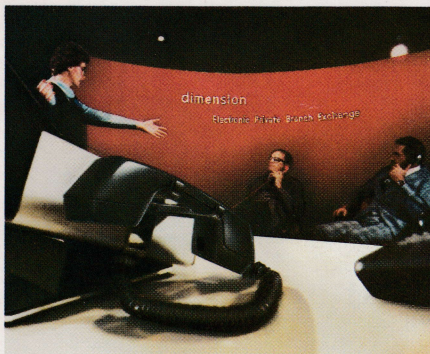




The Bell telephone companies handle hundreds of millions of messages every day. What makes our responsibilities unique is that each one of these messages—to someone—is more important than all the others. In short, our obligation to the public requires that we never forget that, although we number our customers in the millions, we serve them one at a time.



Today the Bell System is unreservedly committed to a sustained initiative aimed at discerning—indeed anticipating—the communications requirements of an increasingly diverse and fast-changing market and to the shaping of products and services matched to those requirements.

What makes service a goal worth striving for is that not at the end of ten years or a hundred can we tell ourselves we have achieved it. Over the long pull, Bell System policy calls for constant improvement of the quality of our service and constant improvement of its usefulness. We have no other business and no greater source of strength.





The 94th Annual Meeting of AT&T shareholders will be held at 2:00 p.m. on Wednesday, April 18, 1979, in the Seattle Center Opera House, 325 Mercer Street, Seattle, Washington.

The consolidated financial results reported herein are for American Telephone and Telegraph Company and its subsidiaries.

If you wish further information, the following are available upon request:

— 1978 Statistical Report, with additional data on our operations.

— Form 10-K, AT&T's annual report to the Securities and Exchange Commission.

— Annual reports of the Bell telephone operating companies, the Western Electric Company and Bell Laboratories.

— Information relating to various Bell System benefit plans for employees contained in plan descriptions, annual reports and other materials regularly furnished to employees under the Employee Retirement Income Security Act of 1974.

The AT&T Annual Report is also available in braille, talking records and cassettes.

Address requests to the Secretary, American Telephone and Telegraph Company, 195 Broadway, New York, N.Y. 10007. The telephone number of the Company is (212) 393-9800.

Information on AT&T common and preferred stock, bonds, dividends or interest payments and the Dividend Reinvestment and Stock Purchase Plan can be obtained by calling without charge 800-631-3311 or, from New Jersey, 800-352-4900. Mailed inquiries should be addressed to AT&T Co., P.O. Box 2018, New Brunswick, N.J. 08903.

The Company maintains stock transfer offices at 180 Fulton St., New York, N.Y. 10007; at 444 Hoes Lane, Piscataway, N.J. 08854, both of which can be reached through the toll free telephone numbers above, and at 140 New Montgomery St., San Francisco, Calif. 94105, which office can be reached by calling (415) 542-3801.

## The Bell System

The Bell System is an association of companies, each separately managed but sharing the common objective of providing communications services to the nation. Of the Bell System's 21 principal operating telephone companies, all but four are wholly owned by AT&T: Pacific Telephone (89.8%), Pacific Northwest Bell (89.3%), Mountain Bell (88.6%) and New England Telephone (86%). In addition, AT&T has a non-controlling ownership in Cincinnati Bell (27.7%) and Southern New England Telephone (18.9%). The Western Electric Company, a wholly-owned subsidiary, manufactures and purchases telecommunications products and supplies for the Bell System. Bell Laboratories, jointly owned by AT&T and Western Electric, provides research and development services. AT&T's Long Lines Department is the Bell System's interstate and overseas operating unit.

**American Telephone and Telegraph Company**  
195 Broadway, New York, New York 10007

**American Telephone and Telegraph Company  
Long Lines Department**  
Bedminster, New Jersey 07921

**New England Telephone and Telegraph Company**  
185 Franklin Street, Boston, Massachusetts 02107

**The Southern New England Telephone Company**  
227 Church Street, New Haven, Connecticut 06506

**New York Telephone Company**  
1095 Avenue of the Americas, New York, New York 10036

**New Jersey Bell Telephone Company**  
540 Broad Street, Newark, New Jersey 07101

**The Bell Telephone Company of Pennsylvania**  
One Parkway, Philadelphia, Pennsylvania 19102

**The Diamond State Telephone Company**  
One Parkway, Philadelphia, Pennsylvania 19102

**The Chesapeake and Potomac Telephone Company**  
930 H Street, N.W., Washington, D.C. 20001

**The Chesapeake and Potomac Telephone Company of Maryland**  
Constellation Place, 1 East Pratt Street, Baltimore, Maryland 21202

**The Chesapeake and Potomac Telephone Company of Virginia**  
703 East Grace Street, Richmond, Virginia 23219

**The Chesapeake and Potomac Telephone Company of West Virginia**  
1500 MacCorkle Avenue, S.E., Charleston, West Virginia 25314

**Southern Bell Telephone and Telegraph Company**  
Hurt Building, P.O. Box 2211, Atlanta, Georgia 30301

**South Central Bell Telephone Company**  
600 North 19th Street, Birmingham, Alabama 35203

**The Ohio Bell Telephone Company**  
100 Erieview Plaza, Cleveland, Ohio 44114

**Cincinnati Bell Inc.**  
225 East Fourth Street, P.O. Box 2301, Cincinnati, Ohio 45201

**Michigan Bell Telephone Company**  
444 Michigan Avenue, Detroit, Michigan 48226

**Indiana Bell Telephone Company, Incorporated**  
240 North Meridian Street, Indianapolis, Indiana 46204

**Wisconsin Telephone Company**  
722 North Broadway, Milwaukee, Wisconsin 53202

**Illinois Bell Telephone Company**  
225 West Randolph Street, Chicago, Illinois 60606

**Northwestern Bell Telephone Company**  
100 South Nineteenth Street, Omaha, Nebraska 68102

**Southwestern Bell Telephone Company**  
1010 Pine Street, St. Louis, Missouri 63101

**The Mountain States Telephone and Telegraph Company**  
931 Fourteenth Street, Denver, Colorado 80202

**Pacific Northwest Bell Telephone Company**  
Sixteen Hundred Bell Plaza, Seattle, Washington 98191

**The Pacific Telephone and Telegraph Company  
(including Bell Telephone Company of Nevada)**  
140 New Montgomery Street, San Francisco, California 94105

**Western Electric Company, Incorporated**  
222 Broadway, New York, New York 10038

**Bell Telephone Laboratories, Incorporated**  
600 Mountain Avenue, Murray Hill, New Jersey 07974






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## A RECORD OF THE YEAR

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**On the cover:** The words are from "Words We Live By," a statement of policy first published in the Company's Annual Report for the year 1977. The pictures symbolize the *residence*, *business* and *network* sectors that are the principal organization units in the restructuring of Bell System operating and marketing departments that was initiated in 1978 to assure that we continue to fulfill that policy in the face of the increasingly diversified requirements of today's customers and the increasingly competitive operating environment we confront.



# Report of the Chairman of the Board

This is my final accounting to share owners of the state of their business. That it comes at the conclusion of what in many ways was the Bell System's most successful year is testimony to the skills and energies of the very nearly one million people who made it so—the men and women of the Bell companies throughout the nation whose contributions at every step of the service process—from research and development through manufacture and supply to operations and customer service—produced the year's results. With affection and pride, I salute them.

That this is my last Annual Report makes it a natural occasion for a review of developments not merely from year-end to year-end but over a span of time sufficient to provide a sense of the longer-term direction of the business—the trajectory that, barring a major discontinuity in the national economy, it might reasonably be expected to follow in the years immediately ahead.

## Improved earnings

In early 1972 upon being elected chairman of the board, I stated on behalf of my colleagues that the first priority of AT&T's new management would be to restore the Company to the track of continuing improvement in earnings per share that had characterized its performance through most of the years since World War II. That has been accomplished.

Over the past seven years, earnings per share have increased at an average annual rate of 10.2 per cent. Nineteen seventy-eight's earnings—\$7.74 per share—are almost twice those of 1971.

Since 1971, the annual dividend rate has been increased six times—from \$2.60 to \$4.60—more than matching the increase in the cost of living in that period.

With improved earnings came, beginning in 1975, a sufficient improvement in the market price of AT&T shares to provide an opportunity to strengthen the Company's financial structure through the marketing of equity. Thus borrowing margins have been restored that may one day stand our business in good stead.

Not surprisingly, the Bell System's improved performance has not gone unobserved in the financial markets. Since mid-1972, the price of AT&T shares on the New York Stock Exchange has risen 50 per cent compared to a decline in the N.Y.S.E. composite index of common stocks of about five per cent.

## Undiminished opportunities

But more than on history the market's evaluation of our shares is based on its appraisal of our prospects, the opportunities we confront and our readiness to meet them.

First, with respect to demand, there is nothing in our experience of recent years that suggests any abatement in the trend of society's demand for communications services. In each of the past seven years, the Bell companies have handled a volume of business on the average eight per cent bigger than the year before. At the end of 1971 we served 100 million telephones; today we serve over 133 million. And in 1978, we handled almost twice as many long distance calls—14.6 billion—as we did in 1971. Growth like this is hardly characteristic of an industry that has matured, topped off.

Indeed, it is my conviction that the Bell System today confronts an era of opportunity unmatched in its history. At last, the Information Age, so long heralded, so long deferred, is here. For its coming, no business is more responsible than ours and none, I believe, is better positioned to meet



*John D. deButts, chairman, with Chairman-elect Charles L. Brown (left).*

its challenges, fulfill its promises.

Our strength is in the network. Over the past seven years we have increased its capacity—from 790 million miles of cable, radio and satellite circuits in 1971 to 1.2 billion today.

But it is not so much the network's capacity as it is its capabilities that make it a unique resource. Indeed, in my view, more than a diversity of suppliers, it is the growing versatility of the nationwide switched network that will most economically and readily provide this country with the diversity of communications services it will require in the years ahead. Already—through the application of advanced electronics—we are well launched on a thorough transformation of that network into an "intelligent" network, as useful for data as for voice, that one day, I am convinced, will serve no two of its customers alike but will be programmed to provide a range of services—and a calling area—tailored to the unique interests and needs of each.

To technology we owe not merely the strengthening of the network's



service capabilities but new efficiencies in its administration and more assured control of its complexities. Recent years have seen the development and application—at an accelerating pace—of scores of computer-based operations systems that have given renewed impetus to the Bell System's traditional drive to improve productivity through improvements in operating methods. That in 1978 the Bell System was able to handle a volume of business roughly 70 per cent larger than it did in 1971 with but a four per cent increase in the number of its employees is in large measure—although certainly not entirely—attributable to the efficiencies accomplished by the accelerated introduction of computer-based operations systems—what inside our business has come to be known as the “acronym revolution.” More to the point, that since 1971, while the Consumer Price Index has increased 61 per cent, the price of telephone service has increased on the average but 29 per cent is evidence of our business' undiminished determination to neglect no opportunity that the Bell System's integrated structure affords to improve efficiency and thereby the value of our customers' services and the profitability of our share owners' investment.

Currently, as it has been from time to time throughout its history, that integrated structure is under challenge—in the courts, before regulatory commissions and before Congress. The Bell System's performance over the past seven years simply adds to the already overwhelming evidence that in no other way could the American people be so well served at so low a cost.

I wish I could say at the end of my term of service as the Bell System's chief executive officer that the course

of national telecommunications policy appears more certain than it did at the beginning. On the other hand, I can state with some assurance that what is at stake in the resolution of that policy is clearer now than it was then and, because it is, I am confident that, while matters are unlikely to be settled to our liking in every particular, too much sense resides in the Congress, in the regulatory commissions and in the leaders of the telecommunications industry itself to permit a significant impairment of the operational integrity of the nationwide switched network or of the organizational arrangements that assure systematic management of the service process.

### **A changed world**

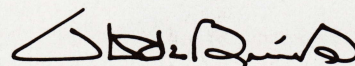
Whatever changes are yet to come, realism requires recognition that ours is already a vastly changed business—changed not only as a consequence of the regulated competition that is one of the facts of life in today's operating environment but—more importantly—changed as a result of the increasing diversification of our customers' needs and the changed—and still changing—technology that provides us the opportunity to meet those needs.

It was in response to these changes that we undertook what I view as the most significant development of 1978—the restructuring of our operating and marketing organizations along lines, not as heretofore of the jobs we do, but of the market sectors we serve. This restructuring represents the climax of a determination I voiced to share owners immediately upon taking up the responsibilities that I am now about to relinquish—and that is to make the Bell System as strong in marketing as it is strong in technology.

Even in the perspective of a more-than-century-old business, the restructuring on which we are now embarked represents an historic change. It signals, though, no change in purpose. Its aim is to permit us more readily to perceive—and more alertly to respond to—the diverse needs of our customers. In short, our aim is service.

### **Still higher goals**

In summary, then, the Bell System has been materially strengthened financially. It has been materially strengthened in its service capabilities; and it has been materially strengthened organizationally. But in no other aspect of its operations has it been strengthened so much as in the capacities of its management. I say that on the basis of the closest working relationship with the leaders of the Bell companies during a period in which—year after year—we set goals for ourselves that at the outset appeared beyond achievement but that, because each of us took them as his own and assumed a personal responsibility for a share in their accomplishment, were in fact accomplished. What more than anything else I would like this final accounting to convey to share owners is how great a pride I take in that experience and—on the basis of it—how firm is my conviction that the Bell System's new leaders will take it to new levels of accomplishment, new dimensions of service to the nation.



J. D. deButts

January 31, 1979







# The Bell System in 1978

It was a year in which—through advanced technology, vigorous marketing and a major restructuring of our operating organizations—we strengthened our ability to meet the nation's increasingly diversified telecommunications requirements.

Nineteen seventy eight was a notable year for the Bell System in terms of performance in the present and promise for the future. It was a record year in volume of business, earnings, dividends and capital expenditures. It was a year of high-quality service. Most significantly, however, 1978 was a year in which the Bell System strengthened its ability to deliver the full promise of technology. That promise envisions not only continuing improvement in basic telecommunications service common to all users but also the provision of services so versatile and diverse that they meet and anticipate a wide spectrum of needs that are unique to individual customers and groups of customers.

This commitment to make our services ever more responsive to the diverse needs of customers—and thus more useful and satisfying—lent direction and purpose to virtually all the Company's activities in 1978. It provided focus for technological development. It guided the expansion and enhancement of the telecommunications network. It spawned a variety of new products and services. It spurred our market research efforts to discern the variety of customer needs for communications services. It led to a basic restructuring of our organization.

## Strengthened financial structure

In order to provide high-quality, abundant and diverse communications services now and in the future, the Bell System must have a sound financial position and sufficient growth in earnings to retain investor confidence and to attract necessary capital. From that standpoint, 1978 was an outstanding year.

Earnings per share were \$7.74, up 88 cents or 12.8 per cent from last year. Operating revenues rose 12.5 per cent or \$4.6 billion, while operating

expenses increased \$3.0 billion or 12.7 per cent. Net income was up \$792 million to \$5.3 billion.

In December, 1978 the United States Supreme Court denied The Pacific Telephone and Telegraph Company's petition to review a California Public Utilities Commission order that could make that company ineligible for accelerated tax depreciation and investment tax credit. The earnings applicable to common shares and other financial data have been reduced to take account of the probable effects of that order. For details see Note (E) to the Financial Statements.

The Company's rate of return on average total capital rose from 9.1 per cent in 1977 to 9.7 per cent in 1978. Return to common equity also improved, rising from 12.2 per cent in 1977 to 13.1 per cent, but it still remains below the 14 to 16 per cent range that investors seek and which we believe we must attain in order to compete for capital on reasonable terms.

Once again improved earnings enabled us to continue the policy of raising the dividend to reflect the increasing book value of share owners' equity and to maintain the integrity of the dividend in the face of inflation. In February, 1978 the Board of Directors announced a 40-cent annual increase in the dividend, effective April 1, bringing the annual rate to \$4.60. This was the seventh dividend increase in the past ten years.

The Bell System continued to strengthen its capital structure, as the ratio of debt to total debt and equity capital declined to 46.5 per cent, its lowest level in seven years. This reflected in part our ability to meet approximately 74 per cent of our capital needs from internal sources such as reinvested earnings, depreciation, deferred taxes and investment tax

credits. In addition, we raised some \$1.2 billion in new equity through dividend reinvestment and employee savings and stock ownership plans. While AT&T issued no long-term debt, the associated companies raised \$2.5 billion in such offerings at an average interest cost of 9.1 per cent.

