

Soc  
HE  
8846  
A51

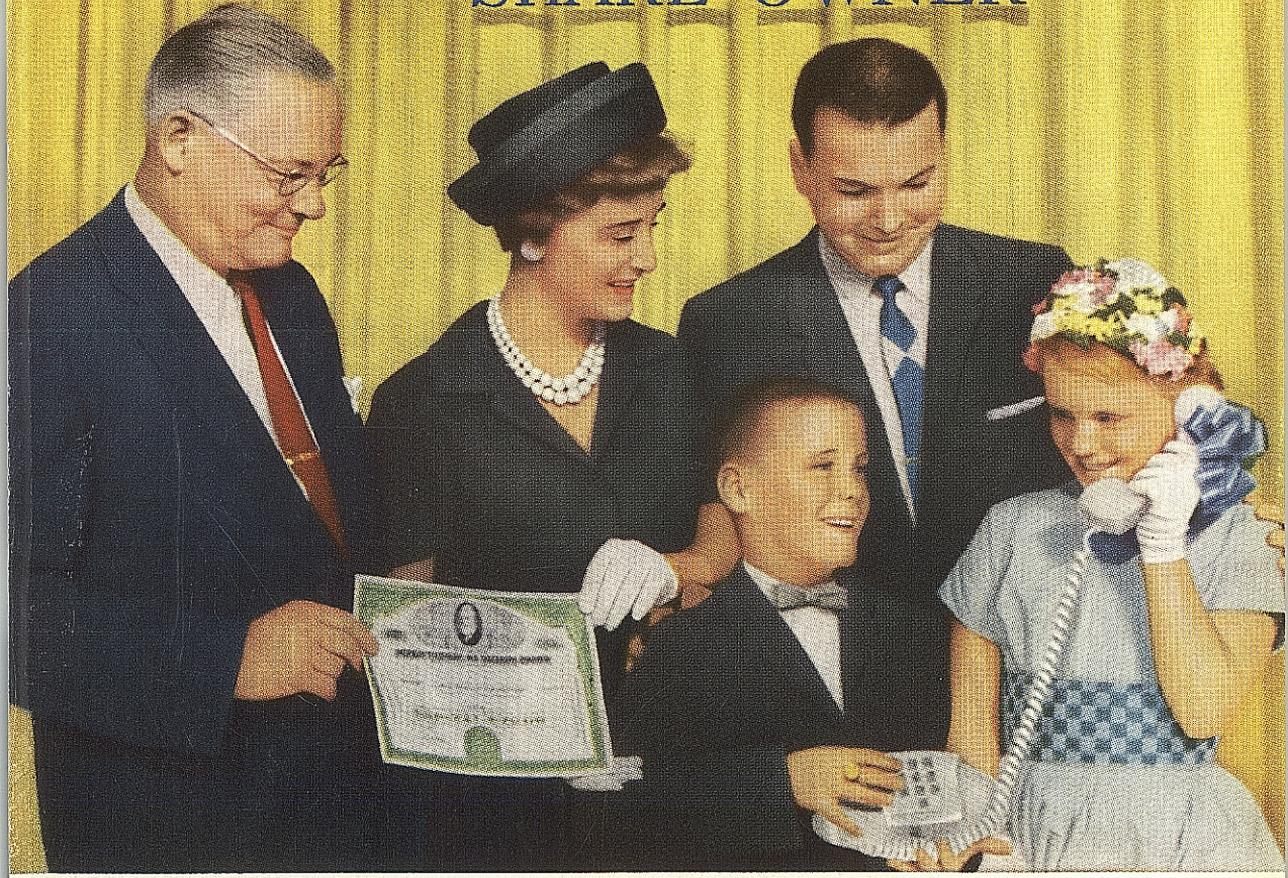
LIBRARY  
DATE  
MAR 13 1962  
FLORIDA STATE UNIVERSITY



# AT&T

## Annual Report

# 2,000,000<sup>th</sup> SHARE OWNER



# 1961

the year we welcomed our 2,000,000th share owner

AMERICAN TELEPHONE AND TELEGRAPH COMPANY  
SERVICE DEFENSE PROGRESS

## A SHARE IN THE FUTURE

Last June Mr. and Mrs. Hugh Polson, of Wichita, Kansas, invested some of their savings in A. T. & T. stock—and so became, together, our two-millionth share owner.

We invited the Polsons to “come and bring the children,” Kay and Steve, for a visit in New York. In presenting their stock certificate (as pictured on the cover) Frederick R. Kappel, chairman of the board, observed, “It is the confidence of our share owners that makes it possible for us to provide good and improving service. And if we didn’t provide good service we would not have widespread share owner support.”

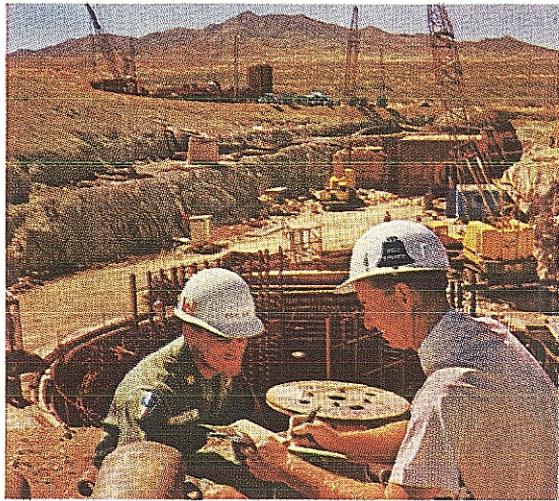
The developments typified in the pictures at the right—new telephone convenience, dependable communications for defense, progress through scientific research—are all based on the willingness of families like the Polsons to put their dollars to work in our business.

And as Mr. Kappel also pointed out, their investment “will eventually help send Kay and Steve to college.” Just as the Polsons have a share in our future, we have a share in theirs.

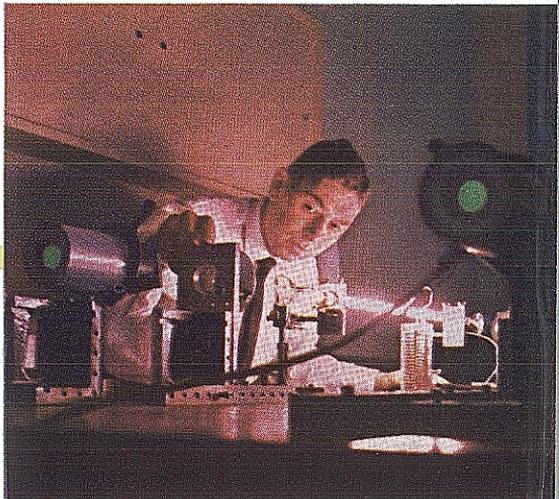
**ANNUAL MEETING.** The seventy-seventh Annual Meeting of the Share Owners will be held on April 18, 1962, at the Kingsbridge Armory, 29 West Kingsbridge Road, The Bronx, New York City. Meeting time will be 2 p.m.



**SERVICE.** Attractive panel telephones will be among our new 1962 offerings. Market trial was completed in 1961.



**DEFENSE.** Providing the communication system to serve an underground Titan intercontinental ballistic missile base.



**PROGRESS.** Experimental “optical masers” give promise of sending communications in the future over beams of light.

AT&T  
1961

## Annual Report

### CONTENTS

Board of Directors . . . . .	2
Officers . . . . .	3
Financial Summary . . . . .	4
Taxes . . . . .	4
Service Summary . . . . .	5
Report Text . . . . .	7
Defense Communications Policy . . . . .	19
Financial Statements . . . . .	25
Certificate of Audit . . . . .	25
Map of Bell System . . . . .	31
Bell System Companies . . . . .	32

The cost of this report is less than 15 cents a copy, including mailing.

### AMERICAN TELEPHONE AND TELEGRAPH COMPANY

195 Broadway, New York 7, N. Y. Telephone: Area Code 212, 393-9800

#### FOR SHARE OWNERS WHO ARE BLIND

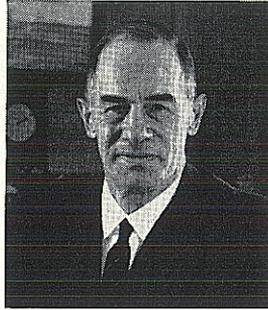
The report is available in Braille and on talking records. Kindly address requests to the Secretary of the Company. Copies will be distributed with the assistance of the Telephone Pioneers of America, the organization of long-service employees who work with the blind as one of their community service activities.

This report reviews the work of the American Telephone and Telegraph Company and its associated companies in the Bell System. Annual reports of the principal telephone subsidiaries of the A. T. & T. Company, and of Western Electric, manufacturing and supply unit of the System, are available on request. The System furnishes service in 48 states and the District of Columbia, and its lines connect with other telephone systems in all 50 states of this country, and throughout the world. A list of the Bell System companies is given on page 32.

# BOARD OF DIRECTORS



**William C. Bolenius**  
Vice Chairman of the Board



**Lloyd D. Brace**  
Chairman of the Board  
The First National Bank of Boston



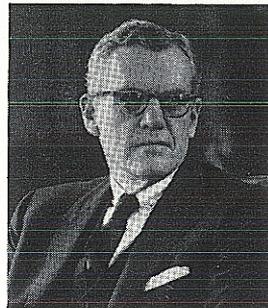
**Edward B. Hanify**  
Partner, Ropes & Cray



**Henry T. Heald**  
President, The Ford Foundation



**Eugene J. McNeely**  
President



**J. Irwin Miller**  
Chairman of the Board  
Cummins Engine Company, Inc.



**William B. Murphy**  
President  
Campbell Soup Company



**Monroe J. Rathbone**  
President, Standard Oil Company  
(New Jersey)



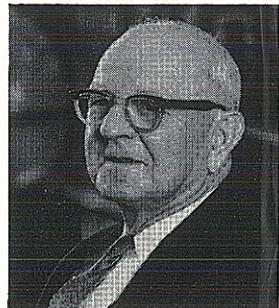
**George F. Smith**  
Consultant, formerly  
President, Johnson & Johnson



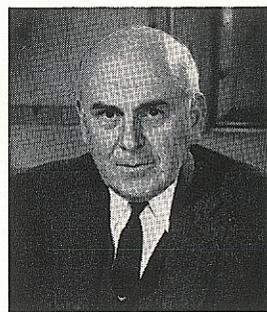
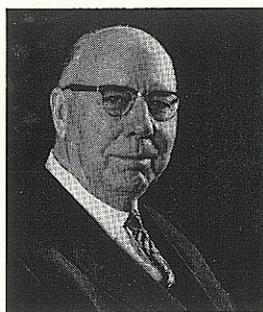
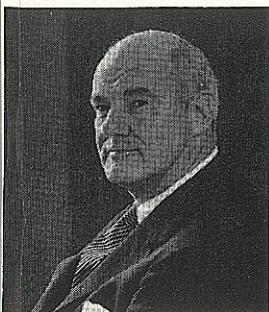
**Jay Taylor**  
Owner  
Jay Taylor Cattle Company



**William White**  
President, The Delaware and  
Hudson Company and  
The Delaware and Hudson  
Railroad Corporation



**A. Lee M. Wiggins**  
Chairman of the Advisory Com-  
mittee, Atlantic Coast Line Rail-  
road Company and Louisville  
and Nashville Railroad Company



**J. Victor Herd**

Chairman of the Boards  
America Fore  
Loyalty Insurance Group

**Frederick R. Kappel**

Chairman of the Board

**John L. McCaffrey**

Retired Chairman of the Board  
International Harvester Company

**John J. McCloy**

Counsel to Milbank, Tweed,  
Hope & Hadley

Thomas F. Patton, president of Republic Steel Corporation, was elected a director on February 14, 1962, the same day that this report was approved. Vannevar Bush, a director since 1947, retired from the Board on February 1, 1962, in accordance with the age limit provisions for board membership.

