsidiary to provide added flexibility and more efficient, single-management focus on financing of installment payment agreements offered by U.S. marketing divisions.

IBM establishes a corporate function to coordinate quality programs. The Quality Institute is opened to train managers and professionals in techniques needed to sustain company leadership in quality.

The company closes its branch office in Iran in response to government policy requiring local ownership of data processing enterprises.

IBM United Kingdom celebrates its 30th anniversary and IBM Taiwan celebrates its 25th anniversary.

Products & Services

IBM announces the IBM Personal Computer, the smallest, lowest-priced IBM computer to date (which quickly becomes the industry standard).

The company also introduces the 3081 Model Group K processor, offering 32 million characters of main storage, and significant internal performance improvement; Multiple Virtual Storage/Extended Architecture, providing additional memory and greater efficiency for large systems users; an entry-level 4321 processor; the 4331 Model Group 11 and Small System Executive software designed to reduce the skill level needed to operate these systems; 4341

Model Groups 10 and 11; and an increase of main storage of 3033 Model Group S processors to 16 million characters.

Other products rolled out during 1981 include three new models of the 8100 Information System, increasing performance and storage capacity; the 4700 Finance Communication System with compact computer devices for teller and administrative operations; the System/23 Datamaster; a bi-directional 3268 Printer with improved dot matrix technology; models of 3705 Communications Controller, providing data transmission in smaller networks, and remote facilities in larger ones; and the 3880 Storage Control Unit that attaches multiple IBM central processing units at data rates up to 3 million characters per second.

Alternative channels to sell IBM products and services are developed as part of significant new marketing direction. Marketing through additional distributors is initiated; select firms are authorized as dealers to sell selected IBM products; contracts are signed with Sears, Roebuck and Co., Inc., and Computerland to sell IBM Personal Computers; and sales channels are expanded to include manufacturers who integrate IBM assemblies and products into specialized systems.

Deliveries begin of the 3380 Direct Access Storage Device that uses "thin film" technology to read and write data at 3 million characters per second.

Alliances

Satellite Business Systems begins commercial operations and launches its second satellite.

Science & Technology

IBM computers and software play key role in successful first orbital flight of the Space Shuttle.

IBM scientists fabricate 288,000-bit memory chip that holds four times as much data in only twice the area.

Facilities

The first scientific center opens in Brasilia, Brazil and IBM Canada moves to a 74-acre site northeast of Toronto, Ontario.

A total of 4.5 million square feet of plant and laboratory space are added worldwide and another four million square feet is under construction in six countries.

Corporate Citizenship

IBM begins a \$2.7 million audio visual project in Soweto aimed at improving quality of education for South African blacks.

Individualized work schedules for U.S. employees are implemented (flexible work hours had been introduced earlier in World Trade countries).

1982

Business Performance

IBM gross income increases to \$34.36 billion and net earnings rise to \$4.4 billion. IBM has 364,796 employees and 725,745 stockholders.

Organization

New business organizations, called Independent Business Units, are formed to take advantage of new business growth areas, such as telecommunications and industrial automation.

IBM Australia observes its 50th anniversary, and IBM Hong Kong celebrates its 25th anniversary.

Products & Services

IBM announces the 3084, the company's top-of-the-line computer, with four central processing units offering up to 64 million characters of main memory and 48 channels; and the 3083 model Groups E, B and J, using the industry's densest logic circuit packaging.

Also introduced in 1982 are the 4954, a new addition to the Series/1 family; the System/38 Model 7 with double the main storage previously available; the 3800 Printing Subsystem, Model 3; the Series III Copier/Duplicator Model 60; two new models of the 3890 Document Processor; a videotext system offering users fast and convenient access to computerized business information; the monochrome 5291 Model 1 and 5292 Color Display Stations; two new models of the 5219 bi-directional printer; the IBM Personal Typewriter; Scanmaster I, for storing and retrieving image documents from a host computer; the 6361 Fastdraft System, a low-cost drafting system using a light pen and a CRT screen; hardware and software options for IBM Displaywriter and Datamaster; and enhancements to IBM 3814 Switching Management System.

The 25th anniversary of the IBM-developed programming language FORTRAN is marked.