Our strengthened earnings in 1978 were the product of stronger-than-expected demand, improved marketing and sales efforts, more efficient operations and rate awards in jurisdictions where, despite achievements in offsetting the impact of inflation, we had to seek rate increases.

## Growth in demand

By virtually every measure, 1978 was a year of record demand. Long distance calling increased by 12.6 per cent. Overseas calls continued to grow by about 27 per cent with customers in nearly 900 cities able to dial direct to 47 countries.

Overall volume of business (operating revenues adjusted for rate changes) grew by a record 10.6 per cent.

At year's end, Bell System phones in service totaled some 133 million—five million more than in 1977.

While 1978 was a year of high demand, it was also a year of generally high-quality service throughout the country. During the year we reported but 43 service weakspots to the Federal Communications Commission, more than in 1977 but dramatically fewer than in 1974 and years before.

Although technical measurements are critical, the fundamental measure of service quality is what our customers think of it. We measure that in a variety of ways. One such measurement is a continuing telephone survey in which more than a million customers are interviewed each year about their service. In 1978, about nine out of



# It was a year of growth in revenues, earnings, dividends

## RESULTS IN BRIEF

	1978	1977 <sup>①</sup>	1976 <sup>①</sup>	1975 <sup>①</sup>	1974 <sup>①</sup>
<b>Earnings per Common Share</b> .....	\$ 7.74	\$ 6.86	\$ 5.98	\$ 5.08	\$ 5.26
Based on average shares outstanding (000) .....	659,843	625,878	595,184	567,915	557,815
Dividends declared per common share .....	\$ 4.60	\$ 4.20	\$ 3.80	\$ 3.40	\$ 3.24
<b>Revenues</b> .....	<i>Millions</i>	<i>Millions</i>	<i>Millions</i>	<i>Millions</i>	<i>Millions</i>
Local service .....	\$18,685	\$17,007	\$15,557	\$13,976	\$12,797
Toll service .....	20,770	18,094	16,065	13,925	12,461
Other (including other income) .....	2,289	1,902	1,492	1,323	1,441
	<u>41,744</u>	<u>37,003</u>	<u>33,114</u>	<u>29,224</u>	<u>26,699</u>
<b>Expenses</b> .....					
Operating .....	26,505	23,516	21,021	18,757	16,716
Income taxes on operations .....	3,837	3,268	2,905	2,364	2,306
Other taxes on operations .....	3,439	3,252	2,977	2,681	2,454
Interest .....	2,690	2,487	2,426	2,306	2,057
	<u>36,471</u>	<u>32,523</u>	<u>29,329</u>	<u>26,108</u>	<u>23,533</u>
Net income .....	5,273	4,480	3,785	3,116	3,166
Preferred dividend requirements .....	164	184	227	232	232
Income applicable to common shares .....	<u>\$ 5,109</u>	<u>\$ 4,296</u>	<u>\$ 3,558</u>	<u>\$ 2,884</u>	<u>\$ 2,934</u>
Ratio of earnings to fixed charges (Securities and Exchange Commission basis) .....	4.01	3.77	3.52	3.22	3.43
Main telephones <sup>②</sup> .....	68	65	64	62	60
Extension telephones <sup>②</sup> .....	65	63	59	56	54
Total telephones .....	<u>133</u>	<u>128</u>	<u>123</u>	<u>118</u>	<u>114</u>
Toll messages <sup>②</sup> .....	14,639	12,844	11,684	10,725	10,198
WATS messages <sup>②</sup> .....	3,631	3,046	2,451	1,942	1,605

① Restated. See note (E) to Financial Statements. ② Charges for main and extension telephones currently account for about 18% and 5%, respectively, of Total operating revenues. Toll and WATS messages currently account for about 39% and 7%, respectively, of Total operating revenues.

## MANAGEMENT'S ANALYSIS OF RESULTS IN BRIEF

**Earnings per common share** rose 88 cents in both 1978 and 1977, as income applicable to common shares increased \$813 million and \$738 million, respectively. Average common shares outstanding increased 34 million in 1978 and 31 million in 1977. Total revenues (including other income) were up 12.8% and 11.7% while total expenses (including taxes and interest) rose 12.1% and 10.9% in 1978 and 1977, respectively.

**Revenues from local and toll services and other income** increased \$4.7 billion in 1978 and \$3.9 billion in 1977 for several reasons: more telephones in service and growth in local and long distance calling volumes in both years; higher intrastate rates, \$600 million and \$700 million in 1978 and 1977, respectively; higher interstate long distance rates that were authorized by the FCC, \$50 million in 1978 and \$20 million in 1977; and increased sales of directory advertising, \$216 million and \$173 million in 1978 and 1977, respectively. Western Electric's net income increased by \$71 million in 1978 and \$273 million in 1977 reflecting improvement in sales and a continuing control of costs.

### Operating expenses increased due to the following changes in:

	1978 versus 1977	1977 versus 1976
	Millions	
Wages and salaries, including cost-of-living adjustments .....	\$1,296	\$ 970
Total pensions and benefits .....	335	267
Depreciation due to increased: Rates .....	84	209
Plant investment .....	410	352
Materials, supplies and other payments .....	864	697
Total operating expenses ..	\$2,989	\$2,495

**Income taxes on operations** rose \$569 million in 1978 and \$363 million in 1977, reflecting higher income before taxes.

**Other taxes on operations** increased \$187 million in 1978 and \$275 million in 1977. Property taxes in 1978 decreased by \$5 million due to lower property rates and assessments while 1977 increased by \$124 million largely as a result of an expanding base of taxable plant. Gross receipts taxes increased \$101 million in 1978 and \$82 million in 1977. Social Security taxes rose \$80 million in 1978 and \$65 million in 1977 mainly because of statutory increases in the taxable wage base.

**Interest expense** increased \$203 million in 1978 and \$61 million in 1977 primarily because of new debt capital obtained by the companies to help finance their construction programs in both years and higher interest rates in 1978. (See note (M) to Financial Statements.) The average cost of long and intermediate term debt issued in 1978 was 9.06% compared to 8.12% in 1977.

## MARKET AND DIVIDEND INFORMATION.

The principal market for trading in AT&T common stock is the New York Stock Exchange. Market data as obtained from the composite tape\* and dividend data for the last two fiscal years are listed below.

Calendar Quarter	Market Price		Dividend Paid
	High	Low	
1977			
1st .....	65¼	61¾	\$ .95
2nd .....	65%	61%	1.05
3rd .....	64½	60½	1.05
4th .....	63%	58%	1.05
1978			
1st .....	62½	56%	\$1.05
2nd .....	63½	59¾	1.15
3rd .....	63¾	58½	1.15
4th .....	64%	59%	1.15

\*Encompasses trading on the principal U.S. stock exchanges as well as off-board trading.



Net income increased by 17.7 per cent over 1977. We financed a \$13.7 billion construction program, 74 per cent of it from internal sources. We strengthened the Bell System's capital structure, reducing the ratio of debt to its lowest level in seven years.

ten of these customers rated their telephone service good to excellent and considered telephone employees knowledgeable and courteous.

Record demand required record capital expenditures in 1978 of some \$13.7 billion. While much of the capital outlay was for expansion of facilities to handle current volumes of business and anticipated growth in the future, some 23 per cent—or \$3.2 billion—was spent for modernization projects. We continued, for example, to extend electronic switching systems throughout the telecommunications network—for both local and long distance switching. We installed 365 local electronic switching systems during the year. About 30 per cent of Bell System telephones—close to 40 million—are served by some 1700 local electronic switching offices.

We also are moving ahead rapidly with the installation of our latest “super switchers” for long distance calls. Nine of these high-speed, high-capacity, digital switchers were added in 1978. There are now 21 in the nation, including one operated by the General Telephone Company of Florida.

The extension of electronic switching technology, with its computer-like control capabilities and a new signaling system for processing information about a call, is leading to a profoundly different, more versatile kind of telecommunications network. Called the “stored-program controlled” network, it will be able to provide a wide variety of customized services depending upon the instructions stored in the switching equipment's memory. For example, a customer might be able to direct the network to put through, automatically, collect calls to designated telephone numbers; to screen incoming calls so that only those from “customer-approved”

telephone numbers are received, while others are answered with a recorded message; or, to provide a signal, when the customer's phone is in use, that a call from a “priority” telephone number—a relative or business associate—is waiting to get through.

The ability to provide these and other services economically and profitably is rooted not only in stored program control but also in advances in solid-state electronics that were pioneered by Bell Laboratories, starting with the invention of the transistor in 1947. Since then, Bell Laboratories has continued to be at the forefront of a technology that today makes it possible to put a complete computer, capable of performing tens of thousands of operations, on a chip of silicon one-tenth the size of a postage stamp.

The fruits of Bell Laboratories research and development pervade the nation's telecommunications system and more are coming. For example, Bell Labs has been a pioneer in the development of lightwave communications—transmitting information as pulses of light through hair-thin glass fibers. That technology, a laboratory curiosity only a few years ago, came through a year-long service test in Chicago with flying colors.

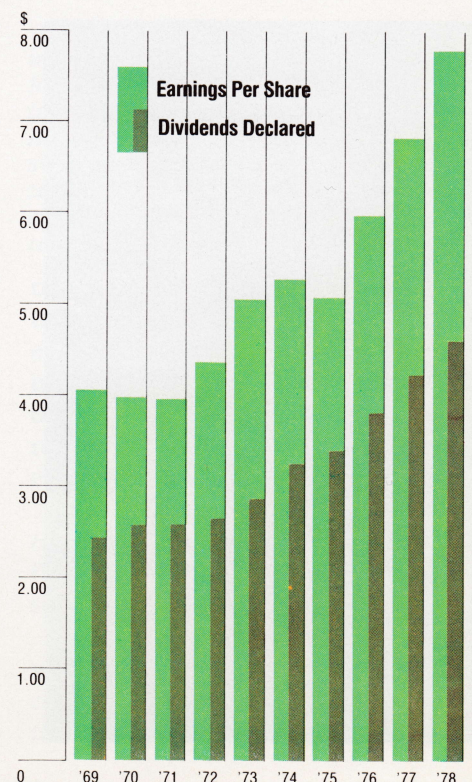
The Western Electric Company will begin production of a commercial lightwave system in 1979. In 1980, it will be installed in the Atlanta metropolitan area linking two local central offices and a long distance switching center.

Bell Labs scientists are already exploring more advanced lightwave systems that will require fewer amplifiers and will handle significantly more calls. In the future, lightwave systems are expected to be used for local lines, long distance routes and undersea cable.

Another Bell Laboratories develop-

ment—called Advanced Mobile Phone Service—was tested in the Chicago area during 1978. This new service overcomes what has been the principal difficulty with mobile telephone service in the past: a scarcity of frequencies which limits the number of customers that can be served. Advanced Mobile Phone Service uses a set of contiguous geographic “cells,” each equipped with an assigned set of frequencies and a base station for transmitting and receiving calls. Callers leave a cell and move on to another without any effect upon the call in progress. As they do so, the frequencies they were using are freed for other callers. The new system will make mobile service widely available

**Earnings Per Share; Dividends Declared:**  
In 1978 the annual dividend was raised to \$4.60 a share, the seventh increase in ten years. Earnings per share were \$7.74 in 1978, 88 cents higher than in 1977.





# We built to meet today's demand, tomorrow's opportunities

and offer quality comparable to regular telephone service.

The Bell System continuously seeks to improve the call-handling capacity of existing telephone lines in order to maximize the efficiency of its plant investment. Several developments in 1978 served that objective, thereby diminishing the need for new capital.

One such development was the introduction of a system that increases the call-carrying capacity of our most advanced coaxial cable from 108,000 to 132,000 simultaneous conversations.

With the same aim of increasing the network's capabilities without extensive capital outlay was the successful trial of single sideband microwave radio, a technique which more than triples the capacity of existing microwave transmission systems with the addition of only a minimal amount of new equipment. Although single side-

band radio transmission was developed by the Bell System more than 60 years ago, it took recent Bell Labs advances in amplifiers before it could be applied effectively to the high-capacity, long distance microwave radio network. The trial, which involved Bell Labs, AT&T Long Lines and Western Electric, was conducted on a 29-mile microwave route linking Ashburnham and Wendell, Massachusetts.

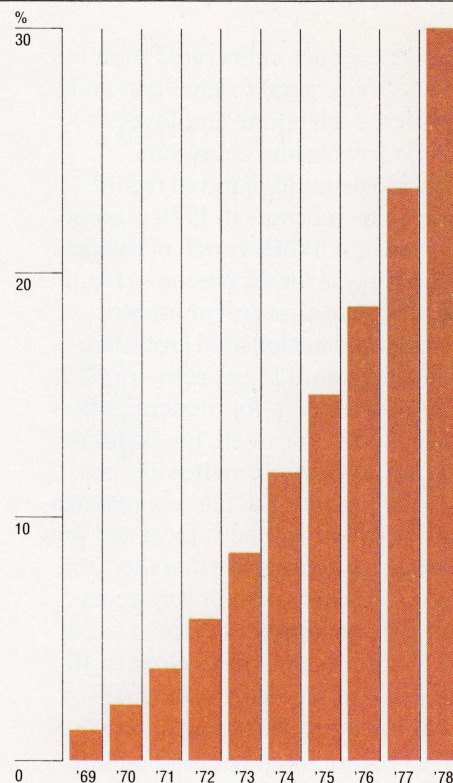
The new single sideband system will go into service in 1980.

Efforts to expand the capacity of existing telephone facilities were not confined to large coaxial cable systems or microwave routes. In 1978, more than 45 of our large electronic switching offices were "retrofitted" with a new, higher-speed central processor—the unit that controls the switching office—which can more than double an existing office's call-handling capacity. More than 85 per cent of the equipment in the office remains unchanged, and the unit that is removed can be installed in central offices handling lower volumes of calling. Over the next ten years, installation of the new units in existing offices is expected to yield significant savings.

## Organization restructuring

The Bell System's organizational structure has been shaped from its inception by our fundamental goal of service. While our organization has changed from time to time to accommodate new technology and more

*Through advanced technology, we increased the capacity of our long distance transmission systems and lowered costs. In 1978 we completed a test of a new single sideband microwave radio system that can more than triple the call-handling capacity of existing systems with a minimum of new capital investment.*



**Growth in Electronic Switching:** About 30 per cent of Bell System telephones—nearly 40 million—are served by 1700 local electronic switching offices.

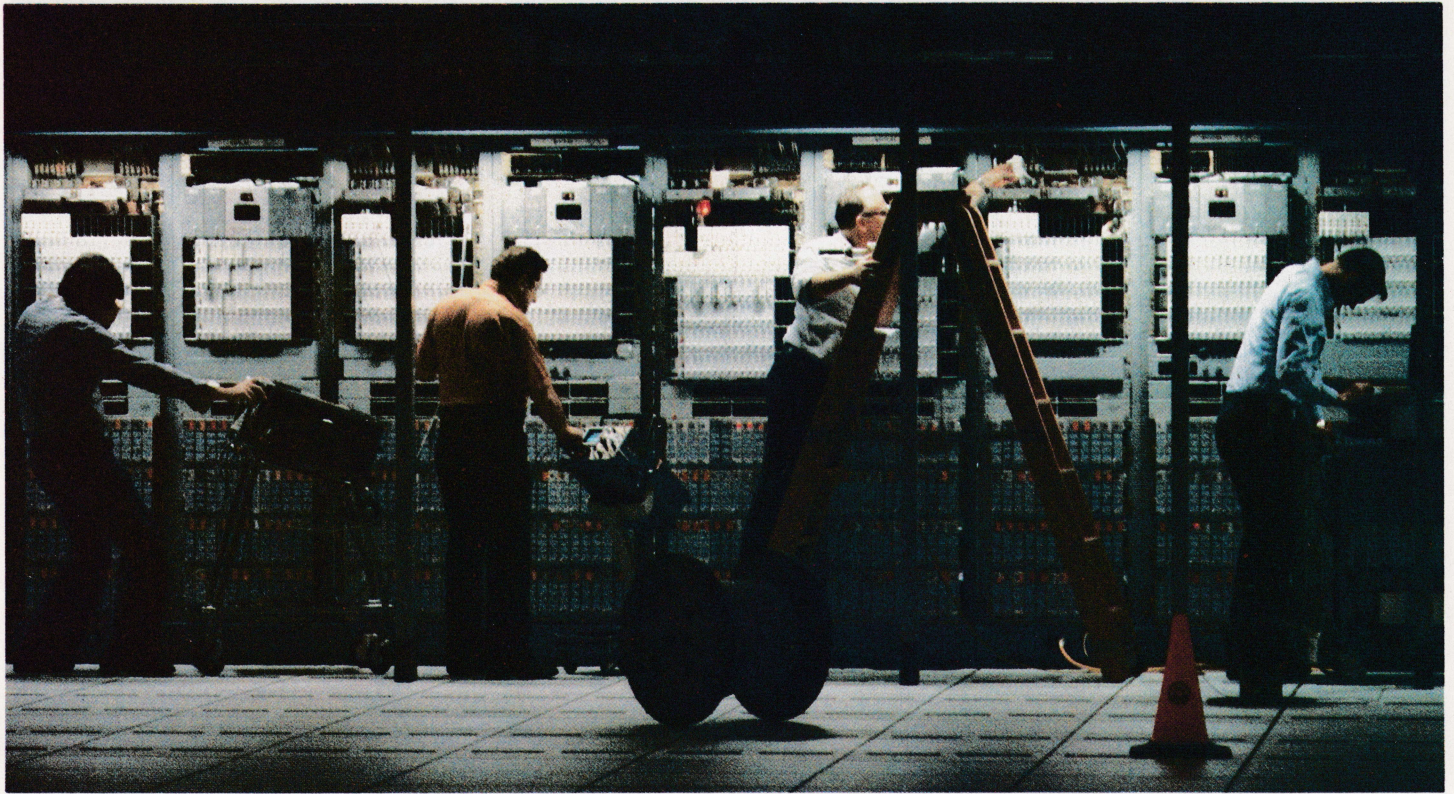
efficient managerial methods, the operating departments both at AT&T and in the associated telephone companies have largely been organized along "functional" lines—according to the tasks performed: installation and maintenance of equipment, operator handling of telephone calls and business office dealings with customers. And marketing has been distinct from operations.