## OFFICERS

### CHAIRMAN OF THE BOARD

Frederick R. Kappel

### PRESIDENT

Eugene J. McNeely

### VICE CHAIRMAN OF THE BOARD

William C. Bolenius

### EXECUTIVE VICE PRESIDENTS

Paul A. Gorman

James E. Dingman

### VICE PRESIDENTS

Henry T. Killingsworth

Edward B. Crosland

Prescott C. Mabon

George L. Best

John J. Scanlon

Lloyd S. Miller

James W. Cook

Gordon N. Thayer

Claude M. Blair

Sanford B. Cousins

Wellington Powell

Richard R. Hough

Horace P. Moulton

Walter K. MacAdam

Lowell F. Wingert

### VICE PRESIDENT AND SECRETARY

Allen G. Barry

### VICE PRESIDENT AND COMPTROLLER

Alexander L. Stott

### TREASURER

L. Chester May



# Financial Summary

	1961	1960
Operating Revenues and Other Income . . . . .	\$8,592,860,000	\$8,110,217,000
Operating Expenses . . . . .	\$5,012,790,000	\$4,754,289,000
Taxes . . . . .	\$1,971,687,000	\$1,847,702,000
Interest Deductions . . . . .	\$282,796,000	\$257,271,000
Net Income . . . . .	\$1,325,587,000	\$1,250,955,000
Applicable to Minority Interests . . . . .	\$41,001,000	\$37,989,000
Applicable to A.T.&T. Stock . . . . .	\$1,284,586,000	\$1,212,966,000
<b>NET INCOME PER A.T.&amp;T. SHARE . . . . .</b>	<b>\$5.52*</b>	<b>\$5.53*</b>

\* Based on 232,627,000 average shares outstanding in 1961 and 219,234,000 in 1960.

**Dividends** on A. T. & T. stock were increased from 82½ to 90 cents a share quarterly, effective with the July dividend.

**Construction** expenditures in 1961 were \$2,700,000,000. Well over half of this was to handle new business. About a quarter was to replace plant and move facilities as customers' needs required. The remainder was to modernize service and improve operating efficiency.

**New Capital** of \$961 million was obtained through the offer to A. T. & T. share owners of one new share for each 20 held. Employees purchasing stock made payments of \$311 million. \$90 million of new money was obtained from the sale of debt issues, and \$395 million of outstanding debt was refunded at lower interest rates.

**A New Company**, the Pacific Northwest Bell Telephone Company, was formed to serve in the areas of Washington, Oregon, and northern Idaho where service was formerly provided by The Pacific Telephone and Telegraph Company.

## TAX FACTS

Taxes of \$1,972,000,000 paid by the System for 1961 were \$124,000,000 more than for 1960. They amounted to \$8.18 per A.T.&T. share, compared with profits of \$5.52 per share.

Taxes are the cost of government—and inevitably, a large part of the cost of telephone service. In 1961 they took 23 cents out of every dollar we received for service rendered, compared with 20 cents five years ago.

It might reasonably be concluded that the telephone is carrying its full share of the tax load. But *in addition*, our customers in 1961 paid \$680 million of Federal telephone excise taxes. Last spring, Congress again postponed termination of the excise tax on local service—this time until June 30, 1962. This discriminatory burden should be lifted.

in 1961...



**Telephones Increased** nearly 2,450,000 to a total of 63,178,000. Long distance conversations rose five per cent and overseas conversations 18 per cent.

**New Services** were well received. DATA-PHONE sets, which enable business machines to "talk" over regular telephone connections, nearly doubled in number. Revenues from "Wide Area Telephone Service," introduced a year ago for customers who wish to make many long distance calls for a fixed monthly charge, are now about \$38 million annually. There is strong demand for TELPAK service, for users who send large amounts of communications between specific points. We are installing thousands of new systems with pushbutton and speakerphone arrangements that make telephone service more convenient and flexible. New CENTREX systems, permitting direct dialing to and from extension phones in large organizations, already serve 400,000 telephones in business and government. Close teamwork between Bell System research and development, manufacturing, and operating organizations has speeded introduction of improved equipment and services.

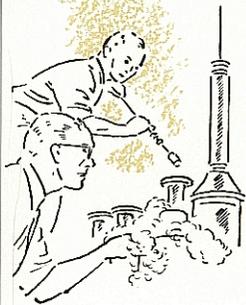
**Communication Satellites** were being made ready at Bell Laboratories for testing in space. Under agreement between your Company and the National Aeronautics and Space Administration, launching of the first of these experimental "Telstar" satellites is scheduled for the spring of 1962.

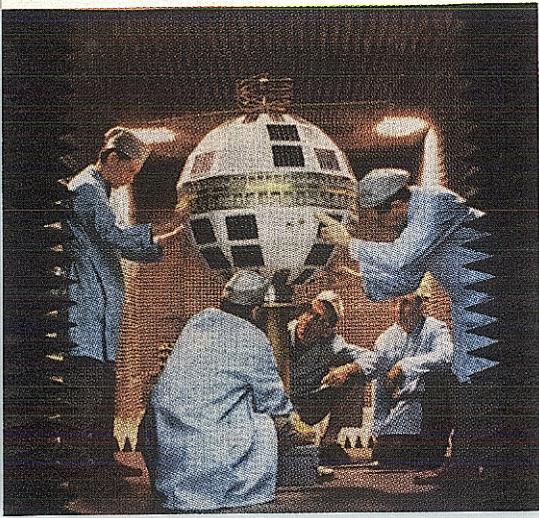
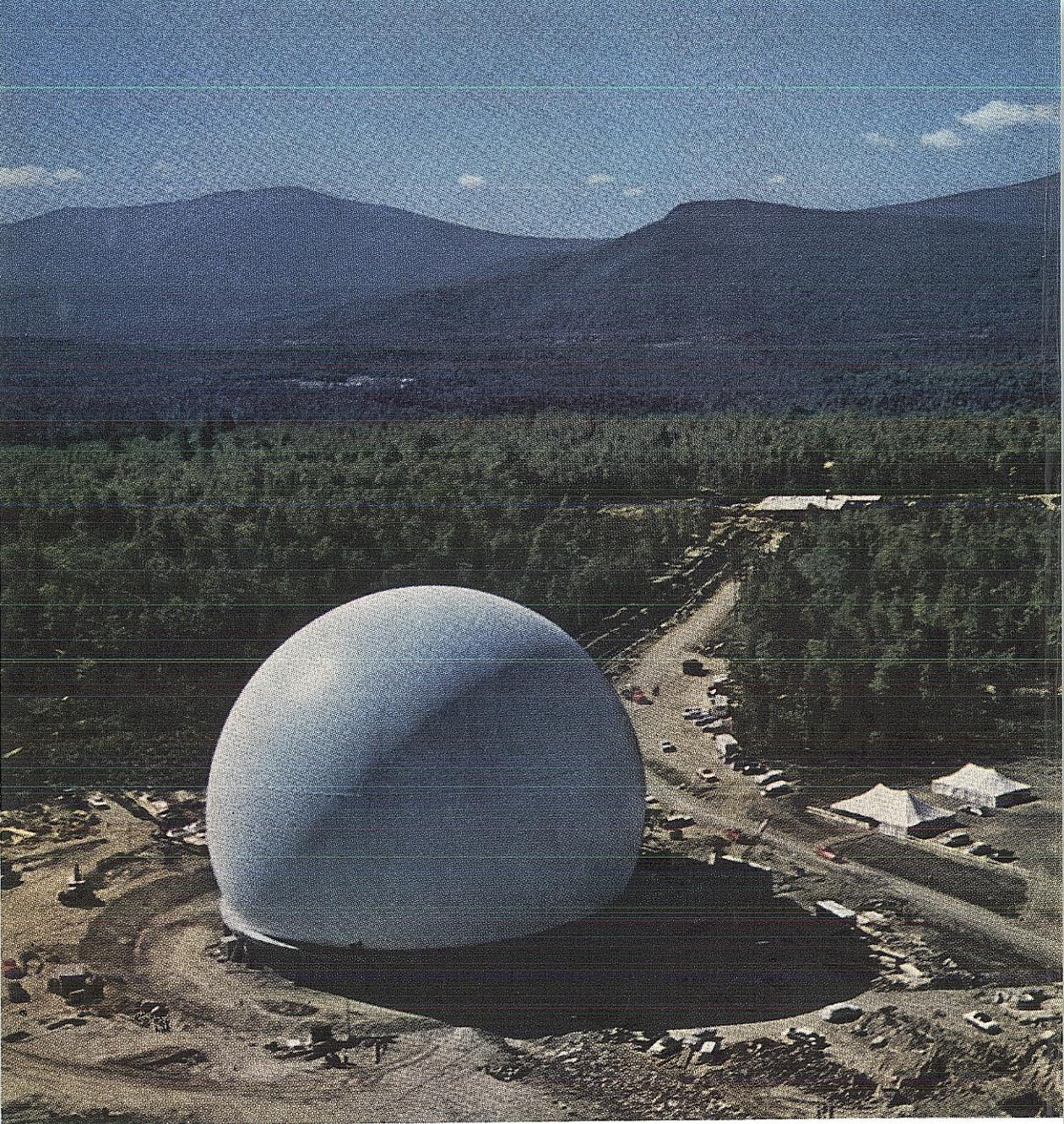
**Research** brought results of profound importance. Bell scientists invented "optical masers" that can *continuously* produce channels of pure light. Conceivably in the future such channels could carry far more communications than any radio system. Research on superconducting materials has opened the way to generating immensely powerful magnetic fields with small amounts of power. This will be of great

usefulness in communications, and will have great impact also on the development of nuclear energy—on equipment critical to the nation's defense—and on further investigation of the properties of matter.

**Defense Efforts** included: Continuing construction by our Long Lines Department of a transcontinental underground cable protected against blast. Successful tests of the Nike Zeus anti-missile system in preparation for full-scale testing in 1962. Special communication arrangements for instant worldwide military conference. Further DEW Line extensions in the Aleutians and across Greenland, and additional communications for the Ballistic Missile Early Warning System.

**Electronic Switching** of telephone calls has proved very successful in a trial conducted at Morris, Illinois, and work is proceeding on design and manufacture of a production-model Electronic Central Office. Direct Distance Dialing is now available to nearly two-thirds of our customers. Eight million telephones have been arranged for "all-number calling," with no letters—the best way to meet the need for more telephone numbers. We have introduced new plans to aid in transmitting educational television to schools. And, in 1961, we were preparing to convert teletypewriter exchange service to dial operation in 1962.





