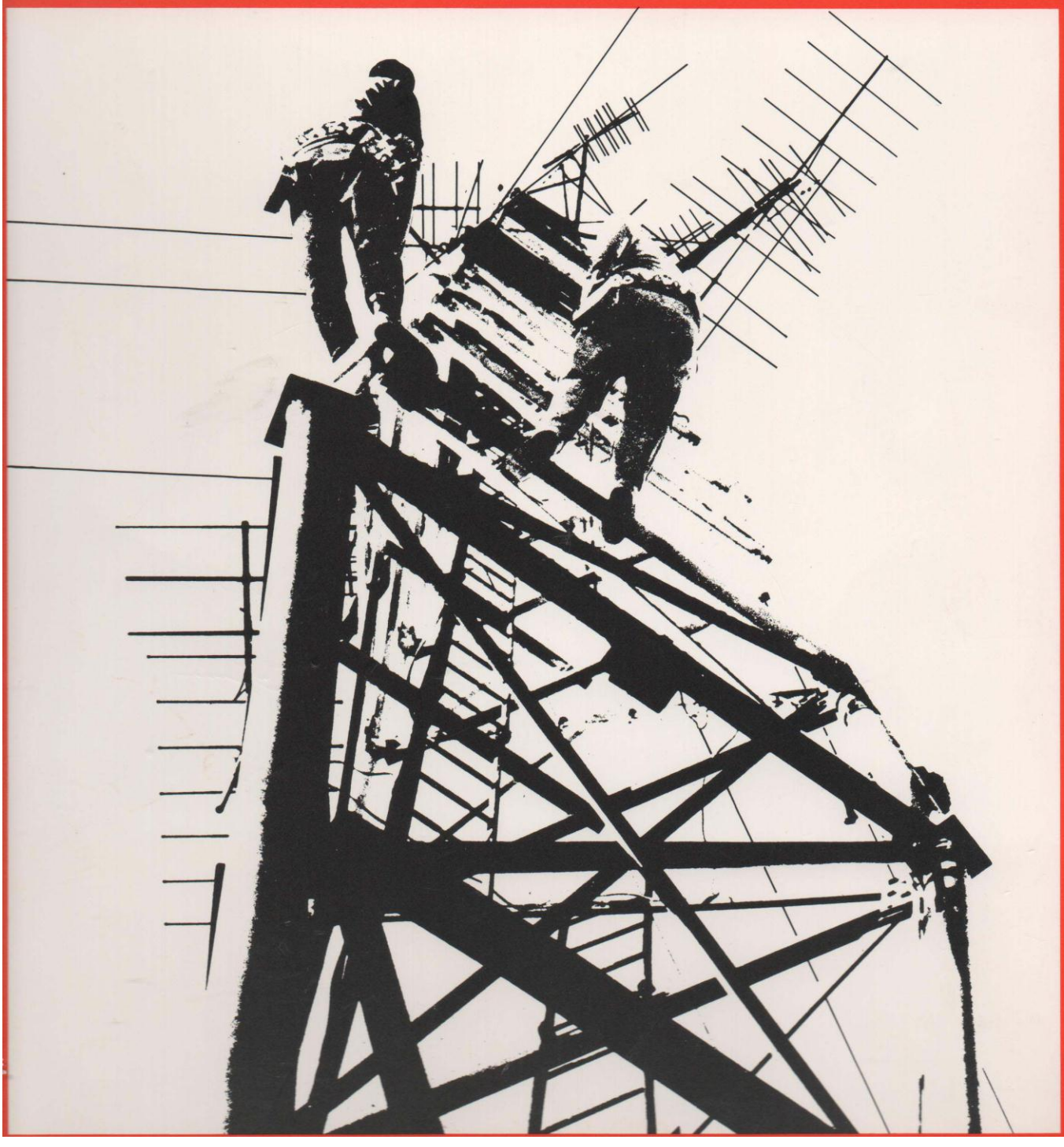
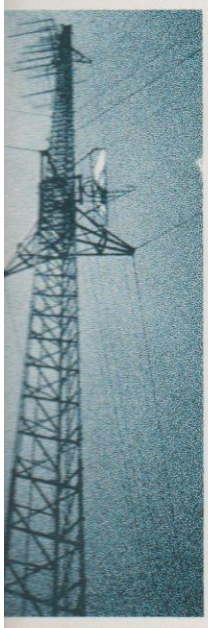
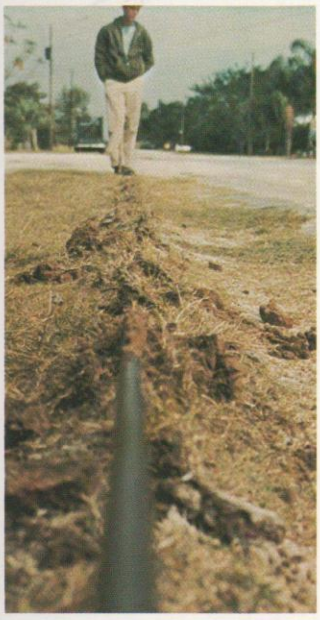
Coaxial Communications, Inc.