This organizational structure was well suited to the times. For most of our history, our fundamental objective has been to extend service to all—to provide universal, high-quality, readily affordable service. But if universality of service was the hallmark of our first 100 years, diversity of service will be the thrust of our second century.





Record demand meant a record construction outlay. But we built for the future, too—by installing new switching and transmission systems embodying advanced technology that enables us to handle more messages faster and at less cost.



Today's technology provides the capability to supply diverse services. Certainly the needs and expectations of both business and residence customers vary widely.

To identify and anticipate the needs of customers, to assure the development of products and services to meet them, and to furnish and maintain those services as effectively as possible, we have restructured our organization to match the markets we serve. In effect, we have organized our operating and marketing activities into three major areas: *Business*, *Residence* and—since all users depend upon the nationwide telecommunications network—*Network*. At AT&T Headquarters each organization segment is headed by an Executive Vice President. Shaping the organization to the customer markets we serve will enable the Bell System to provide ser-

vices that are far more responsive to the wide-ranging needs of our customers. At the same time, it will enable us to perform more effectively in the competitive arena in which we now operate.

The Bell System has always been organized for service; now we are reorganized to serve even better.

### **Services for business**

Modern business runs in large measure on information and communications. Swift, versatile communications systems play a crucial role in the efficiency and profitability of businesses large and small. But no two industries, nor any two customers within an industry, have precisely the same needs or the same problems. Recognizing this fact, we intensified our efforts to analyze the industries and the companies we serve to iden-

*At a rate of more than one every day, we installed electronic switching centers—for both local and long distance switching. Shown above is the final stage of installation of a long distance "super switcher" in Garden City, N.Y. Electronic switching means faster, more efficient and more diverse telecommunications services.*

tify their needs. Our purpose is to tailor communications solutions that enable business customers to move information rapidly and efficiently in order to increase their revenues, reduce expenses and operate more effectively.

In 1978, we provided business customers with a variety of new, highly flexible communications systems to solve business problems.

Four large business organizations, with highly complex private line communications systems, began using the Bell System's new Enhanced



# An "unseen revolution" spurred productivity advance

Private Switched Communications Service. The new service, which utilizes electronic switching, enables customers to monitor their own networks, rearrange them to meet changing needs, and receive detailed accounting of the calls made from each telephone. The service also eliminates time-consuming redialing when facilities are busy by "queuing" calls and putting them through automatically when lines are available.

A new service for business customers with less complex communications requirements is Electronic Tandem Switching (ETS) which uses our Dimension® PBX to help business customers make the most of their communications investment. Among the numerous features of ETS is automatic route selection: the system chooses the most economical communications path among the various services that a business may have. Customers may also change telephone numbers in the system, rearrange traffic patterns, modify calling privileges and monitor the efficiency of the entire system.

The Bell System is also extending the benefits of new technology to small businesses with the introduction of the Horizon® communications system. The system is designed for businesses with up to 80 lines and offers features formerly available only to large businesses. Customers may rearrange or delete features of each extension, reassign telephones without rewiring and change extension numbers.

Data communications continued to play an increasingly important role in the activities of business, government and other organizations. In 1978, the Bell System received approval from the Federal Communications Commission to expand its DATAPHONE® Digital Data Service (DDS)—offering

private line digital transmission with speeds up to 1.5 megabits per second—to serve 96 cities. During the year, 24 cities were added to the DDS network. The service is now available in 48 cities and will be extended further in 1979.

In July, the Bell System sought the FCC's approval to use existing digital facilities for its projected Advanced Communications Service (ACS).

ACS aims to provide data users a switched, shared network as accessible as the long distance network is to telephone users. At the same time, ACS is aimed at solving a variety of problems that have plagued data users for some time. One is the incompatibility of data terminals that may pre-

vent an organization from linking separate data networks it may originally have set up for a variety of discrete purposes. ACS acts as an "interpreter," permitting data machines with different speeds and codes to communicate with one another.

ACS offers business customers the prospect of more efficient use of existing equipment, ease in adding more sophisticated equipment and the ability to exchange data with suppliers, customers and others without concern about compatibility. ACS should also open up data communications to small business users who up to now have found them beyond their reach because of the initial costs involved. With ACS, these customers can start on a limited scale and expand as desired.

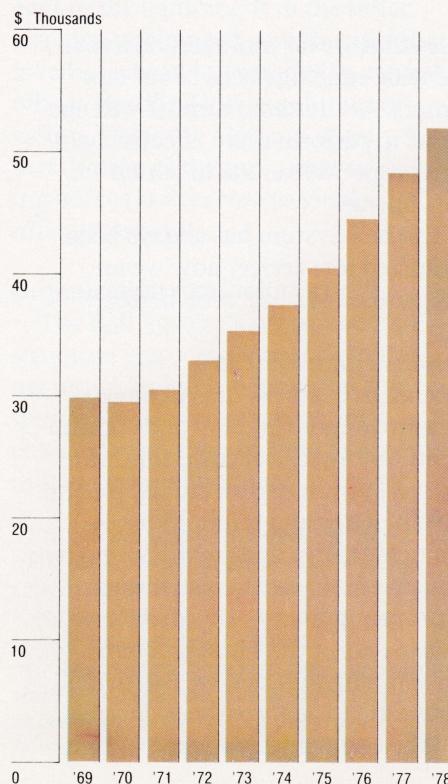
## Communications for the home

There is no area of our business where we expect to see more dramatic change in the variety and diversity of services than in communications for the home.

Certainly all customers have a common need for basic telephone service. Beyond that, however, our market studies tell us that the needs and desires of residence customers vary widely, depending upon their age, income, lifestyle, location and many other factors.

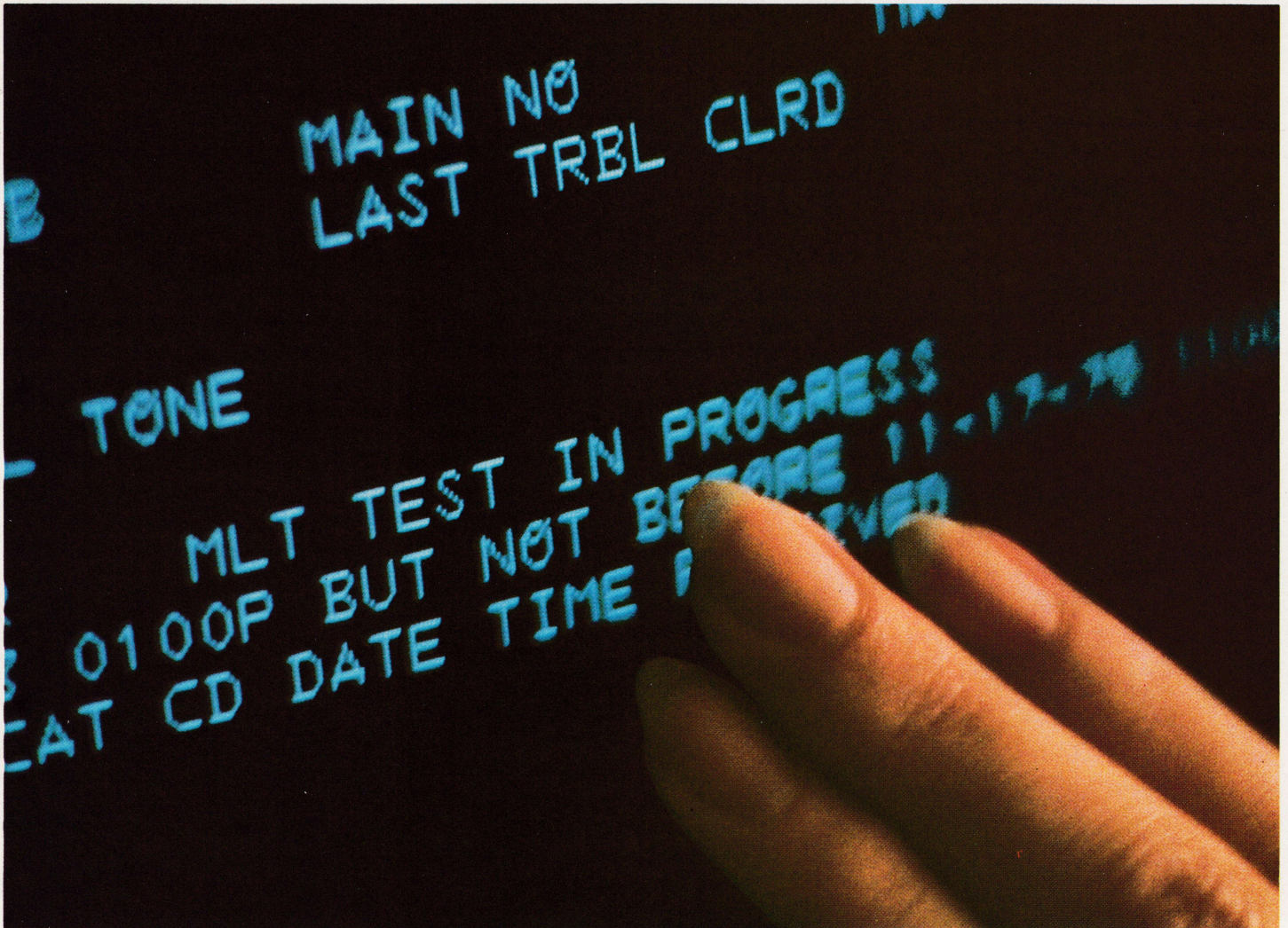
The needs of the elderly—for example, for swift access to police, fire and medical help—may differ markedly from those of young, single, apartment dwellers. Other residence customers, active in business and community work, may want in their homes the kind of flexible communications—conferencing, call forwarding, automatic call-back when lines are busy—that are characteristic of modern office communications systems.

**Volume of Business Per Employee:**  
*Investment in new technology—software as well as hardware—has been a significant factor in enhancing the productivity of Bell System employees.*





That "unseen revolution" is the wide application of computer-based systems that monitor the network, isolate troubles, compile telephone directories, and more. These systems enhanced productivity and helped keep telephone rates down.



While some of these needs are met by current offerings, such as Custom Calling and the Touch-A-Matic® telephone, the growing use of solid-state technology—both in the network and in terminals for the home—will make it possible, as never before, to offer a wide variety of new services.

"Choice" will certainly be the byword in home communications services in the future. But, even in the present, we are offering home users many more choices.

Today's residence customers, for example, can choose from 22 styles of



*Computer-based systems enable us to locate and clear troubles on a customer line rapidly. Shown here is a computer display in an Automated Repair Service Bureau in Atlanta, Georgia where the computer system is conducting tests on a customer's line. Repair Service personnel can quickly inform the customer as to the nature of the problem and how soon it will be cleared.*



# To meet changing customer requirements, we changed, too

telephones for the home including three new Design Line\* telephones that were introduced in 1978. The new Noteworthy\* telephone set is a compact wall unit that incorporates a telephone, slate or cork message board and a compartment for storing the telephone directory. The Telstar\* phone is a graceful desk set of contemporary design. The third set, The Snoopy & Woodstock Phone, follows in the tradition of The Mickey Mouse Phone for the young and the young-at-heart throughout the country.

Customers show growing interest in shopping in person at our Phone-Center Stores where they can look over the wide variety of styles available. Today almost half of the homes we serve are equipped with modular outlets. Customers who have these outlets in their homes can pick out their telephone sets at our Phone-Center Stores, take them home and plug them in themselves. At year's end, we had more than 1,800 Phone-Center Stores in operation.

Some other services designed to meet special needs are worthy of mention. A new public telephone service, called Charge-A-Call, was introduced in 1978 and should prove a convenience to travelers. Charge-A-Call public telephones require no coins and are designed for customers who intend to make collect, credit card or charge-to-a-third-party calls. These phones also help keep telephone costs down as they are less expensive than coin telephones to manufacture, install and maintain.

We also improved service to customers with physical disabilities by establishing assistance centers for hearing- and voice-impaired customers. These centers, equipped with teletypewriters for communicating with these customers, will make it easier for them to get information

about special services, report service problems and discuss billing or other business matters.

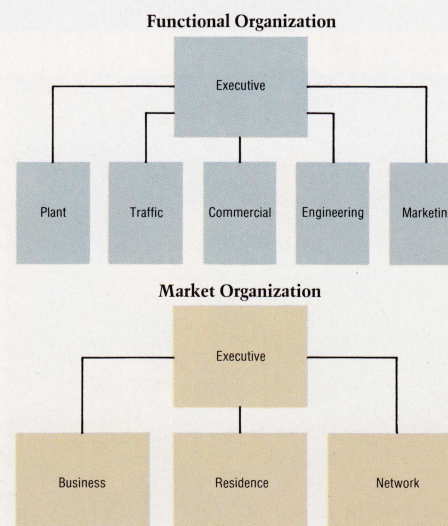
We are studying the needs of disabled customers in order to take them into account in the design of new products and specialized services that will enhance their ability to communicate.

## Improved operating methods

Today some 125 different types of computer-based systems, developed by Bell Laboratories, help reduce the cost and enhance the productivity of our operations. Many of them mean faster, better service for customers as well.

These systems are profoundly changing and streamlining the way we run all aspects of our business. We use these systems to monitor and test the performance of switching centers and trunk lines, to isolate defective components in the network, to determine the most efficient size and loca-

**Organization Restructuring:** *Historically, Bell System operations have been organized along "functional" lines. In 1978 we restructured our organization along the lines of the market sectors we serve.*



tion of central offices and to handle many of the tasks involved in coin calls, such as computing and informing customers of the charges.

The Automated Repair Service Bureau (ARSB) offers a good example of the way these systems are put to work to eliminate time-consuming and costly paperwork and to improve service for customers. When a customer calls an Automated Repair Service Bureau, the attendant enters the customer's information into a computer, which tests the line to determine the trouble. In many cases, the trouble is identified and cleared within minutes of the customer's call. The computer system provides repair personnel the information necessary to correct most problems. When the trouble is very complex and not readily isolated, skilled technicians are alerted to investigate further.

While the ARSB is local in scope, the Bell System continued to extend its Engineering and Administrative Data Acquisition System/Network Management (EADAS/NM) which monitors the performance of the nationwide network and flashes notice of impending congestion or other trouble to network managers around the country and to the AT&T Long Lines network operations center in Bedminster, N.J. At these centers re-routing of calls and other corrective action can be ordered swiftly to ensure uninterrupted service. By 1980, 27 EADAS/NM systems will be in operation providing faster, more precise information on the status of the network.

The extension of these computer-based systems throughout the Bell System is being coordinated closely by AT&T and Bell Laboratories to assure that they are being used most effectively and, where possible, linked to achieve optimum efficiency.



Service means meeting customers' needs. To know our customers' needs better and to shape our services to meet them, we realigned our operations into Business, Residence and Network organizations. Organized to serve, we reorganized to serve even better.