### **SPACE COMMUNICATION STATION**

Under the protective dome above, at Andover, Maine, we began assembly last fall of a huge ground antenna to be used in forthcoming "Project Telstar" satellite communication experiments. At left, one of the Bell System's experimental satellites is made ready for tests in special chamber.

# 1961 Annual Report

In the closing minutes of 1961, the balloon satellite *Echo*, which first demonstrated the feasibility of worldwide communications via space, made its 6,232nd orbit around the earth.

Even as the big balloon sailed on into 1962, an advanced type of experimental satellite, containing electronic equipment that can relay voice, data, and TV signals, was receiving ground tests at Bell Laboratories in preparation for testing in space.

This report will not be all about satellites. The satellite story does, however, illustrate several aspects of our business.

It is a growing business (the main value of satellites for commercial communications is that they promise to provide large numbers of worldwide channels to meet future needs).

It is a business based on continuous technical innovation and improvement.

Further, our business requires big investment for the long run, and not infrequently (as in the case of satellites) some years may pass before the investment will produce a profit. This emphasizes the importance of regulatory commissions allowing overall earnings that create financial strength and encourage look-ahead action.

Another point is that our services must

be as dependable as we can make them—and again the satellite story is illustrative. While satellite communications are being developed, we are also proceeding to build more ocean telephone cable systems. A link between the United States and Bermuda has just been completed. Late in 1962, our new cable ship *Long Lines* will lay a cable from Florida to Jamaica. Others will follow in 1963 and 1964—to South America, to England (our third transatlantic cable venture), and to Japan and other points across the Pacific.

The existence of both cable and satellite systems (as well as short-wave radio) would greatly increase the dependability of overseas communications for everyday use and also in case of national emergency. Our overland network already provides many alternate routes—a great asset for defense. Diversity of routes and facilities for overseas service will have similar value.

As previously mentioned, the prospect of satellite communications calls attention to the continuous technical progress that invigorates the business. Indeed, discoveries and developments made at Bell Laboratories—including transistors, solar cells that convert sunlight into electricity, long-lived “traveling-wave” electron tubes,



Western Electric and Bell Laboratories men work in Western's Columbus, Ohio, factory on design and manufacture of production model of electronic central office, offering many new features for convenience of service. Successful trial of experimental system at Morris, Illinois, ended early this year. Effort is now concentrated toward installation of the first regular office for commercial service by early 1965.

and special antennas and amplifiers—it is these that make high-quality service via satellites possible.

But the new arts we are using do not find application in space alone. They are permeating the entire communications system. New devices and new services are steadily being introduced. Of this, more later. The point we would like to stress first is that technical advances require, most of all, human proficiency in putting them to use. Examples of the educational activities involved are pictured on the

following pages. Much of this is in the field of engineering—but by no means all of it. For the impact of technical development falls heavily also on marketing: where will new kinds of equipment and service be most useful, and how shall they be sold? Likewise, telephone craftsmen and operating forces must learn the best ways of using new tools and techniques.

The satellite story prompts one more thought of greatest importance. This was well expressed recently by a share owner. He said, "Please don't get so wrapped up

in bouncing voices off satellites that you fail to put in my phone when I ask for it.”

Down-to-earth personal attention to every customer's every need is the first essential in all our work. This is what pays dividends to share owners. In 1961 we took additional steps to improve our understanding of customers' wants, and the quality of our response.

We made check after check of how we perform *from the viewpoint of the people we serve*. These checks included visits to homes and offices where service had just been installed or changed; inspections of public telephone arrangements; test calls by the thousand—long distance calls, calls to information operators, to our own business offices, to repair service bureaus. All these activities help us to see ourselves as others see us, and start action toward better performance.

Looking at our job in this way, we sincerely believe that today more people than ever before are getting better service than ever before—service faster and more convenient, and freer from errors, imperfections, and delays. But we are keenly aware that there are always many things left to improve, and to bring the improvements about we intend to keep, all through our organization, a lively dissatisfaction with things as they are.

### **Developments in Service**

Several of the most important have been mentioned on page 5. In addition:

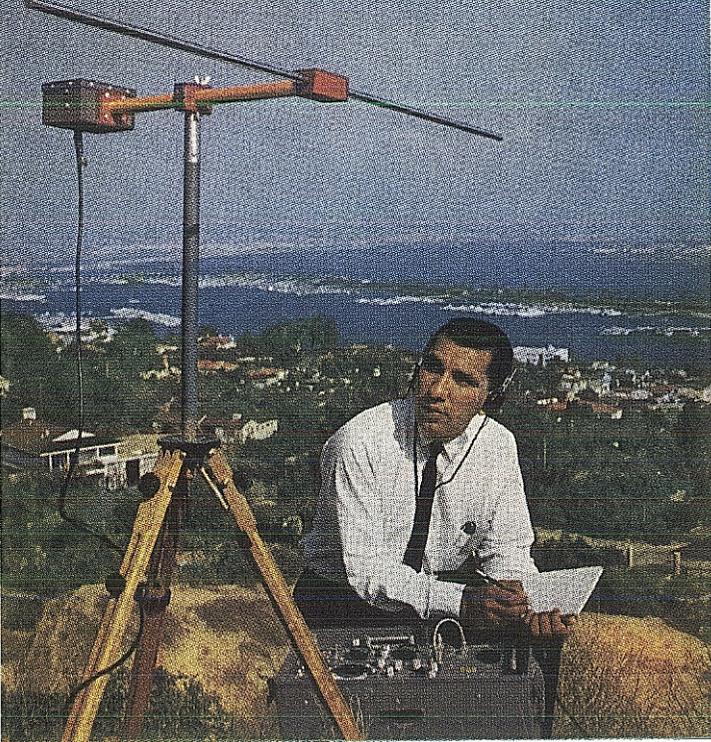
Steady growth continues in the number of homes that have individual-line tele-

phone service; and, correspondingly, the proportion of customers on four-party lines continues to decrease. Also, more and more people want two or more telephones in their homes. In 1961, the number of step-saving extension phones in service increased by nearly a million.

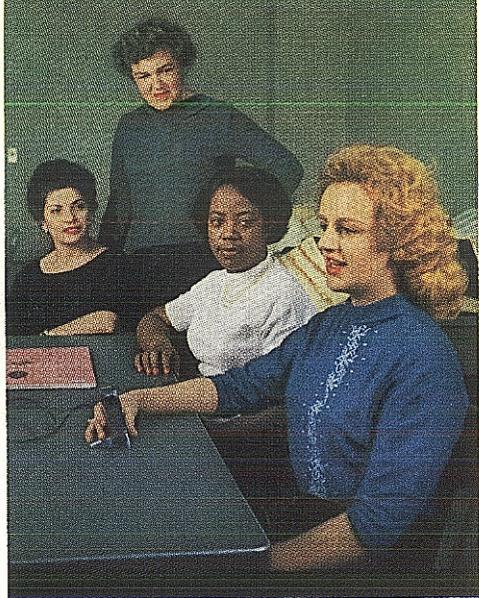
Last year too, in several more metropolitan communities, service arrangements were changed so that telephone users could call throughout wider nearby areas without toll charges. As suburbs grow, we continue to propose such changes in keeping with customers' needs and preferences, and with appropriate adjustments in rates.

New techniques are making possible data transmission at higher speeds. Some of the present data sets can send the equivalent of 2,500 words a minute over the regular telephone network; and communication channels that we have specially designed for the purpose are now carrying information between electronic computers at speeds of a half-million words a minute or more. We are also developing means to enable business machines to place calls (as well as receive them) automatically. All in all, the versatility of data communication services is growing in pace with fast-growing needs.

A new service planned for 1962, known as Wide Area Data Service, will be for customers who send many teletypewriter and data communications to scattered points. For a fixed charge per month (as in the case of Wide Area Telephone Service, first offered about a year ago) the customer will obtain an “access” line into



College graduates like this engineer work on learn-by-doing assignments that help test their qualifications for management careers; here, measuring strength of radio signals for "Bellboy" signaling service.



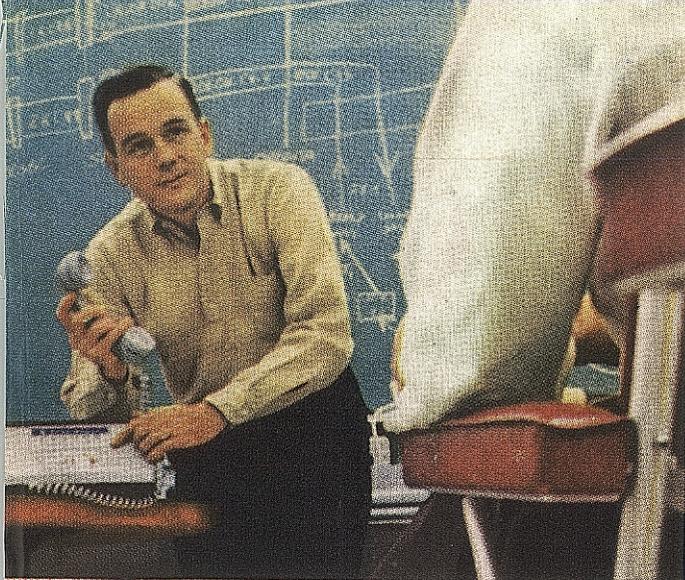
Voice training for information operators; as long distance dialing increases, information service becomes more important than ever, and we are working on various methods to improve its convenience.

## PREPARING OURSELVES FOR THE FUTURE

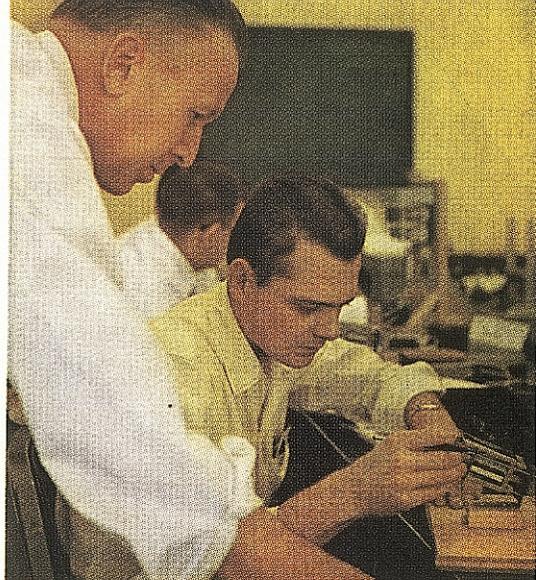
a nationwide dialing network. Over this he can send messages as desired throughout any of several designated geographic areas, the widest of which covers the whole United States except Alaska and Hawaii. Customers may buy either full-time service, 24 hours a day, or ten hours of use per month, with additional use charged by the hour.