IBM markets its first two industrial robotic systems — 7565 and 7535 manufacturing systems — which can be programmed with advanced IBM developed language.

The IBM Credit Corporation introduces term lease financing to U.S. customers.

Alliances

Satellite Business Systems launches its third satellite.

IBM enters an agreement to purchase a minority interest in the Intel Corporation.

Science & Technology

IBM equipment plays a key role in three successful flights of Space Shuttle *Columbia*.

Facilities

More than 3.5 million square feet of new plant and laboratory space is completed at 11 sites in five countries, and another 4.8 million square feet are under construction worldwide. By year-end, IBM-owned and leased plant and laboratory space worldwide totals almost 74 million square feet.

Corporate Citizenship

IBM contributes \$80 million in cash grants, equipment and other support to social, educational and cultural programs worldwide.

The company provides \$50 million in cash and equipment over five years to selected universities to develop and update manufacturing systems engineering courses. IBM undertakes a joint project with Carnegie-Mellon University to develop software and a network to make campus data processing resources available to students and faculty from home, office, and laboratory.

The IBM laboratory at Hursley, England, develops a display terminal with audio output for sight-impaired operators.

Thirteen major job training centers open in the United States for the economically disadvantaged, bringing the total of such IBM-supported centers to 21.

1983**Business Performance**

IBM gross revenue climbs to \$40.18 billion and net earnings rise to \$5.48 billion. IBM has 369,545 employees and 769,979 stockholders.

Organization

John R. Opel succeeds Frank T. Cary as chairman of the board, and John F. Akers becomes president. Paul J. Rizzo becomes vice-chairman of the board.

The Corporate Management Board replaces the Corporate Office, and the Policy and Business Operations Committees replace the Corporate Management Committee.

Three new divisions are established: Entry Systems, National Distribution, and Systems Technology.

The General Technology Division is restructured, and the Industrial Systems organization is formed.

Products & Services

IBM announces the IBM Personal Computer XT, with larger memory, dual-sided diskette drive and high-performance fixed-disk drive; two models of the PC *jr*, IBM's smallest and lowest-priced computer; the 3270 Personal Computer Workstation, with a display screen that can be divided into seven viewing areas; the Personal Computer XT 370, which can be used as a

stand-alone system or as a terminal linked to larger computers; the System/36, a small business computer with data and word processing, business color graphics and office management functions; the 4361 and 4381, two new models in the 4300 computer series; new models for the 8100 Information System; new models of Series/1 and System/38; and the 4704 Model 2 high-speed finance terminal.

The main storage capacity of 3081 models of large-scale processors is expanded to 48 million characters.

Also introduced in 1983 are the 3268 Color Printer Model 2C; the 3178, a low-cost display station; the 3290 gas panel display station; the 3430 magnetic tape subsystem; the 5550 small business computer for Japan; the 7540 robotic system; the 4370 Personal Banking Machine, which cashes checks, dispenses exact change, and accepts check deposits without deposit slips or envelopes; the 5080 graphics system; and Database 2 (DB2), a versatile software system.

Customer deliveries begin of the 7350 Image Processor, a specialized terminal for scientific and research applications.

The IBM Personal Computer is now marketed in 16 countries in Europe, the Middle East and Far East.

IBM delivers first LAMPS MK III production ship/air weapon system.

The IBM Credit Corporation expands services to include financing for virtually the entire IBM product line.

IBM becomes an official sponsor of 1984 Olympics.

Alliances

A minority interest in the ROLM Corporation is purchased, and plans are announced for IBM-ROLM cooperative product development.

Science & Technology

A new IBM research technique, called scanning tunneling microscopy, produces for the first time three-dimensional images of the atomic surfaces of silicon, gold, nickel and other solids.

Facilities

Plans are announced to build the Corporate Technical Institute in Thornwood, N.Y., and a low-rise office complex in Somers, N.Y.

A scientific center is established in Caracas, Venezuela.

The IBM office building at 590 Madison Avenue in New York City is dedicated.

More than 1.7 million square feet of plant and laboratory space are completed, including sites in Kingston, N.Y.; Charlotte, N.C.; Rochester, Minn.; Don Mills, Ontario; and Jarfalla, Sweden.