Computer-based technology, in short, is penetrating virtually every aspect of the telephone business. It is changing the way we manage. It is affecting the nature of job skills required. And it is essential if we are to continue our record of productivity which in recent years has averaged nearly three times that of American industry as a whole. Enhanced productivity has been the key reason that the price of telephone service has increased far less than the cost of living.

#### Telephone rates

As a result of our efforts to cut costs and improve efficiency through the application of new technology, training and sound management, the price of telephone service has gone up only 40 per cent since 1967, while the Consumer Price Index has risen approximately 95 per cent.

In 1978, we received rate awards totaling \$318 million in additional annual revenues. We seek telephone rate increases only where they are absolutely needed and after we have exhausted all other means of achieving the earnings needed to assure good service. Where that is the case, we believe we are obligated to file for higher rates in order to meet our responsibilities to the public and to investors.

We are also aware that our obligation to take scrupulous account of the potential impact of our actions upon the economy applies particularly to the current effort to bring inflation under control. AT&T Chairman John D. deButts pledged to President Carter



*AT&T's restructured operations organizations are headed by (from left), Richard R. Hough, executive vice president-network; Kenneth J. Whalen, executive vice president-residence; and Thomas E. Bolger, executive vice president-business.*



# We tailored our services to help business manage better

that the Bell System would keep price increase requests of the Bell System operating companies, as well as Western Electric price increases, within the guidelines of the President's anti-inflation program. He further pledged that AT&T will not seek any general increase in the level of interstate rates in 1979. Mr. deButts also stated the Bell System's intention to conform its wage and salary program to the guidelines adopted by the Administration.

We are continuing our efforts to improve earnings on our own through greater efficiencies, more effective marketing, and through the introduction of telephone pricing structures that minimize the need for basic rate increases for all customers. For example, we are offering "measured" local service as an option to flat-rate service to residence customers in some areas of the country. Measured service means that local calls are timed and charged in much the same way as long distance calls—customers who use the service more will pay more. This helps keep telephone service widely affordable and, at the same time, provides the telephone companies revenues that grow in line with the increased cost of providing additional service.

Other rate approaches also help keep down the price of basic telephone service. Limiting the number of "free" calls each month to Directory Assistance and charging thereafter is one example. Only about 15 per cent of our customers make about 80 per cent of the calls to Directory Assistance. Many are made by business organizations as a quick credit-verification technique, not as a means of securing a telephone number. One business customer made 20,000 such calls in a single month. By charging for Directory Assistance calls over the monthly allowance, customers who

use the service extensively pay a more equitable share of the costs of providing it as opposed to all customers bearing the burden through basic telephone rates.

Various rate plans for Directory Assistance service are now in effect in 26 states, with only about six per cent of residence customers paying an additional charge in any given month.

## One system; one goal

Fundamental to the Bell System's ability to deliver high-quality service at reasonable cost is its integrated structure. AT&T, Bell Laboratories, Western Electric, AT&T Long Lines and the operating telephone companies share a common goal of high-quality service and work closely to achieve that goal.

In particular, the close coordination among Bell Laboratories, Western Electric and the operating telephone companies in the design, development and manufacture of new products and services has yielded significant economies and assured high-quality, reliable service and the rapid introduction of new technology.

For its part, Western Electric has offered Bell operating companies products priced significantly below those available from other manufacturers. Currently, Western's prices average about 82 per cent of the lowest prices for like products offered by the general trade. Although Western Electric experienced increasing costs, it held the line on prices for equipment it made for the Bell companies in 1978. Through engineering cost reductions, Western was able to save some \$200 million in annual costs. Such savings help keep down the price of service.

Western Electric had a record year in terms of sales and earnings. While production of telephone and data sets, cable and electronic switching equip-

ment increased significantly over last year's strong performance, two new directions for the future began to take shape.

The first was the opening of a new Switching Software Center in Illinois where Western engineers are producing computer programs for electronic switching systems to provide new customer services and to maintain these complex switching systems economically. With the Bell System's increasing reliance on computer-type technology, the design, development and production of software programs is becoming a major endeavor.

The second new direction was the formation of Western Electric International, Inc., a separate subsidiary devoted to marketing telecommunications products and skills outside the United States and Canada. Western Electric International is engaged in constructing a 6,000-mile microwave system for Saudi Arabia. The first link in the system, a 200-mile route connecting Riyadh and Buraydah, was completed on schedule in October. (In Iran—until internal disturbances there prevented its employees from carrying out their work—American Bell International Inc. (ABII), an AT&T subsidiary, had been serving as overall coordinator of the development of that country's telecommunications system. As of this writing, nearly all of ABII's employees have been returned to the United States.)

While Western Electric's performance has been an essential element

*Bell System marketing managers specialize in particular industries so that we can shape our services to meet the individual needs of business customers. Shown here (clockwise, from upper left) are specialists in aerospace, forest products, food, air transportation, construction and the news media.*



The communications needs of business vary from industry to industry, company to company. We studied those needs and tailored advanced technology to help business customers cut costs, move information and operate more efficiently.





**For America's homes, we offered  
a wider array of choices**





We offered new telephone sets for the home. And we identified a wide variety of needs for new communications services. We are on the threshold of a new era of services for the home as sophisticated and diverse as those serving business.

in the Bell System's ability to furnish high-quality, reasonably priced service, we are committed to use the best product at the lowest cost regardless of source. In 1978, the Bell telephone companies purchased about \$1.5 billion in telecommunications products from general trade suppliers. About one-third of all Bell System expenditures for telecommunications products, including Western Electric purchases of components for its own products, goes to outside suppliers.

#### **Telecommunications policy**

For more than a decade now, the role of competition in telecommunications and the structure of the industry have been urgent but unresolved issues. In 1978, they were again the subject of judicial, regulatory and legislative inquiry.

There were some hopeful signs of movement toward sensible resolution.

The Justice Department, however, continued to press its antitrust action against the Bell System in which it seeks dismemberment of the Bell System's integrated structure. In particular, it seeks the divestiture of Western Electric, some or all of the

*Customers can choose from some 22 styles of telephone sets for the home and shop for them in person in 1,800 Phone-Center Stores throughout the country.*



operating telephone companies, and the possible separation of other parts of the Bell System.

The pre-trial discovery stage of the suit continued as U.S. Federal District Judge Harold H. Greene, who replaced the late Judge Joseph C. Waddy, redetermined that "no part of this case was within the exclusive jurisdiction of the Federal Communications Commission" and that the court had jurisdiction over the entire case. Judge Greene also established a timetable and procedures regarding the pre-trial discovery and ordered each side to file four "statements of contention and proof" between November, 1978 and April, 1980.

In our first statement, filed early in 1979, we told the court that we are convinced that any objective judgment of our structure under regulation will confirm that our conduct has been reasonable and we have not violated the antitrust laws.

We also advised Judge Greene that we believe that the basic facts of industry history—the economic, technological and public interest considerations that shaped the Bell System's integrated structure and its role as a regulated monopoly—are well documented. We told the court that if the government would agree to these facts the case would be significantly expedited and could, in our view, go to trial within a year. Judge Greene asked each side to review the other's filing to determine areas of agreement.

Meantime, the role of competition in telecommunications continued to be widely debated. Unresolved are such questions as how there can be fair competition when some "competitors" may serve where it profits them most and others—the telephone companies—must serve all alike.

Fortunately, such questions are at

last receiving concerted attention both from the Federal Communications Commission and from the Congress, after considerable urging on our part and on the part of the telephone industry as a whole.

The Federal Communications Commission is looking in depth into the question of whether the public is best served if long distance service, or its equivalent, is provided by the existing telephone industry or by multiple, competing suppliers.

In similar fashion, stimulated by the telephone industry's support of the Consumer Communications Reform Act proposal in 1976, the Congress—both the House and the Senate Subcommittees on Communications—is giving concerted attention to questions of national telecommunications policy: what the goals should be and what industry structure provides the best means of achieving those goals.

After many months of work and exploratory hearings, the Communications Act of 1978 was introduced in June. It was sponsored by Rep. Lionel Van Deerlin, chairman of the House Interstate and Foreign Commerce Subcommittee on Communications and the Subcommittee's then ranking minority member, Rep. Louis Frey, Jr. Almost 500 witnesses appeared during the 33 days of hearings on the proposed legislation that were held in Washington, D.C. and seven other cities.

We applauded some provisions of the bill and expressed grave reservations about others. We were pleased by those provisions that recognized the need for universal service and the need to keep basic rates affordable through support from other services. We also agreed with those provisions of the bill which held that the telephone companies should be free of



# We enhanced the capabilities of America's telecommunications network

restraint in the kinds of technology they could employ in providing service and which said that, where competition was in the public interest, it should be full and fair for all parties.

Unlike the Communications Act of 1934, the bill failed to spell out a public interest standard to guide the industry and its regulators. We believe that standard should be a balance of interest between the needs of all users and those with special requirements.

Also, in placing primary reliance on the market for the provision of all services, the bill failed to safeguard the unity of the nationwide telecommunications network upon which the public depends. Finally, one provision of the bill could force AT&T to divest itself of Western Electric. As we stressed to the Subcommittee, "No other single action would more adversely affect the pace of innovation in telecommunications, the quality of services the consumer enjoys, or the cost of providing these services."

We are encouraged by the thorough airing the issues received during these hearings and we hope that a revised bill, expected to be introduced in 1979, will correct the deficiencies we noted in our testimony on the earlier version. We also look with interest to the Senate, where Sen. Ernest F. Hollings, chairman of the Commerce, Science and Transportation Subcommittee on Communications, has expressed interest in revising the Communications Act of 1934 to reflect today's circumstances.

While the fundamental issues of industry structure and telecommunications policy have not been resolved, the work is going on in earnest. Already we have seen recognition of at least some of our concerns about the impact of competition upon telephone rates. As a result of interest expressed by the Commerce Depart-

ment's National Telecommunications and Information Administration (NTIA), the telephone industry, the FCC and the competing carriers completed an agreement which provides that where competing long distance carriers use the local telephone exchange network in furnishing long distance type services, the charges they will pay for using these facilities will include an amount designed to help keep down basic rates.

The agreement represents an interim measure, pending resolution of the basic question of whether long distance service should be supplied only by the telephone industry or by competing suppliers.

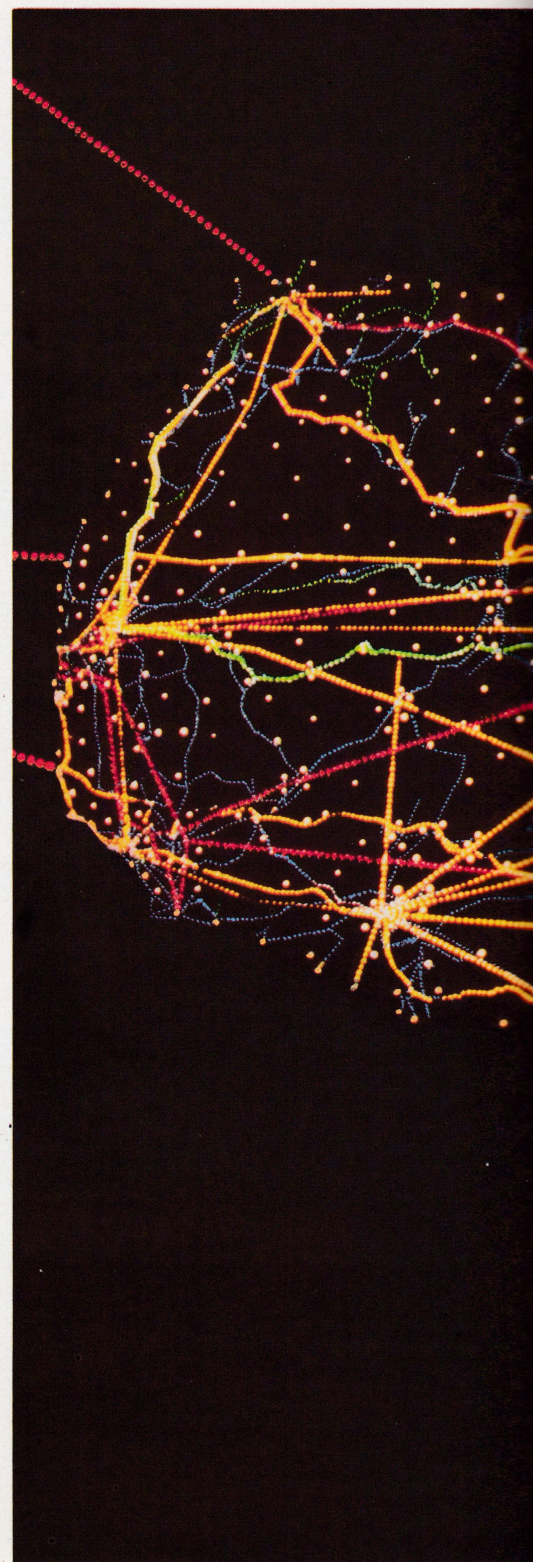
Another important issue in telecommunications came under thorough examination during the year.

The FCC continued its investigation, known as the Second Computer Inquiry, to determine the scope of data communications services, which common carriers, such as AT&T, provide under regulation, as distinguished from data processing services, which the Commission has said it will not regulate.

Advances in technology have made it more difficult to ascertain a clear boundary line between such services.

AT&T, however, has pointed out to the FCC that common carriers should have the freedom and flexibility to use data processing technology in providing communications services. The Commission, in July, 1978, rejected a recommendation of its Staff which would have severely limited the types

*The nationwide communications network, a complex web of wire, microwave radio, satellites and intricate switching systems, carries information in virtually any form—voice, data, video. Advanced technology continues to enhance not only the network's capacity but its capabilities for new services.*





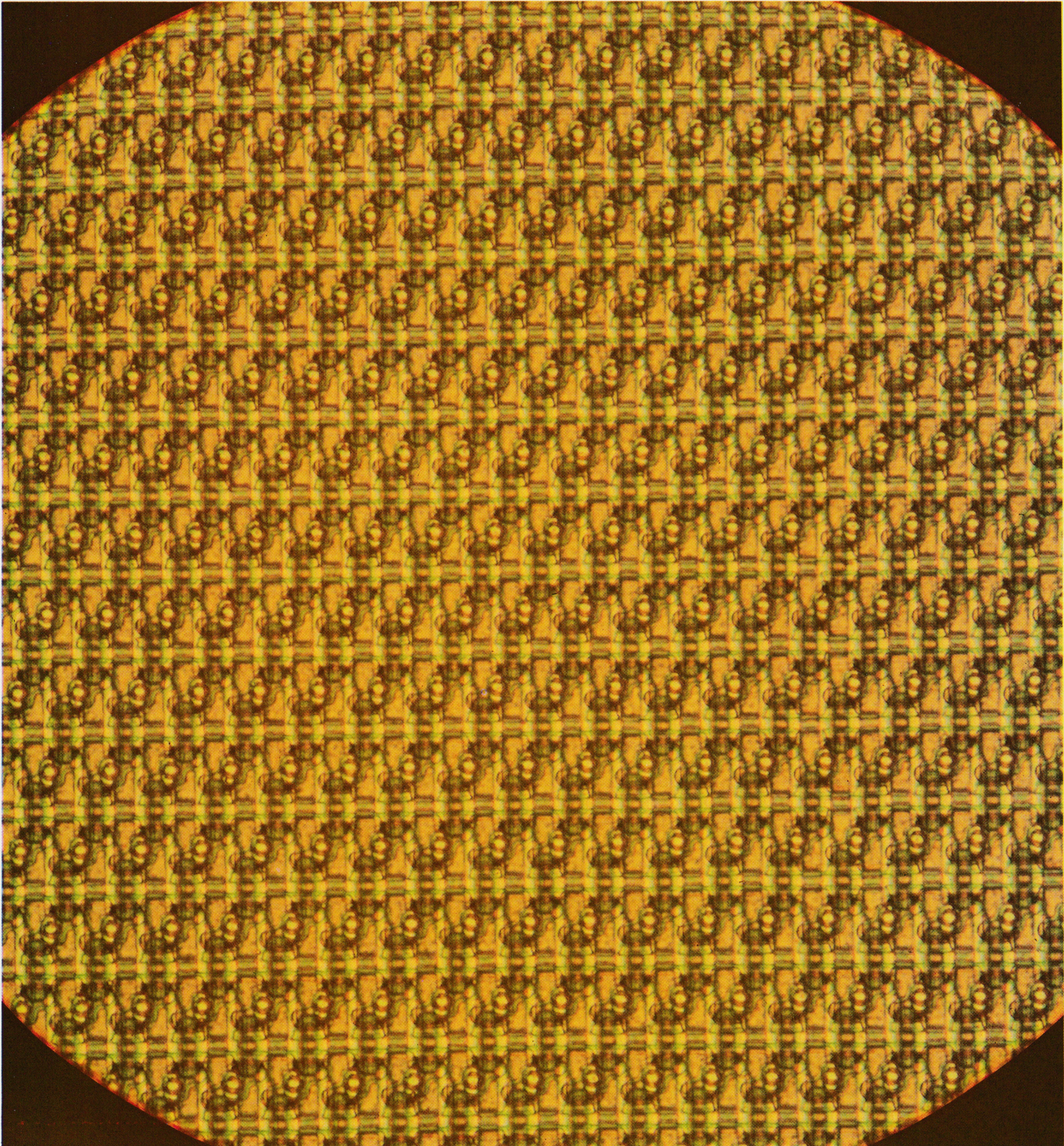
The telecommunications network becomes increasingly "intelligent" as we extend electronic switching and other advanced technology. This means in the future that the network can be programmed to provide individualized services customer by customer.