Demand for the new TELPAK service introduced in 1961 has been very strong. This service is designed to meet the growing need of industry and government for large-volume communications between

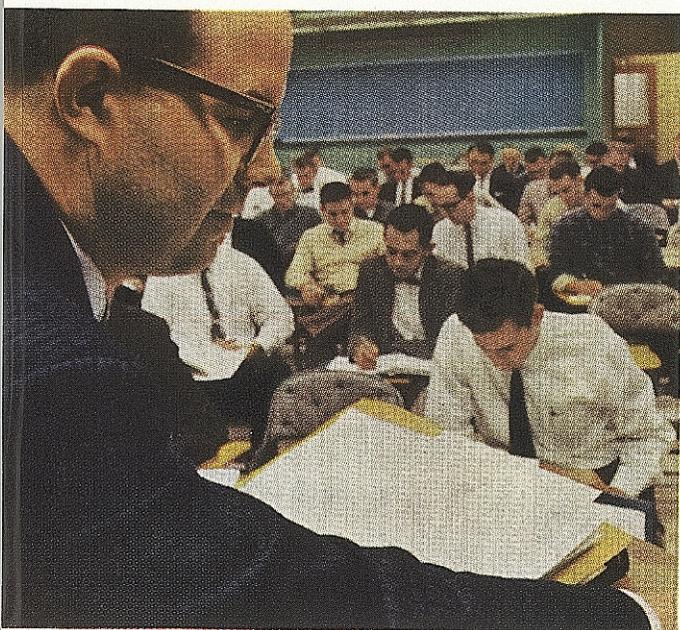
specific points. TELPAK provides broad communication highways of different capacities, which customers may use to send voice, data, or information in other forms. The Federal Communications Commission has been conducting hearings on both TELPAK and Wide Area Data Service, which may be considered competitive with services and facilities provided by others. We feel strongly that both these new services meet important public needs and that our failure to provide them would deny industry and government the benefits of progress in the communications art.



Instructor discusses with marketing men the uses of equipment for DATA-PHONE service. This "new-look" data set has telephone and dial for setting up connections so that business machines can "talk" to each other through the regular nationwide telephone network.



Telephone craftsmen study details of the modern central office apparatus it is their responsibility to maintain in top condition for dependable service.



The Communications Development Training program at Bell Laboratories, extending over three years, prepares graduate engineers for research and development work. Half the time is in classroom study. More than 1,800 men have taken part in this program since 1948. Since 1956 men who meet the requirements have received MS degrees.

### HELPING OTHERS, TOO

This Korean communications man has been studying teletypewriter equipment in Iowa. At the suggestion of the Agency for International Development of the State Department, Bell System people have welcomed and helped to train hundreds of men from other countries; foreign aid, one might call this activity, on our own home grounds.



Bell telephone company engineers at the University of Colorado, one of several schools where regional centers are being established for advanced study.



We are installing sidewalk public telephones in more and more cities. Some 10,500,000 telephones have been arranged so that calling numbers are recorded automatically when customers dial long distance calls. Also, various types of automatic dialers are being introduced. Radio-telephone service for air travelers, now provided over a wide corridor from the Atlantic to the Mississippi, will be offered from coast to coast within the next year. "Bellboy" service, which allows a person carrying a pocket receiver to be signaled by telephone, is available in 27 cities, and we shall install improved Bellboy systems in several metropolitan areas during 1962. This year also we shall introduce new console-type office switchboards that offer new features for convenience, are attractive in appearance, and save office space.

In 1961 we made further progress in cutting the time between orders for service and installation. New "quick-connect" devices are helping to simplify the everyday job of hooking up service in office or home. Fast, "plug-in" installation is on the way. And more and more new homes and apartments are being prewired when they are built, to eliminate the need for exposed telephone wiring.

An important goal ahead is to improve telephone service for automobiles—so that, for example, users will have automatic access to any one of several radio channels, and be able to dial local and long distance calls. However, broad expansion of this service will depend on the F.C.C. authorizing additional radio frequencies.

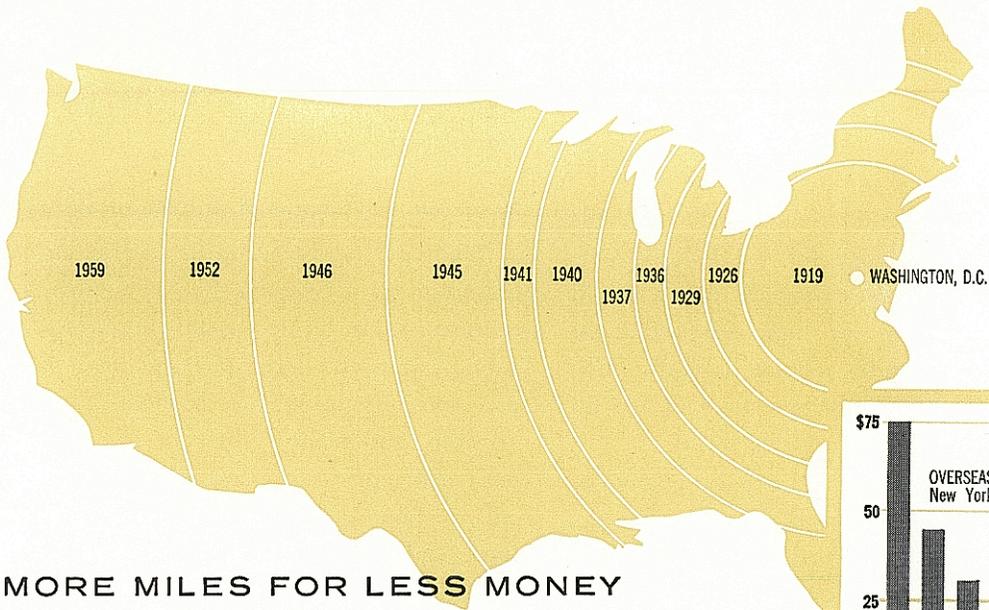
### **The Question of Satellite Ownership**

In 1961, and continuing in 1962, much public attention has centered on how a commercial satellite communication system should be organized and conducted. This question may well be decided during the present session of Congress. Briefly, our position is as follows:

To be most useful, a satellite communication system should be worldwide. Satellite ownership and operation should be shared among all participating countries. The United States portion should be owned and operated, under public regulation, by the communications companies authorized by the Government, now or in the future, to use satellites in providing service. The form of organization should be such as will encourage investment in satellites, promote the most rapid development of the system, and put direct and undivided responsibility on each participating company for the services it renders.

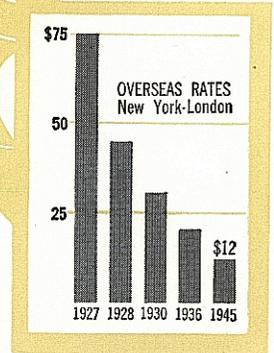
President Kennedy last July made a statement of policy favoring private ownership and operation of the U.S. portion of a satellite communication system, under Government regulation. He said too that there must be equitable sharing of the system and effective competition in the manufacture and supply of equipment the system will use.

We are certain that ownership and operation by the American international communications companies will get this job done faster, better, and at less cost than will any other scheme of ownership, especially Government ownership. We do



## MORE MILES FOR LESS MONEY

In 1919 a \$2.25 daytime interstate long distance call reached 350 miles. Today \$2.25 pays for a call from coast to coast. The map shows how the distance has lengthened through the years. Because of the change in the value of the dollar, the coast-to-coast call of today actually costs much less than the 350-mile call of 1919. Inset at right gives an example of reductions made in overseas telephone rates. The New York-London rate remains \$12 today, although the value of the dollar has declined 40 per cent since 1945.



not want to “dominate” satellite communications, as a few people have charged, and we have strongly emphasized our wish to proceed in a framework of public policy consistent with the principles outlined above. The business of the Bell System is simply to use properly and under regulation every improved means to provide growing service to meet growing needs.

Here it may be recalled that the System has cooperated successfully for 35 years with the communication agencies of foreign countries and territories (and today with 161 such agencies) to provide international telephone service by radio and cable. Satellites offer one more way of doing the same kind of job; and we should like to use them—along with other companies so authorized—under arrangements that

put full responsibility on ourselves for the service we provide. This is essential to the rendering of the best service possible.

Nineteen sixty-two will be a critical year in the testing of communication satellites. We hope it will be decisive also in the creation of a satellite management organization enabling American free enterprise to lead the way in this peaceful use of space.

### Views on Taxation

The impact of taxation on both the Company and its share owners has been a matter of continuing concern.

In 1961 we testified in Washington against proposals to repeal the \$50 dividend exclusion and 4% dividend credit on share owners’ personal income tax returns. Repeal of these provisions would, we

believe, discourage many people, and particularly those of modest means, from investing in corporate enterprise.

Second, we pointed out that the methods proposed last year for withholding personal income taxes from dividends would cause hardship for many thousands of share owners who are not liable for such taxes. They would have to wait for refunds of money they never owed.

Third, we advocated a basic change in the taxing of corporate income. The tax laws limit depreciation deductions to the *number* of dollars originally invested. With the drastic decline in the value of the dollar brought about by years of inflation, the deductions allowed do not recover the *purchasing power* of the dollars originally invested. The result is that taxable income is overstated. "Income" taxes are higher than they should be because under the label of income, capital is being taxed.

From time to time various modifications of the law—for instance, "accelerated" depreciation, "credits" for investment in new equipment, and so on—have been made or proposed. None of them gets to the heart of the matter, which is the decline in the value of the dollar. The sound answer, in our judgment, is for the law to permit *price level depreciation*—meaning, depreciation deductions based on the number of dollars originally invested, *adjusted* year by year for changes in the purchasing power of the dollar. Consistently, also, we believe regulatory commissions should allow for rate-making pur-

poses the full amount of depreciation so determined.

### **Research, Development, and Manufacture**

Adequate depreciation is particularly important in a business like ours, which requires such large capital investment. Equally important, the physical plant we invest in must be built as economically as possible, and always with an eye to its most efficient use. Continuous research and technical development, teamed in time and purpose with manufacturing effort and the telephone companies' programs to improve service, are essential. Better service comes sooner, and at less cost to users, because Bell Laboratories, Western Electric, and the Bell operating companies work together in the same organization and toward the same goals.

Before the design of new equipment is completed, the people who will make it are already at work on the manufacturing process, and the telephone companies are organizing to put it to use. This synchronized overlapping moves new arts into use with great speed. It also makes for economy, because the joint effort is to get the best product *and at the same time* the most efficient process of manufacture.