Corporate Citizenship

IBM donates 1,500 IBM Personal Computers and related programming as part of a computer literacy program for teachers and secondary school students. Personal workstations and IBM professionals are loaned to a Massachusetts Institute of Technology program to incorporate computers and interactive graphics into undergraduate education. IBM establishes a grant program to help universities retain faculty in computer-related fields. IBM and major European universities announce an international computer network to exchange scientific and technical information among academic communities in Europe and United States.

The 30th IBM-sponsored job-training center for the economically disadvantaged opens.

1984

Business Performance

IBM gross income grows to \$45.93 billion and net earnings increase to \$5.48 billion. There are 394,930 employees and 792,506 stockholders at year-end.

Organization

John F. Akers is elected chief executive officer, succeeding John R. Opel, who continues as chairman of the board. Thomas J. Watson, Jr., retires from IBM Board of Directors.

The National Service Division is formed from the field organizations of the former Field Engineering and Customer Service Divisions, to provide service for the full product line in the United States.

The Information Systems and Products Group is formed, and the Information Systems and Communications Group is realigned.

The World Trade organizations are realigned, with significant responsibilities and function transferred to new organizations and major countries.

IBM and ROLM Corporation announce a merger agreement making ROLM a wholly-owned subsidiary of IBM.

IBM discontinues marketing biomedical products, and sells its blood processing equipment to COBE Laboratories Inc.

Products & Services

IBM announces enhancements to the top-of-the-line 308X series; the 3083 model CX processor, the smallest of the high-end 308X computer series; the 4381 model group 3, IBM's most powerful 4300 intermediate processor; the 4361 Model 3 processor; two new models of the Series/1 processors; two new high-end models of the System/38; the new low-cost version of System/36; the 3480 Magnetic Tape Subsystem, which doubles the speed at which tape units transfer data; the 4248 impact printer, the fastest to date; new programs for the 3800 Model 3 laser printer; the 7545 and 7547 manufacturing systems; the 5531 industrial computer for plant

environments; the 9002 desktop computer for engineers, scientists and business professionals; and the 8100 processor and DASD.

Also introduced during 1984 are the 3179 and 3180 monochrome display stations; the Electronic 95 Typewriter; high performance models of the 3880 Storage Control Unit, using IBM's new 256K-bit memory chip; the IBM Cabling System; "Electric" System 2000 typewriters and printers using electronic functions and new print technology; the IBM Office Systems Family, complementary programs for use on IBM Personal Computers, System/36 and System/370 computers; the IBM Portable Personal Computer; the Personal Computer Engineering/Scientific Series, including graphics display using up to 256 colors simultaneously, and more than a dozen telecommunications products; the Personal Computer/AT, IBM's most powerful personal computer to date, and the Personal Computer AT 370; the PC Network, enabling customers to link up to 72 personal computers; enhancements to the PCjr; *Writing to Read*, an educational system that helps young students develop language skills using the PCjr; the 3270-PC/G and PC/GX, two advanced versions of the 3270-PC that offer many graphic functions of large host computers; the Personal Decision Series, five PC programs centered around a new data management program; and the Business Management Series, a commercial accounting system with functions usually provided by host computer programs.

The IBM Credit Corporation introduces the IBM credit card, and passes \$2 billion in total assets.

IBM continues to expand its distribution channels with approximately 10,000 dealer outlets worldwide selling selected products.

Alliances

IBM forms Trintex, with Sears, Roebuck and Co. Inc. and CBS, Inc., to develop commercial videotext service for home use.

The company forms the International Market Network with Merrill Lynch & Co. Inc., to offer an information delivery and office automation system.

Science & Technology

IBM announces the fabrication of experimental one-million-bit memory chips.

Corporate Citizenship

IBM announces a program to give IBM Personal Computers and PCjr systems to approximately 140 urban schools to establish computer literacy courses; the program is to reach 200,000 teachers and students in 28 school systems across the United States.

IBM eliminates mandatory retirement at age 70 for employees throughout the United States, and medical benefits are redesigned to emphasize prevention, and increase flexibility and personal choice.