**In our Laboratories we shaped the future's promise**

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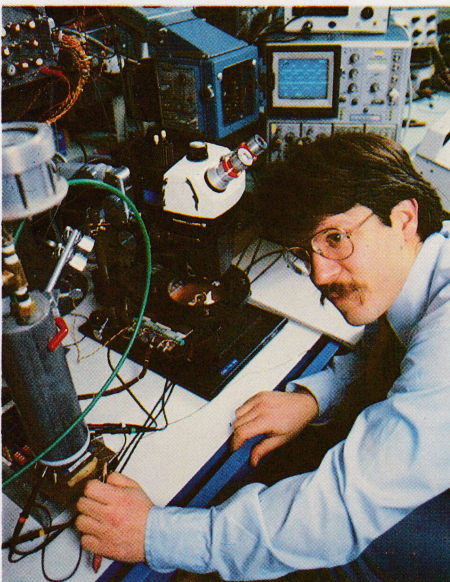


The Bell System's commitment to basic research assures our continuing leadership in communications technology in the future. Birthplace of the transistor, Bell Laboratories is designing very large scale integrated circuits that will help us tailor services to the unique needs of each customer.

of terminal equipment that the Bell System could offer. The Commission viewed this restriction as detrimental to the public. The Staff is revising its recommendation.

Late in the year, the chief of the FCC's Common Carrier Bureau wrote the Company stating that it appeared that AT&T's rate of return on interstate business in 1978 would exceed the 9.5-10 per cent range the Commission authorized in 1976. The Company replied that its 1978 interstate earnings—10.02 per cent—were, for all practical purposes, consistent with the Commission's 1976 order. The Company further said that in light of current economic conditions—including higher capital costs—it would petition the Commission to increase the authorized rate of return. It would not, however, seek higher rates.

*Advances in technology offer more and more capability on a chip. At left is an enlarged photo of a portion of Bell Laboratories new 65,000-bit memory device. The portion pictured is about the size of a period used in the main text of this report. It was developed at Bell Laboratories Branch Lab in Allentown, Pa., pictured below.*



### Other policy matters

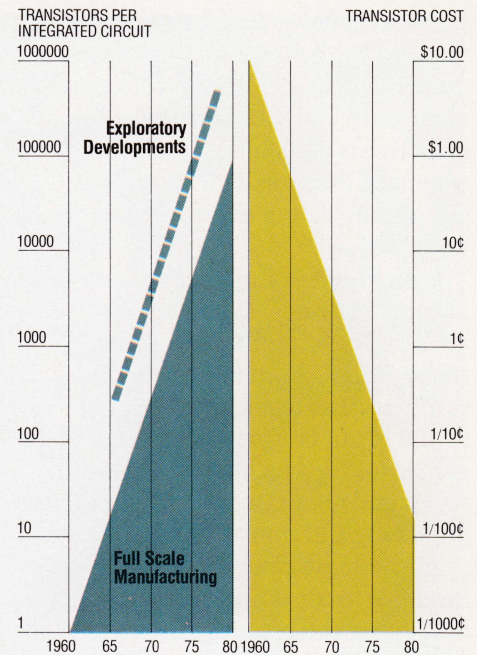
During the year interest focused on a number of other public issues of special relevance to our business, our share owners and our customers.

The right to privacy is a very fundamental right, and one for which we have particular responsibilities. In two instances during the year we felt obliged to speak out when we believed that right was in danger of being compromised. The first involved the proposed Foreign Intelligence Surveillance Bill. We opposed successfully certain parts of the bill in testimony before both the House Judiciary Committee and the Permanent Select Committee on Intelligence because they could permit a federal judge or the Attorney General to compel the telephone companies to install wiretaps for law enforcement purposes.

The second instance related to telephone sales solicitation, in particular the use of automated dialers to make unsolicited recorded calls to customers. We urged the FCC, which is conducting an inquiry on telephone sales soliciting, to consider adopting regulations or standards that would protect our customers from potential abuses by telephone solicitors.

This was one of the many issues that telephone company representatives discussed with consumer organizations during the year. Each Bell telephone company has a Consumer Affairs Committee. Our objective is to work constructively with local and national consumer organizations, to identify problems and needs and attempt to resolve them.

The need to conserve energy is a matter involving all sectors of the public. Since 1973, the Bell System has made a concerted effort to reduce its energy consumption. While our volume of business has grown some



### More Capability at Less Cost:

*The capability of microelectronics has been increased significantly, while production costs have been reduced sharply. This trend promotes the availability of increasingly versatile services.*

47 per cent since then, our energy consumption has dropped by more than nine per cent, with an equivalent savings, through conservation efforts, of 18 million barrels of oil and \$600 million in avoided costs.

In 1979, in cooperation with the U.S. Department of Energy, we will begin testing 35 electric vehicles which promise reduced energy use and less pollution.

### Bell System people

We are making fundamental changes in the way we provide service, in the technology we employ, in the way we manage. But as much as we depend upon advanced technology, it is people—some 985,000 Bell System employees—not computers who run our business. They remain the key to service. Bell System



# We grew in skill—and in understanding

employees have, however, been affected by the introduction of new technology. Some have experienced changes in jobs, or relocation. Our objective is to gain the benefits of advanced technology with as little disruption of employees' lives as possible.

Both managers and craft employees are acquiring new skills. Employee training in the Bell System takes many forms—from management seminars that focus upon shaping the future of our business to training that enables skilled technicians to install, repair and maintain the most complex switching and transmission systems.

At the same time, new technology has freed many employees from repetitive tasks and broadened the scope of their jobs. Our aim is to provide opportunities for all employees to have jobs that are satisfying and challenging enough to be worth doing well.

The opportunities for employment and advancement in our business are there, without discrimination because of age, race, color, sex, creed or national origin. In this connection, it is worth noting that the Consent Decree we signed with the United States government in 1973 expired in January, 1979. This decree committed the Bell System to make a good faith effort to achieve certain goals for hiring and advancing women and minorities and to afford opportunities for either sex in jobs traditionally held by the other. The government's Final Report stated that "...the Bell System's 23 operating companies complied with the Consent Decree and by doing so achieved significant progress toward its major objectives."

Since 1972, minority employees in management have more than doubled, rising to ten per cent. Overall, minority employees represent 17.4 per cent of the total of

Bell System employees. In 1972, women held 2.8 per cent of craft jobs—for example, in installation and repair. In 1978, that figure was 10.1 per cent. Women also have made significant strides in moving into management jobs. In 1978, 35.9 per cent of all management employees were women. Increasingly, men are holding jobs that were traditionally staffed by women. In 1978, about 7.9 per cent of the telephone operators were men, as opposed to 1.4 per cent in 1972.

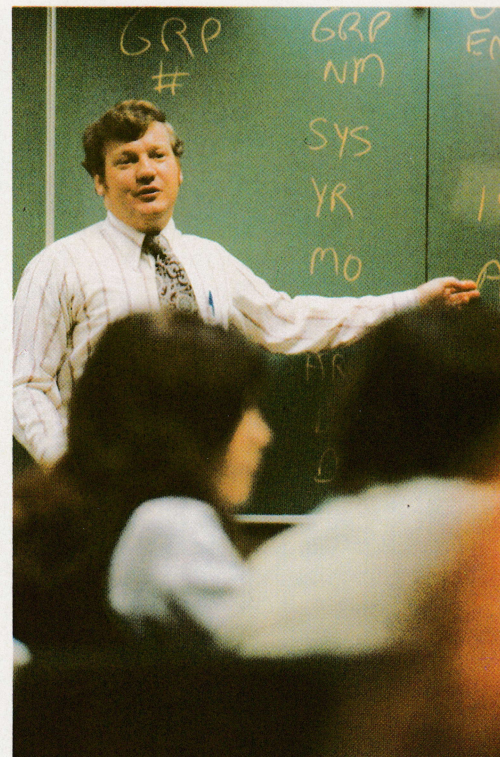
In commenting on the expiration of the Consent Decree, the Company said it would continue to maintain an affirmative action program to ensure equality of employment.

## The future

The Bell System faces a future that is bright with promise. We have the technical resources for continuing innovation and improvement of service. We have the ability to identify the needs of customers and now an increasingly strong marketing capability to meet them. We have the financial strength and the technical and managerial skills necessary to plan and coordinate our resources efficiently. In short, we are singularly equipped to deliver to the public services of unprecedented usefulness, diversity and abundance.

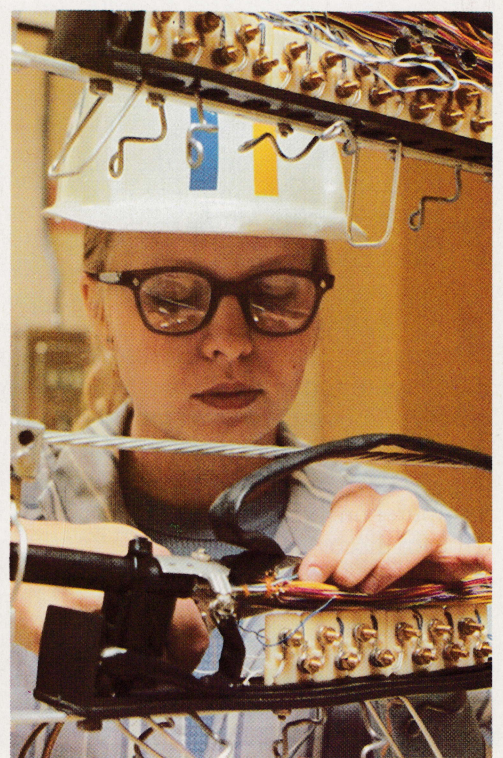
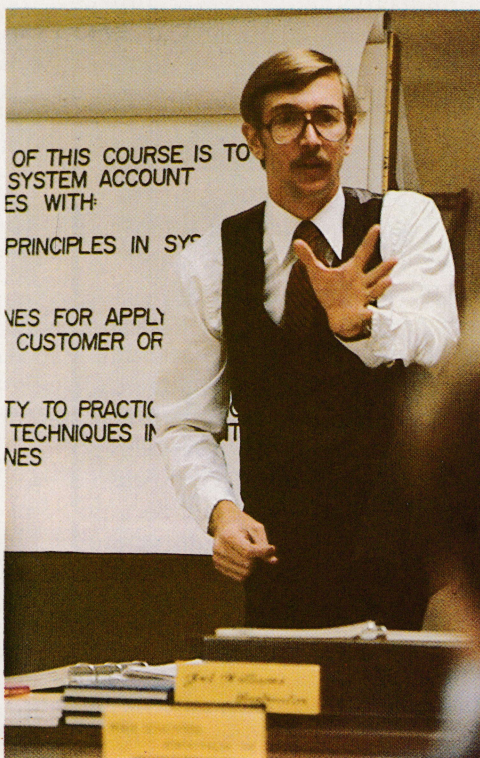
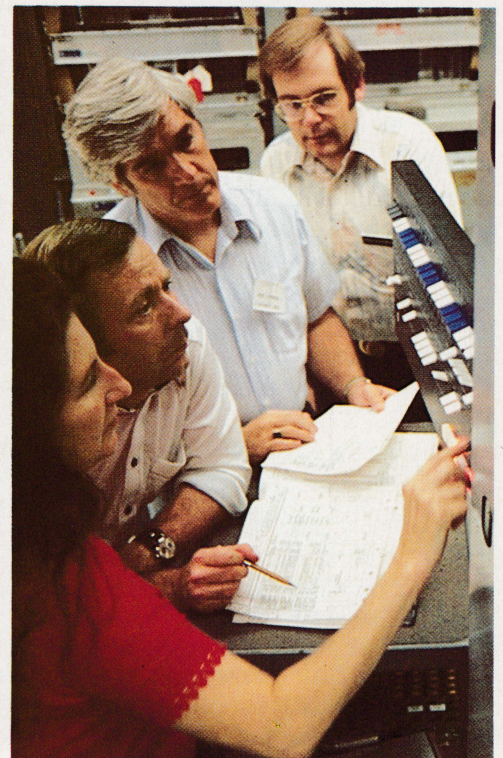
A key reason for this confidence lies in the unique resource of Bell Laboratories. For a high technology business such as ours to continue to innovate,

*Training in the Bell System addresses a wide spectrum of technical and management skills. Clockwise from upper left: Data Systems Programming, Piscataway, N.J.; Corporate Policy, Buck Hill Falls, Pa.; PBX Training, Dublin, Ohio; Electronic Switching, Lisle, Ill.; Plant Training, Lakewood, Colo.; Marketing, Birmingham, Ala.; Outside Plant, South Plainfield, N.J.; Operator Training, Miami, Fla.*





To fulfill the promise of technology takes skill, imagination and understanding of its potential. Bell System employees—from managers to technicians—continued to enhance their skills and deepen their understanding so they can deliver even better communications services in the future.





it must be fueled by constant research that extends the boundaries of scientific knowledge and translates it into useful technology. This has been the story of Bell Laboratories. Its scientific inquiry runs the gamut, from investigation of the properties of matter to understanding the galaxies. Research has fundamentally altered communications technology and has also created whole new industries, including the solid-state electronics industry which has revolutionized everything from computers to television sets. As *Fortune* magazine pointed out in its May 22, 1978 issue, Bell Labs has been responsible for 12 of the 18 major advances in semiconductor electronics, including the discovery that started it all: the transistor.

The transistor serves as a reminder that the Bell System's technical prowess is rooted in basic research. Evidence that this commitment to basic research continues was the 1978 Nobel Prize in Physics awarded to Dr. Arno Penzias and Dr. Robert Wilson of Bell Laboratories. In working with a sensitive microwave antenna, built by Bell Labs for satellite communications, these scientists discovered background radiation believed to be the residue of the "big bang" with which the universe may have begun some 18 billion years ago. Dr. Penzias and Dr. Wilson are the sixth and seventh Bell Laboratories Nobel laureates.

Discoveries and innovations continue to pour forth from Bell Labs. Even as it announced development in 1978 of a new 65,000-bit storage memory device and a new, improved "computer on a chip," scientists at Bell Labs discovered a technique which doubles the speed at which electrons pass through semiconductor crystals. This discovery promises to improve existing semiconductor devices and to offer new, more sophisticated devices in the future.

In short, Bell Laboratories assures the Bell System of being on the leading edge of new technology.

Crucial, however, to harnessing new technology successfully is the ability to develop long range plans that accommodate the needs and desires of customers, the potential of technology and the earnings objectives of the business, at the same time taking into account the various regulatory and other forces that impinge upon our business.

Perhaps at no time in the history of the Bell System have we been so well equipped in this regard. For several years now we have been developing our long range planning capabilities to the point where, despite the dispersion and diversity of the various Bell System units, we not only share common objectives but also have developed System-wide integrated plans for achieving those objectives.

### Changes in organization

In 1978, several changes among AT&T directors and officers occurred.

James H. Evans, chairman and chief executive officer of Union Pacific Corporation, was elected to the AT&T board of directors; William B. Murphy, director and former president of Campbell Soup Company, retired after 17 years of service. His intense personal interest and wise counsel will be missed.

As part of a major restructuring of the AT&T operations and marketing departments, Kenneth J. Whalen, executive vice president-marketing, was named executive vice president-residence; Thomas E. Bolger, executive vice president-operations, became executive vice president-business; and Richard R. Hough, president of the AT&T Long Lines Department, was named executive vice president-network.

Charles E. Hugel, president of Ohio Bell, was elected executive vice presi-

dent in charge of the human resources, labor relations, planning and public relations organizations. Mr. Hugel succeeded Thomas S. Numberger, who retired.