To this end more than 1,700 Bell Laboratories people work at Western Electric factories, and many Western Electric people at Laboratories locations. Teams of telephone men, designers from the laboratory, and manufacturing engineers coordinate the development, production, and installation of new transistorized trans-



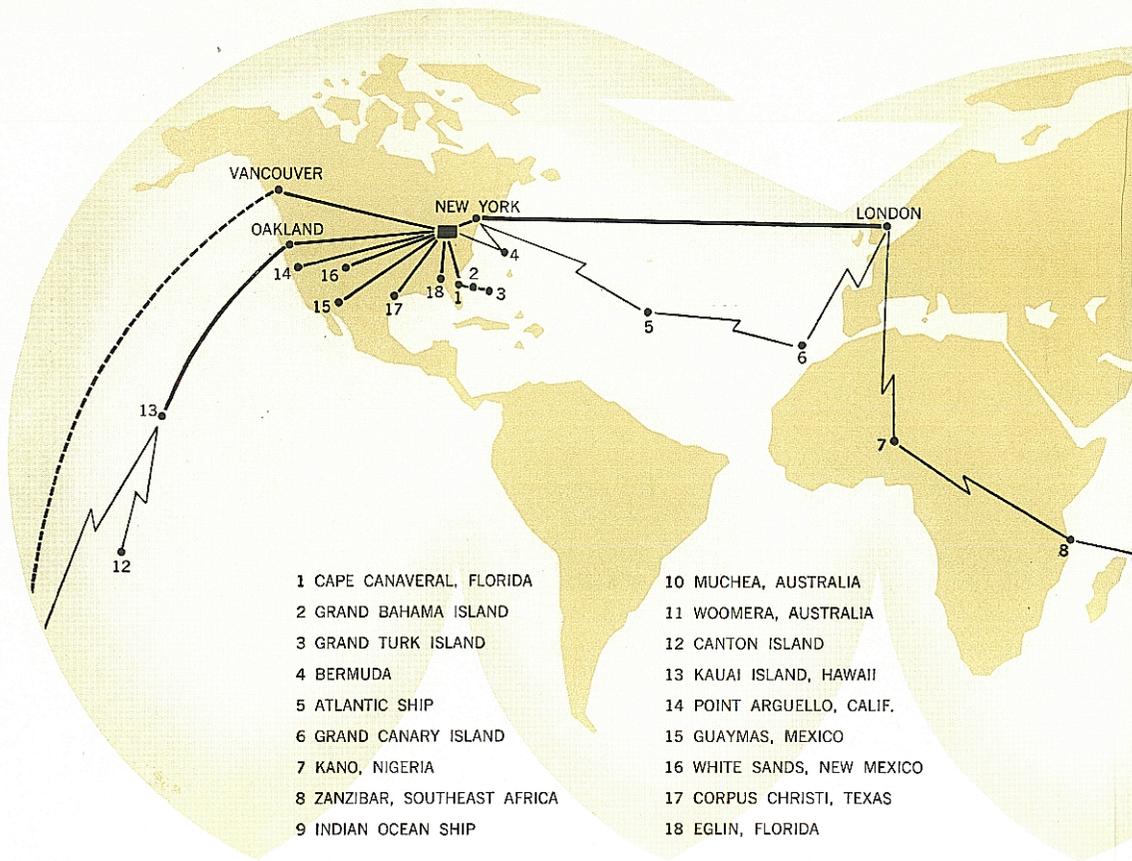
Market trials indicate that people like the attractive, roomy new booth and experimental Princess Telephone shown above. On the latter, pushbuttons for "touch-tone" signaling replace the dial. This system requires adding special equipment in the central office, and we are continuing to study the costs and potential market. The curved door of the booth slides open and closed easily, and there is good lighting and comfortable ventilation. The coin telephone is mounted in a corner panel.

mission systems, electronic switching apparatus, and other projects. As our ship this year starts laying ocean telephone cables that have three times the capacity of the first cables laid six years ago, designers are already at work on a possible future system still more efficient, and Western Electric perfects techniques for manufacturing the new devices that would be used. As telephone men move ahead with construction of a transcontinental buried cable system protected against blast, Western Electric people move into its underground buildings to install equipment. So it goes. The same meshing of effort and skills, teamed in time and purpose, applies to other new services and improvements already referred to: the new "Wide Area" telephone and data services; automatic recording of calling

numbers when customers dial long distance calls; the approaching conversion of teletypewriter exchange service to dial operation; and many others.

Underlying this joint effort, basic research at Bell Laboratories constantly gives us new tools to work with. For example, it seems likely that in another decade or less, we shall have available for overland communications the hollow pipe "waveguide," offering ten times the capacity of existing transmission systems. Equipment for these highways of the future would employ vast numbers of transistor-like devices coming out of our work in the electronics of solid materials—devices of a kind we are already using profusely to improve wire and radio transmission and hold down costs.

Invention of the transistor by Bell

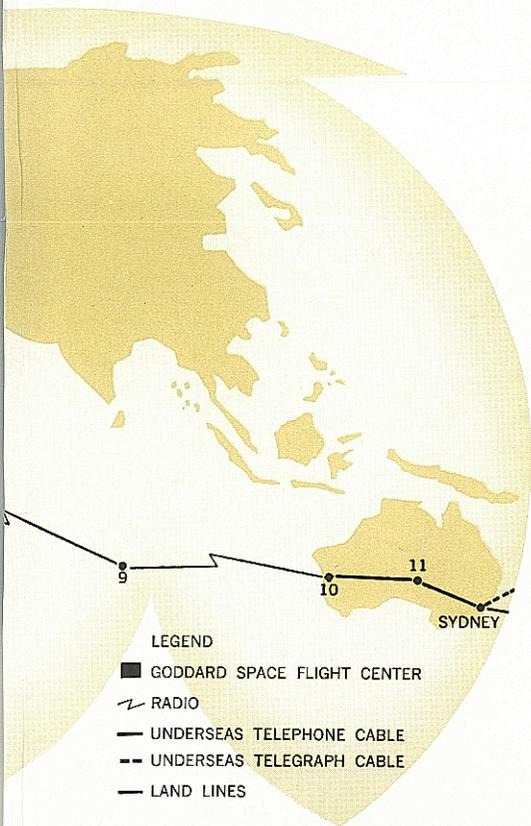


## COMMUNICATING WITH MEN IN SPACE

Map shows the worldwide network for tracking and maintaining constant communications with Project Mercury astronauts. The numbered stations communicate successively with the capsule, and also of course with each other. The complete system was designed and built by an industrial team headed by Western Electric, which, with Bell Laboratories, was responsible for dependability of communications. The network was delivered to the National Aeronautics and Space Administration early in 1961.

Laboratories scientists some years ago led to development of the semi-conductor industry, spurred great advances in computers and business machines, and stimulated widespread research in the science of solids. At the same time, Government needs for defense and for space exploration have further stimulated broad industrial effort in electronics. Our scientists have continued to lead in research into the behavior of solids, and in 1961 they

made notable further advances. New understanding of materials produced the first "solid-state" optical maser that can be operated continuously. This and parallel development of the gas maser (illustrated on the inside front cover) encourage us to think that we shall learn to communicate along beams of pure light; such a system would have a capacity thousands of times greater than any transmission system of today. A second major advance



was the discovery that certain superconducting materials can be used to create more powerful magnetic fields than have ever been practically possible before. This will not only have many uses in communications; it may well overcome one of the major obstacles to the generation of thermonuclear power.

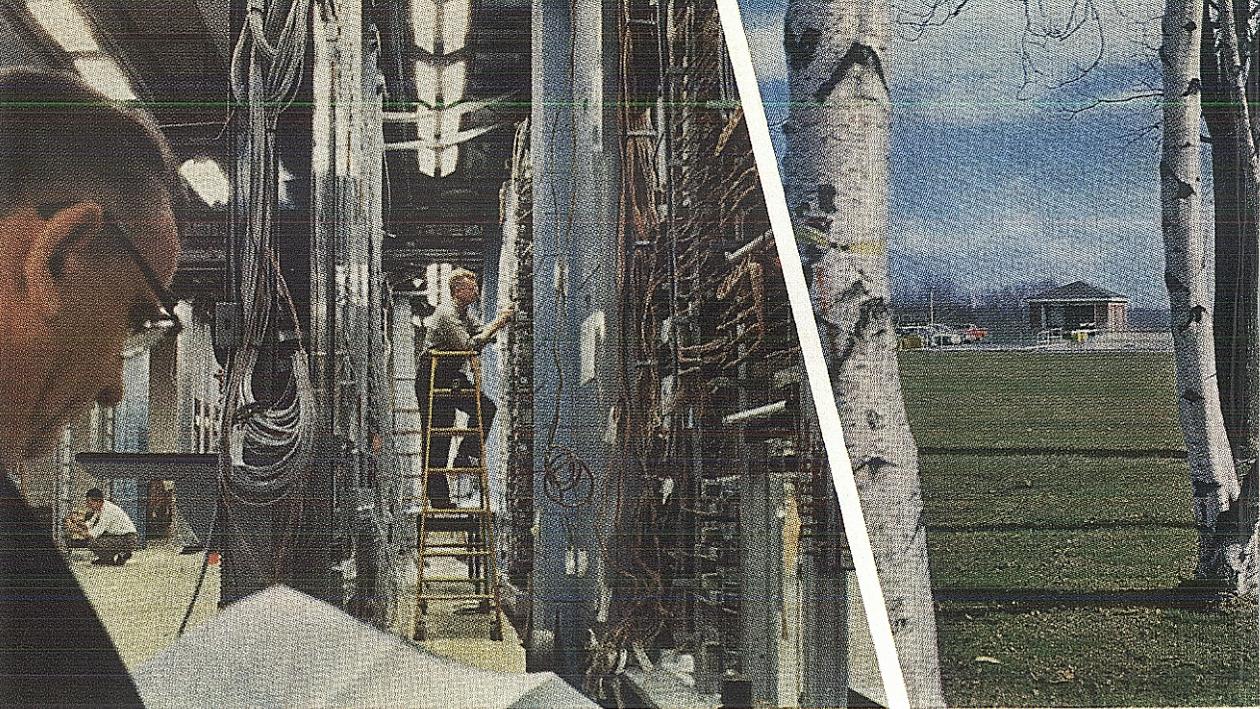
### Western Electric Results

Western Electric sales in 1961 totaled \$2,608,000,000, slightly below last year's \$2,641,000,000, and earnings were \$122,244,000 compared with \$124,490,000. Sales to the Bell System were \$1,917,000,000; most of the balance was in sales to the Government.

During the year Western Electric purchased some \$1,200,000,000 of raw materials, supplies, manufactured equipment, and services from about 40,000 other concerns throughout the United States. On products it manufactured for the Bell System, the company reduced prices by \$34 million on an annual basis. Today the price level for these products is lower than in 1950, although Western's wage rates have risen 71 per cent in the same period and material costs 27 per cent.

The drive for increased efficiency and lower costs has many aspects. Improvements in manufacturing processes effected in 1961 will reduce manufacturing costs by about \$20 million a year. Further savings were accomplished in methods of distributing equipment to the telephone companies and repairing used equipment. Distribution costs last year were \$11½ million less than they would have been if the methods of ten years ago were still being used, and the cost of repair work was nearly \$16 million less.

One more phase of Western Electric-telephone company teamwork may be mentioned. Western Electric equipment engineers translate telephone company needs for central office apparatus into detailed specifications. Now Western has begun decentralizing this job to give each telephone company a single nearby point of contact for all its equipment engineering. This closer association will further increase efficiency and reduce costs. Just as an indication of the scope of equipment engineering work, it requires more than



Installation of equipment in reinforced concrete underground building of transcontinental buried cable system now under construction. This room is deep under the area pictured on the right. The system will run more than 3,700 miles. It has 959 amplifier stations, and nine buildings where it connects with other communication routes—everything in the entire system is under the earth's surface.