On January 31, 1979, Chairman and Chief Executive Officer John D. deButts retired after 42 years with the Bell System, including the last seven as chairman. Charles L. Brown, president, was elected chairman and chief executive officer.

William M. Ellinghaus, vice chairman, became president and chief operating officer to replace Brown; James E. Olson, executive vice president, succeeded Ellinghaus. William S. Cashel, Jr., in addition to his position as vice chairman and chief financial officer, assumed the chairmanship of the AT&T planning council.

**Bell System employees** pictured in this Annual Report are, starting with the middle photo on the cover, Antoinette Besecker and Pete Fastnacht, New Jersey Bell; Robert Lysak and Henry Wood, AT&T Long Lines. Inside are: Patrick Keohane, Donald Hoffmann, George Mandile and Sal Sansaverino, Western Electric; Sandy Paschal, Southern Bell; Charles Massey, Roger Paradis, Steven Hunt, Sunil Naik, Charles O'Donnell, Wayne Bryson, Hugh Jarrett, Bruce Laughon, Jack Keeper, H. J. Hopkins, Michael Winters, Barry Marks, David Roth, Daniel Massiello, Janet Kiehl, Jim Hirschy and Jeff Needel, AT&T; Arnold Yanof, Bell Laboratories; Eugene Keane, AT&T; Vickie Murphy and Vivian Lopez, Southern Bell; Mike Turk, Western Electric; Harold Mohler, Western Electric; Marsha Hobbs, New England Telephone; William Barhydt, Southwestern Bell; Harold Wood, New Jersey Bell; Joan Michel, Pacific Telephone; Bob Maurer, New England Telephone; Bob Lazarus, Cincinnati Bell; Ron Hoffman, Western Electric; Kristi Briggs, Mountain Bell; Joel Williams, South Central Bell; Michael Adams and Vic Possien, New Jersey Bell. The SNOOPY & WOODSTOCK Phone is pictured on pages 16 and 17. The housing is manufactured by American Telecommunications Corporation, PEANUTS Characters ©1958, 1965 United Feature Syndicate, Inc.



# Consolidated Financial Statements

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## Report of Management

The Financial Statements on the following pages, which consolidate the accounts of American Telephone and Telegraph Company and its subsidiaries, have been prepared in conformity with generally accepted accounting principles applicable to rate-regulated public utilities. Such accounting principles are consistent in all material respects with accounting prescribed by the Federal Communications Commission for telephone companies except as to revenue refunds, investments, and a California rate and tax matter as discussed in Notes to Financial Statements.

The integrity and objectivity of data in these financial statements, including estimates and judgments relating to matters not concluded by year end, are the responsibility of management as is all other information included in the Annual Report unless indicated otherwise. To this end, management maintains a highly developed system of internal controls and supports an extensive program of internal audits to give it reasonable assurance at reasonable cost that the Company's assets are protected and that transactions and events are recorded properly. The Company also seeks to assure this objectivity and integrity by careful selection of its managers, by organization arrangements that provide an appropriate division of responsibility and by communications programs aimed at assuring that its policies, standards and managerial authorities are understood throughout the organization.

These financial statements have been examined by Coopers & Lybrand, Certified Public Accountants. Other auditors referred to in their report are Arthur Young & Com-

pany, auditors of Western Electric Company, Incorporated and Southwestern Bell Telephone Company, and Arthur Andersen & Co., auditors of Illinois Bell Telephone Company. The auditors' report, which appears on this page, expresses an informed judgment as to whether management's financial statements, considered in their entirety, present fairly in conformity with generally accepted accounting principles the Company's financial condition and operating results. This judgment is based on procedures described in the first paragraph of their report, which include studying and evaluating the Company's systems, procedures and internal controls, and performing tests and other auditing procedures sufficient to provide reasonable assurance that the financial statements neither are materially misleading nor contain material errors. While the auditors make extensive tests of Company procedures and controls, it is neither practicable nor necessary for them to scrutinize a large portion of the Company's transactions.

The Board of Directors pursues its responsibility for reported financial information through its Audit Committee, composed of Directors (see inside back cover) who are not employees. The Audit Committee meets periodically with management, the internal auditors and the independent auditors to assure that they are carrying out their responsibilities and to discuss auditing, internal control and financial reporting matters. Both the internal auditors and the independent auditors periodically meet alone with the Audit Committee and have free access to the Audit Committee at any time.

R. N. Flint, *Vice President and Comptroller*

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## Report of Independent Certified Public Accountants *To the Share Owners of American Telephone and Telegraph Company:*

We have examined the consolidated balance sheets of American Telephone and Telegraph Company and its subsidiaries as of December 31, 1978 and 1977, and the related consolidated statements of income and reinvested earnings and sources of funds supporting construction activity 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. The financial statements of two telephone subsidiaries and of Western Electric Company, Incorporated, the Company's principal unconsolidated subsidiary, were examined by other auditors; such statements reflect net income constituting approximately 26% and 27% of consolidated net income for 1978 and 1977, respectively. The reports of the other auditors have been furnished to us and our opinion expressed herein, insofar as it relates to amounts included for subsidiaries examined by them, is based solely upon such reports.

As described in note (E), income applicable to common shares for 1978 and 1977 has been reduced to reflect the likelihood of revenue refunds by one subsidiary and the consequent likelihood of loss of certain tax benefits and of interest payments related thereto. As a result, the amount of income applicable to common shares attributable to intrastate rate increases subject to refund is no longer considered material and, accordingly, our opinion on the 1977 consolidated statement of income is no longer subject to the outcome of intrastate rate matters.

In our opinion, based upon our examinations and the reports of other auditors, the consolidated financial statements on pages 26 to 36 present fairly the consolidated financial position of American Telephone and Telegraph Company and its subsidiaries at December 31, 1978 and 1977, and the consolidated results of their operations and the consolidated sources of funds supporting their construction activity for the years then ended, in conformity with generally accepted accounting principles applied on a consistent basis.

Coopers & Lybrand  
1251 Avenue of the Americas, New York, N.Y.  
February 8, 1979



## Statements of Income and Reinvested Earnings

	Thousands Of Dollars	
	Year 1978	Year 1977*
<b>OPERATING REVENUES</b>		
Local service . . . . .	\$18,684,609	\$17,007,291
Toll service . . . . .	20,770,263	18,093,752
Directory advertising and other . . . . .	1,880,743	1,592,185
Less: Provision for uncollectibles . . . . .	342,259	262,040
<b>Total operating revenues . . . . .</b>	<b>40,993,356</b>	<b>36,431,188</b>
<b>OPERATING EXPENSES</b>		
Maintenance . . . . .	8,460,424	7,473,712
Depreciation . . . . .	5,539,664	5,045,312
Traffic—primarily costs of handling messages . . . . .	2,428,097	2,296,776
Commercial—primarily costs of local business office operations . . . . .	1,553,313	1,279,155
Marketing . . . . .	2,118,824	1,788,698
Accounting . . . . .	1,017,044	913,226
Provision for pensions and other employee benefits (B) . . . . .	3,600,479	3,176,356
Research and systems engineering . . . . .	319,857	278,699
Other operating expenses . . . . .	1,467,513	1,264,252
<b>Total operating expenses . . . . .</b>	<b>26,505,215</b>	<b>23,516,186</b>
<b>Net operating revenues . . . . .</b>	<b>14,488,141</b>	<b>12,915,002</b>
<b>OPERATING TAXES</b>		
Federal income taxes (A) . . . . .	3,494,551	2,961,355
State and local income taxes (A) . . . . .	342,869	307,196
Property taxes . . . . .	1,678,265	1,683,256
Gross receipts, payroll-related and other taxes . . . . .	1,760,233	1,568,424
<b>Total operating taxes . . . . .</b>	<b>7,275,918</b>	<b>6,520,231</b>
<b>Operating income (carried forward) . . . . .</b>	<b>\$ 7,212,223</b>	<b>\$ 6,394,771</b>

The accompanying notes are an integral part of the financial statements.

\*Restated. See note (E).



AMERICAN TELEPHONE AND TELEGRAPH COMPANY AND ITS SUBSIDIARIES

	Thousands Of Dollars	
	Year 1978	Year 1977*
Operating income (brought forward) . . . . .	\$ 7,212,223	\$ 6,394,771
OTHER INCOME		
Western Electric Company, Incorporated net income . . . . .	561,200	490,076
Interest charged construction (C) . . . . .	270,490	228,619
Miscellaneous income and deductions—net (D) . . . . .	(80,625)	(145,911)
<b>Total other income</b> . . . . .	<u>751,065</u>	<u>572,784</u>
<b>Income before interest deductions</b> . . . . .	7,963,288	6,967,555
INTEREST DEDUCTIONS . . . . .	<u>2,690,682</u>	<u>2,487,162</u>
<b>NET INCOME</b> . . . . .	<b>5,272,606</b>	<b>4,480,393</b>
Preferred dividend requirements . . . . .	<u>163,403</u>	<u>183,804</u>
INCOME APPLICABLE TO COMMON SHARES (E) . . . . .	<u>\$ 5,109,203</u>	<u>\$ 4,296,589</u>
 <b>EARNINGS PER COMMON SHARE</b> <i>based on average shares outstanding,</i> <i>659,843,000 in 1978 and 625,878,000 in 1977 (E)</i> . . . . .	 <u><b>\$7.74</b></u>	 <u><b>\$6.86</b></u>
 REINVESTED EARNINGS		
At beginning of year (E) . . . . .	\$17,699,401	\$16,041,885
Add—Net income . . . . .	<u>5,272,606</u>	<u>4,480,393</u>
	<u>22,972,007</u>	<u>20,522,278</u>
 Deduct—Dividends declared:		
Preferred . . . . .	162,627	179,364
Common—1978, \$4.60 per share; 1977, \$4.20 per share . . . . .	3,037,552	2,642,799
Miscellaneous—net . . . . .	<u>252</u>	<u>714</u>
	<u>3,200,431</u>	<u>2,822,877</u>
REINVESTED EARNINGS AT END OF YEAR . . . . .	<u>\$19,771,576</u>	<u>\$17,699,401</u>



## Balance Sheets

ASSETS	Thousands Of Dollars	
	December 31, 1978	December 31, 1977
TELEPHONE PLANT— at cost		
In service (F) . . . . .	\$107,467,835	\$ 98,717,261
Under construction . . . . .	3,623,541	3,035,359
Held for future use . . . . .	33,822	106,571
	<u>111,125,198</u>	<u>101,859,191</u>
Less: Accumulated depreciation . . . . .	<u>20,773,673</u>	<u>19,461,149</u>
	<u>90,351,525</u>	<u>82,398,042</u>
INVESTMENTS		
At equity (G)		
Western Electric Company, Incorporated . . . . .	3,512,440	3,363,672
Other . . . . .	375,670	322,924
At cost . . . . .	<u>153,715</u>	<u>114,259</u>
	<u>4,041,825</u>	<u>3,800,855</u>
CURRENT ASSETS		
Cash and temporary cash investments—less drafts outstanding:		
1978, \$552,082,000; 1977, \$434,240,000 (H) . . . . .	1,421,276	1,283,079
Receivables—less allowance for uncollectibles:		
1978, \$130,987,000; 1977, \$99,158,000 . . . . .	5,283,926	4,468,280
Material and supplies . . . . .	775,015	663,391
Prepaid expenses . . . . .	<u>175,469</u>	<u>169,708</u>
	<u>7,655,686</u>	<u>6,584,458</u>
DEFERRED CHARGES . . . . .	<u>1,277,909</u>	<u>1,188,937</u>
TOTAL ASSETS . . . . .	<u>\$103,326,945</u>	<u>\$ 93,972,292</u>

The accompanying notes are an integral part of the financial statements.



AMERICAN TELEPHONE AND TELEGRAPH COMPANY AND ITS SUBSIDIARIES

INVESTED CAPITAL, LIABILITIES, AND DEFERRED CREDITS	Thousands Of Dollars	
	December 31, 1978	December 31, 1977
COMMON SHARE OWNERS' EQUITY		
Common shares (Includes excess of proceeds over \$16 $\frac{2}{3}$ par value) (I) . . . . .	\$ 20,846,632	\$19,571,994
Authorized shares: 750,000,000		
Outstanding shares: at December 31, 1978—669,549,000; at December 31, 1977—647,632,000		
Reinvested earnings—see page 27 (E) . . . . .	19,771,576	17,699,401
	<u>40,618,208</u>	<u>37,271,395</u>
PREFERRED SHARES CONVERTIBLE TO COMMON SHARES (J)		
(Includes excess of proceeds over stated value) . . . . .	501,205	593,703
PREFERRED SHARES SUBJECT TO MANDATORY REDEMPTION (J) . . . . .	<u>1,600,000</u>	<u>1,625,000</u>
OWNERSHIP INTEREST OF OTHERS IN CONSOLIDATED SUBSIDIARIES . . . .	<u>1,397,808</u>	<u>1,243,979</u>
LONG AND INTERMEDIATE TERM DEBT (K) . . . . .	<u>34,501,138</u>	<u>32,499,697</u>
CURRENT LIABILITIES		
Accounts payable . . . . .	2,992,463	2,609,638
Taxes accrued . . . . .	1,352,799	1,048,194
Advance billing and customers' deposits . . . . .	955,090	857,604
Dividends payable . . . . .	831,023	741,422
Interest accrued . . . . .	735,061	663,093
	<u>6,866,436</u>	<u>5,919,951</u>
Debt maturing within one year (M) . . . . .	3,772,028	3,248,724
Taxes relating to California rate order (E) . . . . .	1,005,565	744,981
	<u>11,644,029</u>	<u>9,913,656</u>
DEFERRED CREDITS		
Accumulated deferred income taxes (E) . . . . .	9,050,506	7,450,495
Unamortized investment tax credits (E) . . . . .	3,841,399	3,228,636
Other . . . . .	172,652	145,731
	<u>13,064,557</u>	<u>10,824,862</u>
LEASE COMMITMENTS (N)		
TOTAL INVESTED CAPITAL, LIABILITIES, AND DEFERRED CREDITS .	<u>\$103,326,945</u>	<u>\$93,972,292</u>



**Statements of Sources of Funds  
Supporting Construction Activity**

**AMERICAN TELEPHONE AND TELEGRAPH COMPANY  
AND ITS SUBSIDIARIES**

	Thousands Of Dollars	
	Year 1978	Year 1977*
<b>FUNDS FROM OPERATIONS</b>		
Net Income . . . . .	\$ 5,272,606	\$ 4,480,393
Add—Expenses not requiring funds currently:		
Depreciation . . . . .	5,539,664	5,045,312
Deferred income taxes—net . . . . .	1,600,011	1,555,200
Investment tax credits—net . . . . .	612,763	657,558
Deduct—Income not providing funds currently:		
Interest charged construction . . . . .	270,490	228,619
Share of equity-basis companies' income in excess of dividends . . . . .	166,079	110,731
Total funds from operations . . . . .	12,588,475	11,399,113
Less—Dividends . . . . .	3,200,179	2,822,163
	<u>9,388,296</u>	<u>8,576,950</u>
<b>FUNDS FROM EXTERNAL FINANCING</b>		
Issuance of shares, net of redemptions . . . . .	1,157,140	1,597,196
Issuance of long and intermediate term debt . . . . .	2,788,000	2,285,000
Retirement of long and intermediate term debt . . . . .	321,559	2,585,129
Increase in short term borrowings—net (M) . . . . .	58,304	1,052,561
	<u>3,681,885</u>	<u>2,349,628</u>
<b>CHANGES IN WORKING CAPITAL (excluding debt maturing within one year)†</b>		
Cash and temporary cash investments . . . . .	(138,197)	203,654
Receivables . . . . .	(815,646)	(550,775)
Material and supplies . . . . .	(111,624)	(119,813)
Prepaid expenses . . . . .	(5,761)	7,483
Accounts payable . . . . .	382,825	289,394
Taxes accrued . . . . .	304,605	(25,802)
Advance billing and customers' deposits . . . . .	97,486	84,561
Dividends payable . . . . .	89,601	94,918
Interest accrued . . . . .	71,968	21,345
Taxes relating to California rate order (E) . . . . .	260,584	237,635
	<u>135,841</u>	<u>242,600</u>
<b>OTHER CHANGES†</b>		
Investments . . . . .	(74,891)	(26,734)
Deferred charges . . . . .	(88,972)	(182,351)
Ownership interest of others in consolidated subsidiaries . . . . .	153,829	354,060
Other—net . . . . .	203,674	23,596
	<u>193,640</u>	<u>168,571</u>
<b>FUNDS SUPPORTING CONSTRUCTION ACTIVITY</b> . . . . .	13,399,662	11,337,749
Add—Interest charged construction . . . . .	270,490	228,619
<b>TOTAL CONSTRUCTION</b> . . . . .	<u>\$13,670,152</u>	<u>\$11,566,368</u>

The accompanying notes are an integral part of the financial statements.