20 million blueprints a year, and micro-filming of the files, currently under way, will result in savings of \$9 million a year.

### **Teamwork for Defense**

Our work for defense, no less than the rendering of service to the general public, demands close teamwork. Thus, while the A. T. & T. Long Lines Department builds a buried cable system and Western Electric installs equipment in underground stations, Bell Laboratories engineers make basic studies on the further protection of communications facilities to insure continuity of essential service—and also develop plans for microwave radio systems that would use aircraft, flying courses unpredictable by the enemy, as relay points.

In 1961 Bell System people designed,

built, and placed in service for the Air Force new facilities that bring the westernmost tip of the Aleutian Islands into instant communication with North American Air Defense Command headquarters in Colorado. To the east, they completed electronic and communications installations that extend the DEW Line across Greenland to Iceland. They also completed on schedule communication networks reaching back from Ballistic Missile Early Warning System (BMEWS) radar outposts in Greenland and Alaska. They provided systems for the Defense Communications Agency that make possible, in a matter of seconds, worldwide conferences between Washington and the heads of United States commands. They continued research and development work on a new Universal

## COMMUNICATIONS FOR DEFENSE

### A Statement of Bell System Policy

The Bell System provides many important communication services. Of supreme importance, however, are those for the defense of the United States. We are proud of the privilege to take part in providing such services and accept the obligations entailed:

- to exercise imagination in anticipating changing defense needs and in developing facilities and methods to meet them.
- to make our services increasingly useful, versatile, and dependable.
- to maintain for these purposes an organization of highest competence capable of functioning effectively at all times including extreme emergency.

The Bell System is dedicated to the principle that  
*In communications, defense of the nation comes first.*

Integrated Communications (UNICOM) system for the Army Signal Corps that will be capable of handling voice, teletype-writer, data, and facsimile communications for our military forces throughout the world. They extended command and control communications for the Strategic Air Command. They also continued to assist the Air Force in building and testing the SAGE system for defense against aircraft.

All SAGE sectors in the United States are now in operation, with work continuing to effect improvements.

Development of the Army's Nike Zeus anti-missile missile system is moving ahead rapidly. Several successful test firings were made in 1961, and in December a Zeus missile successfully intercepted a Nike Hercules missile used as a test target. Also, a Zeus radar under test at Ascension



For the rebuilding of Bell System plant damaged by hurricane Carla, Western Electric rushed into the storm-stricken area more than twice the amount of telephone cable pictured here at Western's distributing house in Dallas. Cable was only one of the many supplies promptly delivered in quantity.

Island has successfully tracked targets launched from Cape Canaveral. At Kwajalein Island in the Pacific, a Zeus system is being readied for 1962 tests against target missiles fired from California.

Nike tracking and guidance systems are designed and produced by Bell Laboratories-Western Electric joint efforts. An important outgrowth of this work is the "command guidance" system used for guiding Titan I missiles and also for guiding many satellites into orbit. (This coming spring, the system will guide the *Telstar* communications satellite.) It is noteworthy, and we are proud to report, that in the more than 70 shots fired there has been *no* guidance failure.

In 1961, for the twelfth year, Sandia Corporation, a subsidiary of Western Electric, continued to manage the Sandia and Livermore ordnance laboratories of the Atomic Energy Commission.

#### **It All Depends on People**

On September 11, 1961, hurricane Carla struck the Texas coast and spread destruction over a wide area inland. Carla put 166,000 Bell System telephones out of service and crippled more than 1,200 long distance lines. But within a week, substantially normal service had been restored.

How was this accomplished? By concerted action before as well as after the storm. Western Electric, anticipating what

was coming, organized ahead to deliver mountains of equipment. More than a thousand telephone people hastened from other parts of the Southwestern Bell Company, by plane, train, and truck, to help put the service back. Preparedness, organization, materials, money (Carla cost the Bell System \$6½ million)—all played their part. But most important were the traditional spirit of service and human determination to do the job well.

These are the essential qualities for progress and we are ever mindful of them. For individual acts of outstanding competence and service in emergencies, 38 telephone men and women last year received Vail medal awards. Also, a group award has been made honoring Southwestern Bell employees for their noteworthy service during and after the hurricane. Our service tradition was further emphasized in 1961 when the Telephone Pioneers of America observed the 50th anniversary of their Association's founding. More than 200,000 men and women, active and retired, are Pioneers. They have all served 21 years or more in the telephone industry, and through community service and social fellowship they maintain and nourish the spirit that makes this business what it is.

We believe the performance of Bell System people was never better than in 1961. Equally important, as we said earlier, strong will and action to improve our job are stirring throughout the organization. This includes a broad range of activities aimed at helping members of the

business to look around and look ahead—to think wider and see farther. Policies are under constant discussion. Information about new developments is circulated as promptly as possible. Study courses (in addition to those indicated on page 10) deal with financial problems, with problems of supervision, with the setting of goals and the communication of ideas. In a business so closely affected by government at local, state, and national levels, it is essential that employees and managers be alert to public policies and issues. Furthermore, we who provide service of such importance to society must think and act not simply as "employees" or "managers," but as citizens actively participating in community affairs.

Employment costs continued to increase in 1961. Wages totaled \$4,312,000,000. Agreements negotiated with the unions provided for adjustments in wage rates comparable with changes in community wage levels. In addition to wages, the Bell companies spent \$491,000,000, or 11 per cent of their payrolls, for benefits. This sum included payments into pension trust funds; sickness, accident, and death benefits; group life and extraordinary medical expense insurance premiums; and Federal taxes for Social Security old age and disability insurance. The companies pay the full cost of their pension and benefit programs except for group life insurance, toward which employees also contribute. At the end of the year 29,281 men and 34,421 women were receiving pensions paid from the pension trust funds.

## **Automation Requires Careful Human Planning**

Of great importance to employees, customers, and share owners alike is the process of automation. In discussing this it might be well to look back as well as ahead.

What is today called automation has been going on in the Bell System for more than 40 years, ever since dial service began. By the end of 1961, 98 per cent of our telephones were dial-operated and customers were also dialing many of their long distance calls. Yet with the growth of the business—which dial service has vastly stimulated—we now have two and a half times as many employees as 40 years ago, including many more operators.

However, it has been necessary to anticipate changing job requirements in particular places at particular times, and constantly plan ahead to meet the human problems. So it will be also in the future. The introduction of high-speed electronic computers, for example, will require this.

Unquestionably, such computers in the years ahead will help us improve the accuracy and promptness of clerical work in all departments. And there will be many other benefits. For example, management will get information that has never been available before to aid in making decisions. The advantages to customers in the quality and cost of service will be large. So it is clear that computers should and must be used.

Large- and medium-scale computers are now being used in many Bell companies

and more will be introduced in the future. However, this will be a gradual process through the years. We do not anticipate a general permanent reduction in employment. Fluctuations in the number of people at work in the business will undoubtedly occur. But over the long term, as the public continues to use more service, we expect employment will increase. Equally important, we are confident that in converting to computer operation, careful planning will prevent adverse effects. And in this effort, as in everything else, it will be the abilities of *people* that will make the program a success.

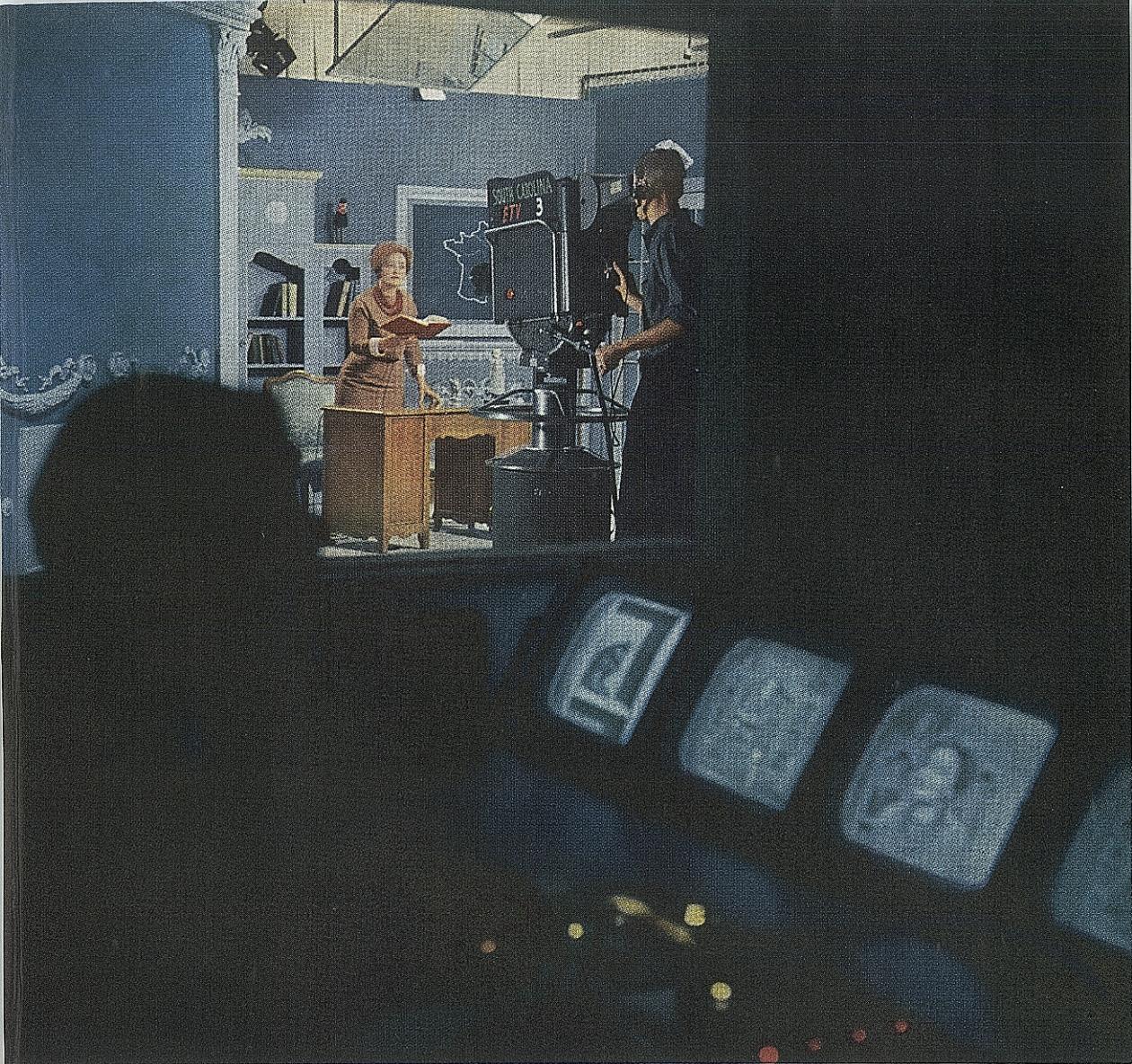
### **To Sum Up . . .**

This has been a year of substantial growth. Earnings have supported the increased dividend. We have made improvements in service. Technical advances have continued to increase the efficiency, versatility, and reliability of Bell System plant, both for everyday use and in readiness for emergency. Employees in all branches of the business have worked together effectively and well. Achievements in research have revealed new horizons.