\*Reclassified to conform to 1978 format and restated as discussed in note (E).

†( ) Denotes a change which results in a decrease in funds supporting construction activity.



# Notes to Financial Statements

**(A) Accounting Policies**—The consolidated financial statements of the American Telephone and Telegraph Company ("Company") and its telephone subsidiaries reflect the application of the accounting policies described in this note. These statements have been prepared in conformity with generally accepted accounting principles applicable to rate-regulated public utilities. Such accounting principles are consistent in all material respects with accounting prescribed by the Federal Communications Commission ("FCC"), except as to the accounting for investments and revenue refunds described in this note, and as to a California rate order and related federal tax matter described in note (E). Other policies and practices are covered in notes (B), (C), (H) and (N).

**Consolidation**—The consolidated financial statements include the accounts of the Company and its telephone subsidiaries. The consolidation process eliminates all significant intercompany transactions except as discussed below under "Purchases from Western Electric." The investment in Western Electric Company, Incorporated ("Western Electric"), an unconsolidated subsidiary, and certain other investments (where it is deemed that the Company's ownership gives it the ability to exercise significant influence over operating and financial policies) are included at equity (cost plus proportionate share of reinvested earnings). All other investments are included at cost. See also note (G).

**Revenue Refunds**—The FCC's Uniform System of Accounts provides that refunds of prior years' revenues, less related income tax adjustments, be charged against current income. However, in conformity with generally accepted accounting principles applicable to rate-regulated public utilities, the Company in its financial statements treats material revenue refunds applicable to prior years as adjustments of the respective years' income and, within a year, as adjustments of the applicable interim periods' income. See also note (E).

**Purchases from Western Electric**—Most of the telephone equipment, apparatus and materials used by the consolidated companies have been manufactured or procured for them by Western Electric. Contracts with the telephone companies provide that Western Electric's prices shall be as low as to its most favored customers for like materials and services under comparable conditions. The consolidated financial statements reflect items purchased from Western Electric at cost to the companies, which cost includes the return realized by Western Electric on its investment devoted to this business.

**Depreciation**—Provision in the accounts for depreciation (5.6% in 1978 and 5.5% in 1977 of the cost of depreciable plant in service) is based on straight-line composite rates determined on the basis of the average expected lives of categories of plant acquired in a given year. The Company has requested the FCC to permit such straight-line com-

posite rates to be determined on the basis of equal life groups of certain categories of telephone plant acquired in a given year which, if granted, will increase depreciation expense above the levels that otherwise would be computed. Such increased depreciation should be allowable in determining revenue requirements in future rate-making proceedings. Depreciation for income tax purposes is provided using different lives, bases and methods as explained under "Income Taxes" below.

**Research and Development**—The cost of basic research and systems engineering performed by Bell Telephone Laboratories, Incorporated is included as expense in determining Net Income. The cost of specific development and design work related to products to be manufactured by Western Electric is recovered in the price charged for such products (see "Purchases from Western Electric" above).

## Income Taxes:

(1) The use of accelerated depreciation methods and shorter lives, permitted by income tax laws and regulations, causes depreciation charges used for tax purposes to be higher during the early years of plant life than the depreciation charges for such plant reflected in these financial statements.

Appropriate income charges and their subsequent reversal, reflected as deferred income taxes—net, are made to prevent the tax effects of these timing differences from distorting Net Income. The components of operating income tax expense in thousands of dollars, were:

	1978	1977*
Federal:		
Current . . . . .	\$1,309,659	\$ 787,143
Deferred—net . . . . .	1,478,401	1,429,454
Investment tax credits—net . . . . .	706,491	744,758
	<u>3,494,551</u>	<u>2,961,355</u>
State and local:		
Current . . . . .	209,208	178,458
Deferred—net . . . . .	133,661	128,738
	<u>342,869</u>	<u>307,196</u>
Total . . . . .	<u>\$3,837,420</u>	<u>\$3,268,551</u>

Income taxes on non-operating income included in Miscellaneous income and deductions—net, in thousands of dollars, were:

	1978	1977
Federal:		
Current . . . . .	\$22,358	\$(49,341)
Deferred—net . . . . .	1,283	724
	<u>23,641</u>	<u>(48,617)</u>
State and local:		
Current . . . . .	(1,064)	(736)
Deferred—net . . . . .	22	7
	<u>(1,042)</u>	<u>(729)</u>
Total . . . . .	<u>\$22,599</u>	<u>\$(49,346)</u>

\*Restated. See note (E).



(2) Investment tax credits result from provisions of the federal tax law which allow for reductions in tax liability based on certain construction expenditures. Corresponding reductions in tax expense are deferred in the year they occur and, except for the additional one per cent credit available under the Tax Reduction Act of 1975 which must be contributed to the Employee Stock Ownership Plan, are amortized as reductions in tax expense over the life of the plant which gave rise to the credits.

(3) The effective consolidated federal income tax rate, as determined by dividing Federal income taxes (see section (1) above) by the sum of Federal income taxes, Net Income and ownership interest of others in the net income of certain consolidated subsidiaries, was 39.4% in 1978 and 38.8% in 1977. The differences of 8.6% and 9.2% in 1978 and 1977, respectively, between the effective rate and the 48% federal income tax statutory rate are attributable to the following factors:

	1978	1977
a. Earnings applicable to investments in companies accounted for on an equity basis which are reflected net of income tax	3.2%	3.3%
b. Certain taxes and payroll-related construction costs capitalized for financial statement purposes, but deducted for income tax purposes, net of applicable depreciation . . . . .	3.0%	3.0%
c. Interest charged construction, which is excluded from taxable income, net of applicable depreciation . . . . .	1.0%	1.0%
d. Depreciation, not deductible for income tax purposes, on that portion of telephone plant costs which represents profit to Western Electric . . . . .	(.6%)	(.6%)
e. Amortization of investment tax credits over the life of the plant which gave rise to the credits. Such amortization reduced income tax expense for the years 1978 and 1977 by about \$255,041,000 and \$209,942,000, respectively . . . . .	2.9%	2.8%
f. Other differences . . . . .	(.9%)	(.3%)
Total . . . . .	<u>8.6%</u>	<u>9.2%</u>

**(B) Provision for Pensions and Death Benefits**—The Company and its consolidated subsidiaries have noncontributory plans covering all employees which provide for service pensions and certain death benefits. These companies have accrual programs under which actuarially determined regular payments are made to trust funds that are irrevocably devoted to service pension and death benefit purposes. The total provision for these service pensions and death benefits, including amounts charged to construction, was \$2,354,447,000 in 1978 and \$2,056,341,000 in 1977, which represented 15.9% in 1978 and 15.7% in 1977 of salaries and wages. Amendments to the plans, adopted pursuant to 1977 union contracts, provided for improved

benefits for all employees and increased 1978 pension accruals by approximately \$91,220,000. Based on the latest actuarial valuation, the companies estimate that the actuarially computed value of vested benefits exceeded the cost of trust fund assets by about \$386,810,000. The accrual programs contemplate that there will be available in the funds amounts sufficient to provide benefits as stated in the plans.

**(C) Interest Charged Construction**—Regulatory authorities allow the Company and its telephone subsidiaries to provide for a return on capital invested in new telephone plant while under construction by accruing interest charged construction as an item of income during the construction period and as an addition to the cost of the plant constructed. Such income is not realized in cash currently but will be realized over the service life of plant as the resulting higher depreciation expense is recovered in the form of increased revenues.

As a result of a change in the FCC's Uniform System of Accounts, effective January 1, 1979 interest charged construction will no longer be accrued on the books of the Company and its telephone subsidiaries for construction projects expected to be completed within one year from the time construction starts ("short term projects"). The interstate portion of the costs of short term projects will be included in the rate base upon which interstate revenue requirements are determined. Approximately \$47,000,000 and \$38,000,000 of interest charged construction was accrued on the interstate portion of the costs of such projects in 1978 and 1977, respectively. (It previously was reported that these 1978 and 1977 amounts were subject to possible reversal; in December 1978 the FCC ruled that such reversal would not be required.) The Company's telephone subsidiaries are seeking approval from the state regulatory commissions for similar rate base treatment for intrastate rate-making. Pending such approval, the Company and its subsidiaries will continue to reflect in their financial statements interest charged construction on the intrastate portion of the costs of short term projects for those jurisdictions where they believe such charges will be allowed for intrastate rate-making.

**(D) Miscellaneous Income and Deductions—Net**—Miscellaneous deductions include the ownership interest of others in the net income of certain consolidated subsidiaries in the amounts of \$133,496,000 in 1978 and \$107,081,000 in 1977. See also note (A), "Income Taxes."

**(E) Rate and Related Matters**—In December 1978 the United States Supreme Court denied a petition of The Pacific Telephone and Telegraph Company ("Pacific"), a subsidiary, for review of a September 1977 Order of the California Public Utilities Commission ("CPUC") which had been stayed by the CPUC pending judicial review. In January 1979 Pacific requested the Court to rehear its petition for review. If this request is denied, the CPUC's Order will



become effective. The Order prescribes a refund of revenues and a reduction of rates resulting from the use of a new rate-making method of treating investment tax credits and deferred federal income taxes resulting from the use of accelerated depreciation. The CPUC concluded in its Order that Pacific's eligibility under federal law for these tax benefits would be maintained. However, the Internal Revenue Service ("IRS") has ruled that implementation of the Order would make Pacific ineligible for these tax benefits, although final determination as to eligibility may not occur for several years. Although Pacific's books of account used for regulatory purposes reflect neither the refund of revenues nor the loss of eligibility for tax benefits, the Consolidated Financial Statements for the years ended December 31, 1978 and 1977 now recognize the likelihood that the CPUC's Order will be implemented and that Pacific will be found to be ineligible for these tax benefits for 1974 and subsequent years. Accordingly, Income Applicable to Common Shares for the years 1978 and 1977 has been reduced by \$36,108,000 and \$35,600,000 (\$.05 and \$.06 per common share), respectively, to reflect the likelihood of revenue refunds and related interest payments. Income for these years also has been reduced by \$36,219,000 and \$27,940,000 (\$.06 and \$.05 per common share), respectively, to reflect the likelihood of loss of tax benefits including interest related thereto. Accumulated deferred income taxes and investment tax credits relating to plant subject to CPUC jurisdiction ("intrastate plant") and interest on these unpaid amounts are now included in current liabilities. Reinvested earnings as of January 1, 1977 have been reduced by \$60,807,000 related to the revenue refunds and \$23,345,000 related to the loss of tax benefits attributable to prior periods. Final determination as to continued eligibility for tax benefits is subject to IRS audit and litigation thereafter. Should Pacific be found to be eligible, the earnings reductions and balance sheet effects relating to the loss of tax benefits would be reversed. In the opinion of counsel, Pacific's eligibility for tax benefits probably would be impaired only insofar as it relates to intrastate plant which represents approximately 80% of Pacific's total plant.

Income Applicable to Common Shares for the years ended December 31, 1978 and 1977 includes approximately \$70,980,000 and \$20,790,000 (\$.11 and \$.04 per common share), respectively, from intrastate rate increases in a number of states that are subject to possible refund.

**(F) Accounting for Station Connection Costs**—In August 1977, pursuant to an FCC order, the Company filed a proposal to change the accounting treatment provided in the FCC's Uniform System of Accounts for station connection costs so that a significant portion of these costs which are now being capitalized would be expensed when incurred in the future. Station connection costs of the type proposed to be expensed amount currently to about \$1,550,000,000 per year. Under the proposal, this accounting change would be

implemented prospectively over a four-year period in approximately equal amounts with provision for straight-line amortization of that portion of the current investment in station connection costs of the type proposed to be expensed in the future; at December 31, 1978 this amounted to approximately \$5,500,000,000. This change will result in an increase in annual expenses; however, such increased expenses should be allowable in determining revenue requirements in future rate-making proceedings. If the FCC adopts these proposed changes during 1979, the Company's telephone subsidiaries may begin implementation retroactive to January 1, 1979.

**(G) Investments at Equity**—The FCC's Uniform System of Accounts requires that investments be carried on the books of the companies at cost. However, in conformity with generally accepted accounting principles, certain investments are included at equity in the accompanying balance sheets. See note (A), "Consolidation."

The following information is provided as of December 31, 1978, for those companies carried at equity:

**Western Electric Company, Incorporated and its subsidiaries**

Wholly-owned and carried on the Company's books at a cost of \$1,455,559,000. The consolidated assets and liabilities at December 31, 1978 were \$6,133,617,000 and \$2,621,177,000, respectively.

**Other**—Includes principally:

**Bell Telephone Laboratories, Incorporated**—50% owned and carried on the Company's books at a cost of \$141,000,000 plus \$15,000,000 of advances, which also equals its investment at equity. Western Electric owns the other 50%.

**The Southern New England Telephone Company**—18.9% owned and carried on the Company's books at a cost of \$68,350,000 plus \$17,500,000 of advances. The Company's equity is \$126,477,000. The market value of the shares owned by the Company based on the closing price as obtained from the composite tape\* at December 31, 1978 was \$80,792,000.

**Cincinnati Bell Inc.**—27.7% owned and carried on the Company's books at a cost of \$31,444,000 plus \$8,200,000 of advances. The Company's equity is \$75,730,000. The market value of the shares owned by the Company based on the closing price as obtained from the composite tape\* at December 31, 1978 was \$59,578,000.

**(H) Cash and Temporary Cash Investments**—Cash and temporary cash investments have been reduced by the amount of drafts outstanding with a corresponding reduction in Accounts payable. It is the practice of the Company and most telephone subsidiaries to make certain payments by draft and to record such drafts as accounts payable until such time as the banks honoring the drafts have presented them for payment. The Company maintains cash and tem-

\*Encompasses trading on the principal U.S. stock exchanges as well as off-board trading.



porary cash investments not only to meet its own obligations but to maintain funds upon which the subsidiary companies may draw on a day-to-day basis to meet their obligations, including coverage for outstanding drafts.

**(I) Common Shares**—Proceeds in excess of par value of common shares amounted to \$9,687,488,000 and \$8,778,124,000 at December 31, 1978 and 1977, respectively. Book value per common share amounted to \$60.67 and \$57.55 at December 31, 1978 and 1977, respectively.

At December 31, 1978 there were 10,506,755 authorized but unissued common shares reserved for the conversion of the Company's outstanding \$4 convertible preferred shares.

The Company increased common shares outstanding in 1978 as follows:

1,939,112 shares issued upon conversion of 1,842,152 shares of the Company's \$4 convertible preferred shares. See note (J).

10,996,004 shares sold at 95% of market for dividend reinvestments and 2,493,071 shares sold at market for optional cash payments under the Share Owner Dividend Reinvestment and Stock Purchase Plan.

5,098,200 shares sold at market to the Bell System Savings Plan for Salaried Employees.

1,389,780 shares issued at market in connection with the Bell System Employee Stock Ownership Plan through the election of an extra 1% Investment Tax Credit.

**(J) Preferred Shares**—Authorized are 100,000,000 preferred shares at \$1 par value. Outstanding are:

	Thousands of Shares	
	December 31, 1978	December 31, 1977
\$50 stated value:		
\$4 cumulative convertible preferred . . . . .	9,981	11,824
\$3.64 cumulative preferred . . . . .	10,000	10,000
\$3.74 cumulative preferred . . . . .	10,000	10,000
\$1,000 stated value:		
\$77.50 cumulative preferred . . . . .	600	625

Each \$4 preferred share is convertible into approximately 1.05 common shares of the Company. During 1978, a total of 1,842,152 shares were converted. See note (I). Proceeds in excess of the stated value amounted to \$2,134,000 and \$2,525,000 at December 31, 1978 and 1977, respectively. Each share may be redeemed by the Company at stated value.

The following shares are subject to mandatory redemption:

The \$3.64 preferred shares may be redeemed by the Company at a premium of \$3.12 per \$50 share on or before April 30, 1979 and at a diminishing premium thereafter. On May 1 of each year, commencing in 1984, the Company through a sinking fund will redeem without premium 3% of these shares plus an additional 3% may be redeemed each year at the Company's option.

The \$3.74 preferred shares may be redeemed by the Company at a premium of \$3.21 per \$50 share on or before January 31, 1980 and at a diminishing premium thereafter. On February 1 of each year, commencing in 1985, the Company through a sinking fund will redeem without premium 3% of these shares plus an additional 3% may be redeemed each year at the Company's option.