We look to the future with confidence and enthusiasm. On the 50th anniversary of the Telephone Pioneers, last September, it was said:

“We shall build a greater communications system in keeping with the needs of a new era in man’s history—and a service organization of broad vision unparalleled anywhere in the world.”

As we strive toward such a goal, we



Educational television center in Columbia, S. C., serves schools over statewide "closed-circuit" network provided by Bell and Independent telephone companies. (The lady is teaching French.) We believe new plans introduced in 1961 for transmitting educational TV will strongly encourage progress in this field.

Students and teacher observe wave behavior demonstrated by machine designed at Bell Laboratories to aid teaching in physics. This and other materials we make available to aid study in science have been enthusiastically welcomed by educators all over the country.



## Bell System Facts in Figures

	1961	1960	1950
Telephones .....	63,177,957	60,735,073	35,343,440
Average Daily Conversations†			
Local .....	216,289,000	209,488,000	135,982,000
Long Distance .....	10,133,000	9,605,000	4,800,000
Total Plant* .....	\$25,892,817	\$24,072,499	\$10,101,522
Operating Revenues* .....	\$8,414,426	\$7,920,454	\$3,261,528
Employees			
Telephone Companies .....	566,648	580,405	523,251
Western Electric Company.....	145,781	143,352	73,458
Bell Tel. Laboratories.....	13,331	12,009	5,757
A. T. & T. Share Owners.....	2,049,213	1,911,484	985,583

†ON BASIS OF PRESENT CLASSIFICATION BETWEEN LOCAL AND LONG DISTANCE  
\*THOUSANDS OF DOLLARS

are grateful for the confidence evidenced by more than 2,000,000 share owners. In the years ahead, as the business grows, large amounts of new capital will be required, and experience shows that to obtain it we shall need the support of both present and new investors. To earn this support we shall continue to do our level best to increase revenues, make the business more efficient, and produce profits that are in good relationship with the profits of well-managed companies in other industries.

In the last few years representatives of the Bell companies have called on many of the share owners in a continuing pro-

gram to get their views. This is helpful to us and we hope that those of you whom we visit like it too. In any case, whether or not you find yourself on our calling list, we always welcome your thoughts and suggestions, and we pledge our best efforts to continue building the trust you have placed in us.

For the Board of Directors,



Chairman of the Board

February 14, 1962

# Financial Statements

THE BELL SYSTEM CONSOLIDATED FINANCIAL STATEMENTS on the following pages consolidate the accounts of American Telephone and Telegraph Company and its principal telephone subsidiaries (listed on page 32). These companies maintain their accounts in accordance with the Uniform System of Accounts prescribed for telephone companies by the Federal Communications Commission.

For the companies consolidated, all significant intercompany items are excluded from these statements. Investment in subsidiaries not consolidated as stated in the Balance Sheets includes the proportionate interest in the net assets of such subsidiaries, and the proportionate interest in their earnings is included in the Income Statements.

Western Electric Company, the principal subsidiary not consolidated, manufactures most of the telephone equipment and apparatus used by the companies consolidated and sells to them materials and supplies procured from others. Contracts with the telephone companies provide that Western's prices to them shall be as low as to its most favored customers for like materials and services under comparable conditions. Items purchased from Western by the telephone companies are entered in their accounts at cost to them, which includes the return realized by Western on its investment devoted to this business.

A. L. STOTT

Vice President and Comptroller

## Certificate of Audit

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 principal telephone subsidiaries as of December 31, 1961 and 1960 and the related statements of income and retained earnings for the years then ended. Our examination was made in accordance with generally accepted auditing standards, and included such tests of the accounting records of each of the companies consolidated and such other auditing procedures as we considered necessary in the circumstances. We have been furnished consolidated financial statements for the years 1961 and 1960 of the Company's principal nonconsolidated subsidiary, Western Electric Company, Incorporated and consolidated subsidiaries, with report thereon by other independent accountants.

In our opinion, the consolidated financial statements (pages 25 to 30 and page 32) present fairly the consolidated position at December 31, 1961 and 1960 and the consolidated results of operations for the years then ended of American Telephone and Telegraph Company and its principal telephone subsidiaries, in conformity with generally accepted accounting principles applied on a consistent basis.

New York, N. Y., February 14, 1962

LYBRAND, ROSS BROS. & MONTGOMERY

# Bell System

*American Telephone and Telegraph*

## ASSETS

	(Thousands of Dollars)	
	December 31, 1961	December 31, 1960
<b>TELEPHONE PLANT AND OTHER INVESTMENTS</b>		
Telephone Plant (land, buildings and equipment)—at cost		
In service .....	\$25,307,318	\$23,475,344
Under construction .....	563,534	575,512
Other (principally held for future use).....	21,965	21,643
	<u>25,892,817</u>	<u>24,072,499</u>
Less: Depreciation reserve .....	5,584,030	5,247,226
	<u>20,308,787</u>	<u>18,825,273</u>
Other Investments		
Investment in subsidiaries not consolidated (a).....	1,292,970	1,184,700
Other (principally in associated telephone companies)— at cost .....	130,783	117,914
	<u>21,732,540</u>	<u>20,127,887</u>
 <b>CURRENT ASSETS</b>		
Cash and temporary cash investments.....	1,516,168	1,172,866
Receivables—less reserve for uncollectibles.....	1,040,565	951,368
Material and supplies.....	95,846	95,234
	<u>2,652,579</u>	<u>2,219,468</u>
 <b>PREPAYMENTS AND DEFERRED CHARGES</b>		
Prepayments (principally directory expenses and taxes) ...	134,165	130,892
Deferred charges.....	98,469	80,036
	<u>232,634</u>	<u>210,928</u>
<b>Total Assets</b> .....	<u><u>\$24,617,753</u></u>	<u><u>\$22,558,283</u></u>

For notes, see page 30

# Balance Sheets

*Company and its Principal Telephone Subsidiaries Consolidated*

## LIABILITIES

(Thousands of Dollars)  
December 31, 1961      December 31, 1960

### CAPITAL STOCK EQUITY

American Telephone and Telegraph Company		
Common stock—par value (\$33½ per share).....	\$7,864,313	\$7,450,616
<i>Authorized 300,000,000 shares; outstanding at December 31, 1961, 235,929,393 shares.</i>		
Common stock installments (b).....	418,082	172,203
Premium on common stock.....	2,926,828	2,298,054
Retained earnings—see page 29.....	3,298,955	2,841,481
APPLICABLE TO A. T. & T. CO. STOCK.....	<u>14,508,178</u>	<u>12,762,354</u>

### Subsidiaries Consolidated—stocks held by public

Common stock .....	422,916	352,658
Preferred stock .....	17,904	17,904
Retained earnings .....	<u>56,374</u>	<u>47,831</u>

### APPLICABLE TO STOCKS OF SUBSIDIARIES HELD BY PUBLIC .....

497,194	418,393
<u>15,005,372</u>	<u>13,180,747</u>

FUNDED DEBT (c).....	<u>7,270,690</u>	<u>7,232,239</u>
----------------------	------------------	------------------

### CURRENT LIABILITIES

Notes payable .....	42,000	42,000
Accounts payable .....	733,563	642,085
Advance billing for service and customers' deposits.....	210,947	191,963
Dividends payable .....	213,783	185,648
Taxes accrued .....	1,028,724	956,642
Interest accrued .....	72,366	72,273
	<u>2,301,383</u>	<u>2,090,611</u>

### DEFERRED CREDITS

Unextinguished premium on funded debt—net.....	22,676	39,330
Other deferred credits.....	17,632	15,356

	<u>40,308</u>	<u>54,686</u>
<b>Total Liabilities.....</b>	<u><u>\$24,617,753</u></u>	<u><u>\$22,558,283</u></u>

# Bell System

## American Telephone and Telegraph

	(Thousands of Dollars)	
	Year 1961	Year 1960
<b>OPERATING REVENUES</b>		
Local service .....	\$4,797,528	\$4,547,409
Toll service.....	3,217,300	2,996,436
Miscellaneous .....	440,101	414,280
<i>Principally from directory advertising.</i>		
Less: Provision for uncollectibles.....	40,503	37,671
<b>Total Operating Revenues.....</b>	<u>8,414,426</u>	<u>7,920,454</u>
<b>OPERATING EXPENSES</b>		
Maintenance .....	1,433,162	1,373,519
Depreciation .....	1,099,940	1,007,840
<i>Representing approximately 4.7% of average investment in depreciable plant.</i>		
Traffic .....	871,087	887,739
<i>Costs, principally operators' wages, incurred in the handling of messages.</i>		
Commercial .....	713,898	670,680
<i>Costs incurred in business relations with customers; public telephone commissions; cost of directories and advertising.</i>		
Accounting .....	304,564	288,713
Development and research (d).....	64,795	40,861
Provision for employees' service pensions.....	221,459	211,350
Employees' sickness, accident, death and other benefits....	93,653	78,608
Other operating expenses.....	299,888	279,221
Less: Expenses charged construction.....	89,656	84,242
<b>Total Operating Expenses.....</b>	<u>5,012,790</u>	<u>4,754,289</u>
<b>Net Operating Revenues.....</b>	<u>3,401,636</u>	<u>3,166,165</u>
<b>OPERATING TAXES</b>		
Federal income .....	1,215,280	1,143,634
State, local and social security.....	756,407	704,068
<b>Total Operating Taxes.....</b>	<u>1,971,687</u>	<u>1,847,702</u>
<b>Net Operating Income (carried forward)</b>	<u>\$1,429,949</u>	<u>\$1,318,463</u>

For notes, see page 30

# Income Statements

*Company and its Principal Telephone Subsidiaries Consolidated*

	(Thousands of Dollars)	
	Year 1961	Year 1960
<b>Net Operating Income</b> ( <i>brought forward</i> ).....	\$1,429,949	\$1,318,463
<b>OTHER INCOME</b>		
Proportionate interest in earnings of subsidiaries not consolidated (e).....	124,426	126,606
Miscellaneous (principally interest (f))—net.....	54,008	63,157
<b>Income Available for Fixed Charges</b> .....	<u>1,608,383</u>	<u>1,508,226</u>
<b>FIXED CHARGES</b>		
Interest on funded debt.....	266,942	243,218
Other interest.....	15,854	14,053
<b>Net Income</b> .....	<u>1,325,587</u>	<u>1,250,955</u>
<b>NET INCOME APPLICABLE TO MINORITY INTERESTS</b> .....	41,001	37,989
<b>Net Income Applicable to A. T. &amp; T. Co. Stock</b> .....	<u>\$1,284,586</u>	<u>\$1,212,966</u>
<b>CONSOLIDATED EARNINGS PER SHARE</b> .....	\$5.52	\$5.53
<i>Based on average A. T. &amp; T. Co. shares outstanding, 232,627,389 in 1961 and 219,233,530 in 1960.</i>		

## Statements of Consolidated Retained Earnings Applicable to American Telephone and Telegraph Company Stock

	(Thousands of Dollars)	
	Year 1961	Year 1960
<b>BALANCE AT BEGINNING OF PERIOD</b> .....	\$2,841,481	\$2,354,762
Net income applicable to A. T. & T. Co. stock.....	1,284,586	1,212,966
Miscellaneous additions.....	2,118	2,104
<b>TOTAL ADDITIONS</b> .....	<u>1,286,704</u>	<u>1,215,070</u>
Dividends on A. T. & T. Co. stock.....	820,680	723,471
Organization and capital stock expense charged off.....	4,613	2,293
Miscellaneous deductions.....	3,937	2,587
<b>TOTAL DEDUCTIONS</b> .....	<u>829,230</u>	<u>728,351</u>
<b>BALANCE AT CLOSE OF PERIOD</b> .....	<u>\$3,298,955</u>	<u>\$2,841,481</u>

# Notes to Bell System Financial Statements

(a) Comprises at December 31, 1961 and December 31, 1960, respectively, \$887,981,000 and \$832,194,000 representing cost of investments in subsidiaries not consolidated (see page 32), and \$404,989,000 and \$352,506,000 representing proportionate interest in the net assets of these subsidiaries in excess of such cost.