The \$77.50 preferred shares may be redeemed by the Company at a premium of \$62.00 per \$1,000 share on or before January 31, 1980 and at a diminishing premium thereafter. On February 1 of each year, the Company through a sinking fund will redeem at stated value at least 12,500 of these shares through 1992 and 18,750 shares each year thereafter and may each year redeem an additional equal number. Under these sinking fund provisions, which became effective in 1978, the Company redeemed 25,000 shares on February 1, 1978 and 12,500 shares on February 1, 1979 which reduced stated capital (as defined in the New York Business Corporation Law) by \$25,000,000 and \$12,500,000, respectively.

**(K) Long and Intermediate Term Debt**—Interest rates and maturities on long and intermediate term debt outstanding at December 31, 1978 were as follows:

Maturities	2½% to 5½%	Millions of Dollars		Total
		6% to 7½%	8% to 10%	
1980 . . . . .	\$ 265	\$ 150	\$ —	\$ 415
1981 . . . . .	170	—	425	595
1982 . . . . .	365	300	120	785
1983 . . . . .	235	—	250	485
1984-1993 . . . . .	3,327	225	250	3,802
1994-2003 . . . . .	4,145	1,805	1,160	7,110
2004-2013 . . . . .	992	6,700	5,238	12,930
2014-2018 . . . . .	—	350	8,029	8,379
Total . . . . .	\$9,499	\$9,530	\$15,472	\$34,501

**(L) Subsequent Financing**—As of February 8, 1979 two majority-owned telephone subsidiaries have announced their intention to sell approximately \$470,000,000 of common shares (about 89% of which the Company expects to purchase), one telephone subsidiary has sold \$83,350,000 of non-voting preferred shares and five telephone subsidiaries have sold or announced their intention to sell up to \$1,350,000,000 of long term debt. The proceeds of these sales will be applied toward repayment of debt maturing within one year.

**(M) Debt Maturing Within One Year**—The Company's telephone subsidiaries follow the practice of financing construction of telephone plant partially through bank loans, commercial paper and other notes payable in twelve months or less after issuance, pending long term financing. In the



Company's computation of ratios of debt to combined debt and equity (usually referred to as "debt ratios"), debt maturing within one year is included with Long and Intermediate Term Debt.

Debt maturing within one year consists of the following:

	Millions of Dollars	
	1978	1977
Notes payable:		
Bank loans . . . . .	\$1,134	\$ 777
Commercial paper . . . . .	1,823	1,831
Other notes . . . . .	30	321
Long and intermediate term debt maturing within one year . . . . .	785	320
Total . . . . .	<u>\$3,772</u>	<u>\$3,249</u>

The weighted average annual interest rates for bank loans, commercial paper and other notes outstanding at December 31, 1978 were 10.8%, 10.1% and 10.5% and at December 31, 1977 were 7.2%, 6.6% and 6.3%, respectively. The maximum amounts of notes payable at any month end during the years 1978 and 1977 were \$3,146,412,000 and \$2,928,724,000, respectively, and the average amounts outstanding during those years were approximately \$2,869,033,000 and \$2,436,004,000 at weighted average interest rates of 7.9% and 5.8%, respectively, computed by dividing the daily face amount of notes payable into the aggregate related interest expense. Long and intermediate term debt maturing within one year outstanding at December 31, 1978 and 1977 carried weighted average interest rates of 6.3% and 4.2%, respectively.

**(N) Lease Commitments**—The Company and its consolidated subsidiaries lease certain facilities and equipment used in their operations and reflect lease payments as rental expense of the period to which they relate. Total rental expense amounted to \$897,480,000 and \$846,009,000 in 1978 and 1977, respectively. At December 31, 1978 the aggregate minimum rental commitments under noncancellable leases for the periods shown were as follows:

Years	Thousands of Dollars
1979 . . . . .	\$ 441,617
1980 . . . . .	376,371
1981 . . . . .	327,166
1982 . . . . .	279,866
1983 . . . . .	229,827
Thereafter . . . . .	2,466,023
Total . . . . .	<u>\$4,120,870</u>

These leases include some which would be classified as "capital leases" under criteria established by the Financial Accounting Standards Board. However, for regulatory accounting and rate-making purposes, such leases are not capitalized. Had such leases been capitalized, additional assets of \$1,017,528,000 and \$932,397,000 (net of \$432,015,000

and \$326,783,000 accumulated amortization) and obligations of \$1,108,047,000 and \$1,029,865,000 would have been included on the Balance Sheets as of December 31, 1978 and 1977, respectively; the effect on Net Income would have been insignificant. Under regulatory rate-making procedures, any expense effects would not be recognized currently but would be recognized over the life of the respective lease.

**(O) Subsequent Events**—American Bell International Inc. ("ABII"), a wholly-owned subsidiary, has been doing business to assist in the development and operation of communication services in Iran. The changing political situation in that country has affected ABII's operations there and could cause Income Applicable to Common Shares to be reduced in 1979 by as much as \$37,500,000 relating to costs already committed or incurred.

**(P) Department of Justice Antitrust Action**—In 1974 the Department of Justice brought a civil antitrust action naming the Company, Western Electric and Bell Telephone Laboratories, Incorporated as defendants, and the 23 Bell System telephone companies as co-conspirators but not defendants. This matter is not likely to be resolved for several years. The Company believes that the relief sought, which includes dismemberment of the Bell System, is adverse to the public interest and it is confident that it has not been in violation of the antitrust laws and that the structure of the Bell System will remain basically unchanged. In the opinion of the Company, dismemberment of the Bell System would have adverse effects on its business, could affect its ability to raise capital, its credit standing and the market value of its securities and could require an immediate payment of federal income taxes previously deferred on intercompany profits. A lump sum payment of such deferred taxes, which are being credited to the plant accounts, would have no direct effect on net income but would materially increase the need for cash and revenues.

#### (Q) Quarterly Financial Information (Unaudited)

Calendar Quarter 1977	Millions of Dollars			Earnings per Common Share*
	Total Operating Revenues	Operating Income	Income Applicable to Common Shares	
1st . . . . .	\$ 8,722	\$1,512	\$ 997	\$1.63
2nd . . . . .	8,975	1,597	1,120	1.80
3rd . . . . .	9,207	1,635	1,112	1.77
4th . . . . .	9,527	1,651	1,067	1.67
Total . . . . .	<u>\$36,431</u>	<u>\$6,395</u>	<u>\$4,296</u>	<u>\$6.86</u>

\*Because of increasing numbers of common shares outstanding each quarter, the sum of quarterly earnings per common share does not equal earnings per common share for the year.



Calendar Quarter 1978	Millions of Dollars			
	Total Operating Revenues	Operating Income	Income Applicable to Common Shares	Earnings per Common Share
1st . . . . .	\$ 9,838	\$1,731	\$1,226	\$1.88
2nd . . . . .	10,158	1,806	1,287	1.96
3rd . . . . .	10,403	1,873	1,351	2.04
4th . . . . .	10,594	1,802	1,245	1.86
Total . . . . .	<u>\$40,993</u>	<u>\$7,212</u>	<u>\$5,109</u>	<u>\$7.74</u>

Income Applicable to Common Shares has been restated for the quarters of 1977 by reductions of \$13,878,000, \$15,742,000, \$16,611,000 and \$17,309,000 (\$.02, \$.03, \$.03 and \$.03 per common share), respectively, and for the first three quarters of 1978 by reductions of \$16,498,000, \$17,865,000 and \$18,714,000 (\$.02, \$.03 and \$.03 per common share), respectively, to reflect the effects of the California refund order and related loss of federal tax benefits. See note (E).

Results for the quarters include approximately \$4,540,000, \$4,750,000, \$4,800,000 and \$6,700,000 (\$.01, \$.01, \$.01 and \$.01 per common share) in 1977, respectively, and \$12,670,000, \$13,920,000, \$17,980,000 and \$26,410,000 (\$.02, \$.02, \$.03 and \$.04 per common share) in 1978, respectively, of Income Applicable to Common Shares resulting from intrastate rate increases which are subject to possible refund.

As previously reported, results for the fourth quarter of 1977 have been decreased by \$32,217,000 (\$.05 per common share) reflecting costs related to the early redemption by the Company of certain long term debt and \$22,760,000 (\$.04 per common share) reflecting the adjustment of prior years' state income taxes by one subsidiary.

**(R) Replacement Cost (Unaudited)**—The following information required by the Securities and Exchange Commission compares telephone plant investment as shown on the Balance Sheets at December 31, 1978 and 1977 with the approximate cost of replacing the productive capacity of the Company and its consolidated subsidiaries at those dates. It also compares accumulated depreciation at those dates with the amounts that would have been provided had past depreciation accruals contemplated such replacement costs. Additionally, depreciation expense for the years ended December 31, 1978 and 1977 is compared with depreciation expense computed (using historic depreciation assumptions) on these estimates of replacement costs.

These replacement costs are theoretical, based on the assumptions that, as of December 31, 1978 and 1977, electronic switching systems would replace all electro-mechanical switching systems, most other telephone plant would be replaced in accordance with present replacement practices and building space would be reduced because of the use of electronic switching systems. Certain telephone plant categories are included at historic cost: principally land, telephone plant under construction, and telephone plant held for future use.

Year 1977	Millions of Dollars		
	As Stated	At Replace- ment Cost	Difference
Telephone plant investment:			
For which replacement costs			
have been determined . . . .	\$ 98,038	\$141,641	\$43,603
Included at historic cost . . .	3,821	3,821	—
Total . . . . .	101,859	145,462	43,603
Accumulated depreciation . .	19,461	35,162	15,701
Net telephone plant . . . . .	<u>\$ 82,398</u>	<u>\$110,300</u>	<u>\$27,902</u>
Depreciation expense . . . . .	<u>\$ 5,045</u>	<u>\$ 6,738</u>	<u>\$ 1,693</u>
Year 1978			
Telephone plant investment:			
For which replacement costs			
have been determined . . . .	\$106,753	\$155,705	\$48,952
Included at historic cost . . .	4,372	4,372	—
Total . . . . .	111,125	160,077	48,952
Accumulated depreciation . .	20,774	38,679	17,905
Net telephone plant . . . . .	<u>\$ 90,351</u>	<u>\$121,398</u>	<u>\$ 31,047</u>
Depreciation expense . . . . .	<u>\$ 5,540</u>	<u>\$ 7,424</u>	<u>\$ 1,884</u>

The difference between historic and estimated replacement cost of net telephone plant investment does not represent additional book value for the Company's stock. The above replacement costs are approximations of the amount of capital that could have been required were the Company and its consolidated subsidiaries to have replaced the entire productive capacity of such plant on December 31, 1978 and 1977. Replacement actually will take place over many years and the funds needed will be derived from sources similar to those available during 1978 and 1977.

Depreciation expense based on an estimate of replacement cost also is theoretical and not deductible in determining income tax expense. The excess of depreciation on replacement cost over that determined on historic cost is a measure of the extent to which current operations have not been making provision for the higher replacement cost of present plant capacity. Such provision, if made, would provide funds which would be used in lieu of funds from other sources for plant construction.

It would be unrealistic to impute a reduced net income by the difference between depreciation based on historic cost and that based on estimates of replacement cost. New plant is likely to provide largely-offsetting additional revenue-generating services and operating efficiencies. Additionally, replacement of plant will take place over many years. It is true, however, that the earnings of the Company must be high enough to provide some equity capital from reinvested earnings and to attract additional debt and equity to provide funds for any replacement cost in excess of depreciation accruals based on the historic cost of the plant.



## Officers\*

**CHAIRMAN OF THE BOARD**  
John D. deButts

**PRESIDENT**  
Charles L. Brown

**VICE CHAIRMAN OF THE BOARD**  
William M. Ellinghaus

**VICE CHAIRMAN OF THE BOARD  
AND CHIEF FINANCIAL OFFICER**  
William S. Cashel, Jr.

**EXECUTIVE VICE PRESIDENTS**  
Thomas E. Bolger  
James E. Olson  
Kenneth J. Whalen  
Richard R. Hough  
Charles E. Hugel

**VICE PRESIDENT  
AND GENERAL COUNSEL**  
F. Mark Garlinghouse

**VICE PRESIDENTS**  
Alvin von Auw  
Rex R. Reed  
Jack A. Baird  
James R. Billingsley  
John G. Fox  
H. Weston Clarke, Jr.  
Jere S. Cave  
Edward M. Block  
William G. Sharwell  
John L. Segall  
Walter B. Kelley  
Donald E. Guinn  
Robert W. Kleinert  
Robert E. Allen  
Archie J. McGill  
Delbert C. Staley

**VICE PRESIDENT  
AND COMPTROLLER**  
Robert N. Flint

**VICE PRESIDENT  
AND TREASURER**  
William G. Burns

**SECRETARY**  
Frank A. Hutson, Jr.

## Board of Directors\*

**William M. Batten**  
Chairman, New York Stock Exchange, Inc.

**Charles L. Brown**  
President

**Edward W. Carter**  
Chairman of the Board, Carter Hawley Hale  
Stores, Inc. (department stores)

**William S. Cashel, Jr.**  
Vice Chairman of the Board and Chief  
Financial Officer

**Catherine B. Cleary**  
Director and former  
Chairman of the Board, First  
Wisconsin Trust Company

**Archie K. Davis**  
Director and Member of the Executive  
Committees, Wachovia Corporation and  
Wachovia Bank and Trust Company, N.A.

**John D. deButts**  
Chairman of the Board

**William M. Ellinghaus**  
Vice Chairman of the Board

**James H. Evans**  
Chairman, Union Pacific Corporation

**Peter E. Haas**  
President, Levi Strauss & Company  
(apparel manufacturer)

**Edward B. Hanify**  
Partner, Ropes & Gray (law firm)

**William A. Hewitt**  
Chairman, Deere & Company (farm and  
industrial tractors and equipment)

**Jerome H. Holland**  
Director of various corporations

**Belton K. Johnson**  
Owner, Chaparrosa Ranch

**Donald S. MacNaughton**  
Chairman of the Board, Hospital  
Corporation of America

**William J. McGill**  
President, Columbia University

**J. Irwin Miller**  
Chairman of the Executive and Finance  
Committee, Cummins Engine  
Company, Inc.

**Edgar B. Speer**  
Chairman of the Board, United States Steel  
Corporation

**Rawleigh Warner, Jr.**  
Chairman of the Board, Mobil Corporation

## Committees\*

**Executive Committee** has authority, within prescribed limits, to act for the Board between meetings.

- John D. deButts, chairman, William M. Batten, Charles L. Brown, Jerome H. Holland, Donald S. MacNaughton, J. Irwin Miller, Rawleigh Warner, Jr.

**Audit Committee** reviews the adequacy of internal accounting controls and internal auditing activities, the work of the independent auditors, and financial accounting and reporting matters. Each year the Committee appoints independent auditors subject to share owner ratification.

- Rawleigh Warner, Jr., chairman, James H. Evans, William A. Hewitt, William J. McGill, Edgar B. Speer

**Finance Committee** reviews the Company's financial policies and condition and authorizes investments in the associated Bell System companies.

- William S. Cashel, Jr., chairman, Edward W. Carter, Catherine B. Cleary, Archie K. Davis, Belton K. Johnson, J. Irwin Miller, Rawleigh Warner, Jr.

**Compensation Committee** approves the compensation of employees at the level of Assistant Vice President and makes recommendations to the Board with respect to compensation of officers at the level of Vice President and above.

- William M. Batten, chairman, Edward W. Carter, Edward B. Hanify, Jerome H. Holland, Donald S. MacNaughton, Edgar B. Speer

**Committee on Employee Benefits** reviews the administration of assets, auditing and actuarial matters for the Company's pension, benefit and employee savings plans.

- William A. Hewitt, chairman, William S. Cashel, Jr., Archie K. Davis, William M. Ellinghaus, Peter E. Haas, Jerome H. Holland, Belton K. Johnson

**Corporate Public Policy Committee** examines Company policy on major public issues and provides guidance to management on these issues.

- Donald S. MacNaughton, chairman, Catherine B. Cleary, James H. Evans, Peter E. Haas, Jerome H. Holland, Belton K. Johnson, William J. McGill

**Committee on Directors** advises on nominations and compensation of Directors.

- J. Irwin Miller, chairman, William M. Batten, Edward W. Carter, Archie K. Davis, Edward B. Hanify, William A. Hewitt

\*As of January 31, 1979





**American Telephone and Telegraph Company**  
195 Broadway, New York, N.Y. 10007

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