(b) Installment payments and interest applicable to shares under elections to purchase by employees of the Company and its subsidiaries under the Employees' Stock Plan approved by stockholders in 1958. The Plan provides that an employee may cancel his election to purchase in whole or in part at any time and receive a refund which may be taken in cash or applied to the purchase of shares. A total of 36,000,000 shares may be issued under the Plan. At December 31, 1961 9,580,000 shares had been purchased and installment payments were being made on 8,121,000 shares.

(c) At December 31, 1961 comprises \$218,000,000 maturing from 1964 to 1970, \$1,345,690,000 from 1971 to 1980, and \$5,707,000,000 thereafter. In January 1962 one subsidiary sold \$60,000,000 of mortgage bonds and in February 1962 the Company sold \$300,000,000 of debentures, both maturing after 1980.

(d) Cost of work carried on for American Telephone and Telegraph Company by Bell Telephone Laboratories.

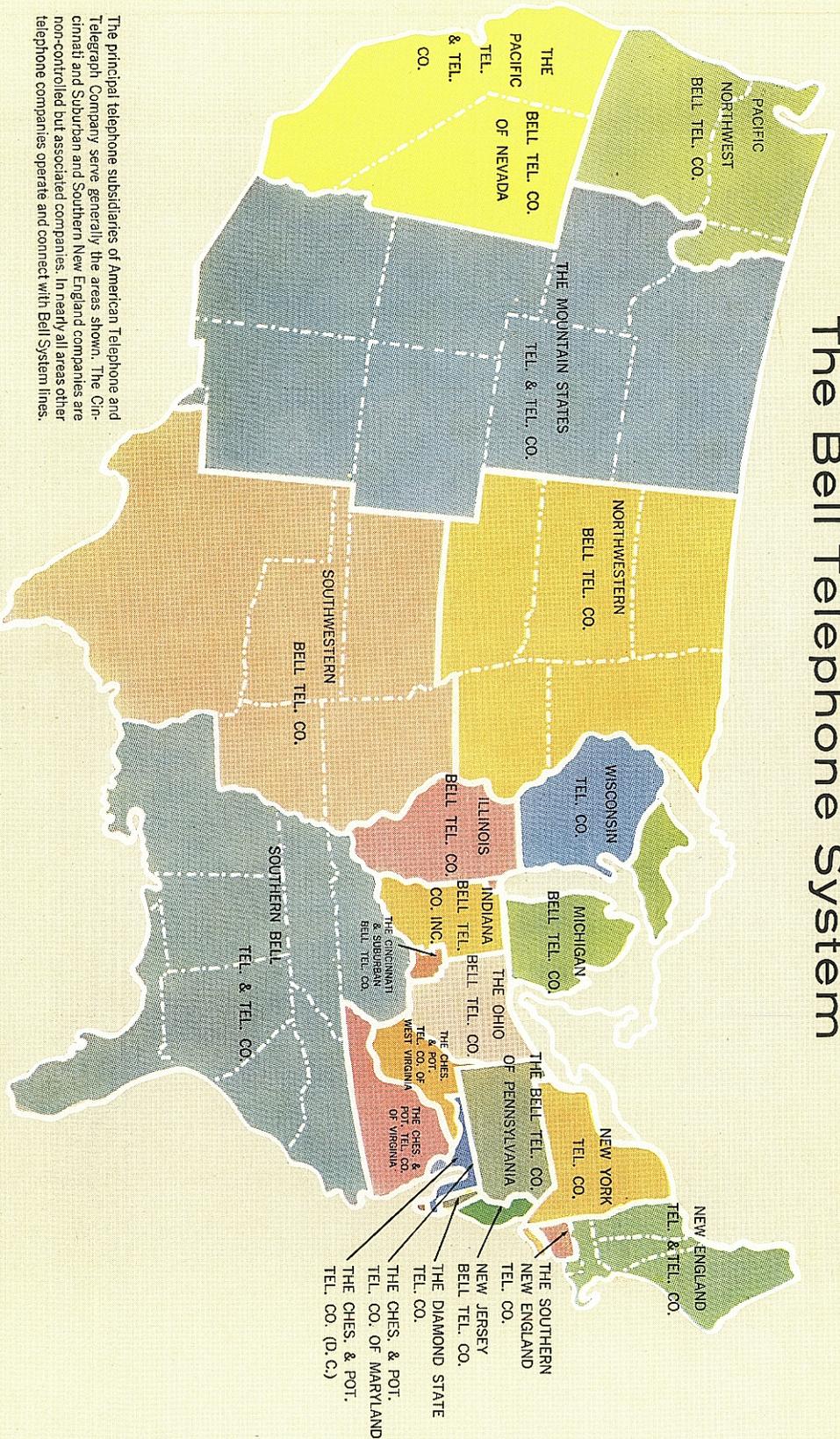
(e) Includes American Telephone and Telegraph Company's proportionate interest (over 99%) in earnings of Western Electric Company and its subsidiaries amounting to \$122,023,000 in 1961 and \$124,264,000 in 1960 of which \$69,750,000 in 1961 and \$67,813,000 in 1960 was received by the Company in dividends.

(f) Includes \$27,975,000 in 1961 and \$24,370,000 in 1960 for interest charged construction.

---

The Company and its subsidiaries have established trust funds which are irrevocably devoted to service pension purposes. Regular payments are made to such funds pursuant to accrual programs. At December 31, 1961 the pension funds amounted to \$3,696,845,000. Future service pension payments to those now on pension rolls and those now entitled to retire on pensions at their own request are fully provided for by the amounts in the funds. The funds are not a part of the assets of the companies and are therefore not reflected in the balance sheets.

# The Bell Telephone System



The principal telephone subsidiaries of American Telephone and Telegraph Company serve generally the areas shown. The Cincinnati and Suburban and Southern New England companies are non-controlled but associated companies. In nearly all areas other telephone companies operate and connect with Bell System lines.

# Bell System Companies

## COMPANIES INCLUDED IN CONSOLIDATED STATEMENTS

December 31, 1961

### AMERICAN TELEPHONE AND TELEGRAPH COMPANY

PRINCIPAL TELEPHONE SUBSIDIARIES	CAPITAL STOCKS Owned by A.T.&T. Co.		Advances from
	% Owned	Equity (a)	A.T.&T. Co. (a)
New England Tel. & Tel. Co.....	69.32	\$ 447,018	\$ 49,600
New York Tel. Co.....	100.00	1,663,474	.....
New Jersey Bell Tel. Co.....	100.00	621,637	18,800
Bell Tel. Co. of Pennsylvania.....	100.00	771,884	10,000
Diamond State Tel. Co.....	100.00	50,497	1,300
Chesapeake & Potomac Tel. Co.....	100.00	112,211	9,600
Chesapeake & Potomac Tel. Co. of Maryland ...	100.00	287,173	16,200
Chesapeake & Potomac Tel. Co. of Virginia.....	100.00	273,593	49,700
Chesapeake & Potomac Tel. Co. of West Virginia	100.00	107,449	12,600
Southern Bell Tel. & Tel. Co.....	100.00	1,548,600	39,500
Ohio Bell Tel. Co.....	100.00	607,775	23,500
Michigan Bell Tel. Co.....	100.00	490,521	22,000
Indiana Bell Tel. Co., Inc.....	100.00	248,405	6,950
Wisconsin Tel. Co.....	100.00	255,869	13,400
Illinois Bell Tel. Co.....	99.32	914,949	25,500
Northwestern Bell Tel. Co.....	100.00	522,701	22,000
Southwestern Bell Tel. Co.....	100.00	1,548,493	113,800
Mountain States Tel. & Tel. Co.....	86.75	511,176	81,900
Pacific Northwest Bell Tel. Co.....	(b) 51.04	193,090	6,400
Pacific Tel. & Tel. Co.....	89.62	1,667,634	.....
Bell Tel. Co. of Nevada.....	(c) .....	.....	.....
<b>Total</b> .....		<b>\$12,844,149</b>	<b>\$ 522,750</b>
<b>SUBSIDIARIES NOT CONSOLIDATED</b>			
Bell Telephone Laboratories, Inc.....	(d) 50.00	\$ 27,500	.....
Western Electric Co., Inc.....	99.82	1,142,310	\$ 40,000
195 Broadway Corporation.....	100.00	29,051	7,800
Other (e).....	.....	33,615	12,694
<b>Total</b> .....		<b>\$ 1,232,476</b>	<b>\$ 60,494</b>
<b>OTHER COMPANIES</b>			
Southern New England Tel. Co.....	18.91	\$ 36,990	\$ 16,400
Cincinnati & Suburban Bell Tel. Co.....	29.80	21,065	5,000
Bell Tel. Co. of Canada.....	3.16	18,855	.....
Miscellaneous investments (e).....	.....	32,473	.....
<b>Total</b> .....		<b>\$ 109,383</b>	<b>\$ 21,400</b>

(a) Thousands of dollars.

(b) 42.72% owned by Pacific Tel. & Tel. Co., equity in capital stock—\$161,623,000. Also held demand note of \$150,025,000.

(c) Wholly-owned subsidiary of Pacific Tel. & Tel. Co., equity in capital stock—\$48,453,000.

(d) Remaining shares owned by Western Electric Company.

(e) Includes investments of principal telephone subsidiaries.



This microwave radio relay station, with Mt. Hood in the background, is one of many serving long distance communications highways. The most modern long distance systems can handle thousands of conversations and several TV programs. Equally important, we have developed new microwave radio facilities that are economical for short, lightly-used routes. Still other new transmission systems multiply the capacity of short wire lines—so that, for example, we shall be able to increase the number of voiceways between central offices in the same city, with less digging up of streets to lay new cables.

AMERICAN TELEPHONE AND TELEGRAPH COMPANY

195 Broadway  
New York 7, N. Y.

MRS. W. NELSON      A-1  
FLORIDA STATE UNIVERSITY LIBRARY  
SERIALS DEPARTMENT  
TALLAHASSEE, FLORIDA