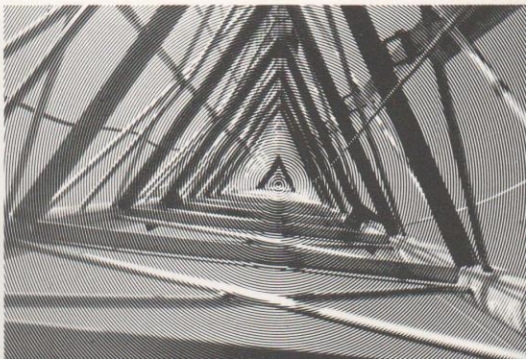


What is Cable Television?

Its History
How It Works
Its Future



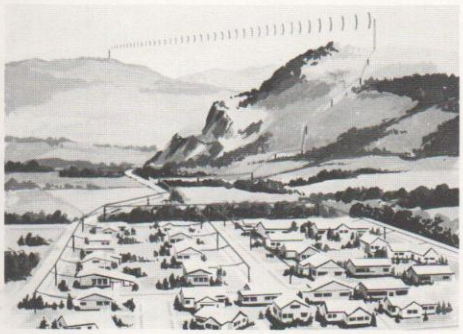




Its History

Cable television, originally known as "Community Antenna Television" or CATV, was first developed in Oregon, Pennsylvania, and Oklahoma between the years 1948 and 1950. The earliest communities served were located in mountain valleys and isolated areas unable to receive an acceptable signal from any television station. The technological objective of these pioneer systems was therefore simple: to improve reception of off-the-air television signals.

During the 1950's it became clear that the development of CATV systems was a feasible endeavor, even in those areas where more than one television signal could be received. Evidencing this fact, 640 operating systems were constructed in the United States by 1960, with a total subscriber number of 650,000. As of April 10, 1970, 3,832 communities are served by cable and the subscriber number has now reached approximately 5 million. This represents a growth rate of approximately 770% in the past decade.



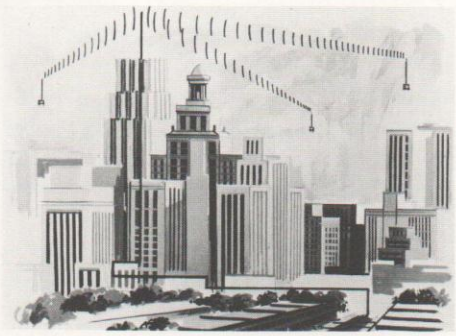
How It Works

A CATV system designed to provide a method for improving the reception of off-the-air television signals is comprised of three basic elements: the receiving device, the headend, and the plant. The *receiving device,* which may consist of an antenna, a parobolic reflector, a microwave receiver, or a combination of the above, is specially designed to pick up as strong a signal as possible from the transmitting station. The electromagnetic signals received are then transmitted through cable to the *headend* which is located at the foot of the receiving device. Here the signals are appropriately regulated, filtered, and amplified by a complex system of electronic devices.

After this processing at the headend, all of the signals are fed into the *plant* for distribution to the viewer. A trunk line coaxial cable carries the signals to smaller distribution cables (feeder cables) that run along the streets where subscribers' homes are located. The coaxial cable is protected by an aluminum sheath and plastic jacket to prevent the signals from escaping and to insulate them from outside electrical interference. Also, because the dynamics of signal transmission are such that the signal weakens as it travels along the cable, amplifiers are placed at 2000 to 2500 foot intervals along both the trunk line cable and feeder cables to keep the signals strong. To provide service to each particular customer, a smaller cable is attached to the feeder cables and is extended into the subscriber's home. The connection device at the feeder cable, which is referred to as a "tap," is designed to extract just enough signal from the cable to assure strong reception. This housedrop cable is equipped with a transformer permitting the cable to be attached to the subscriber's TV set. The coaxial cable, the devices used to route the cable, and the housedrop implements all make up the CATV plant, and the result of the proper engineering and coordination of the headend, receiving device and plant is the delivery of a maximum strength signal over many channels to each CATV viewer.

Its Future

The emergence of CATV as an integral part of the communications industry has been accompanied by numerous technological advances. The development of the capability for two-way transmission of audio and video signals over a single coaxial cable has enhanced the capabilities of closed-circuit television. Also, the character of coaxial cable is such that, given the proper amplifying devices, at least 30 usable channels exist in each cable. Since the number of commercial broadcast signals available over the airwaves seldom exceeds seven or eight, numerous channels remain free for public, educational and private use. Moreover, the development of sophisticated videotape equipment and studio facilities, coupled with the ability to direct a program to selected geographic areas or to specially equipped and tuned television sets, has advanced CATV to the threshold of full utilization of these channels.



Legal developments have also opened the door for full channel utilization. In the early years of the CATV industry, cable operators were free to import distant television signals into any market they pleased. In 1966, the Federal Communications Commission asserted its jurisdiction over the industry. In general, the FCC promulgated rules designed to maintain advertising markets for local television stations. More specifically, the FCC impeded the development of major market CATV by allowing only local signals to be carried in the top 100 metropolitan areas, by virtually restricting available channel use to automated services, and by prohibiting the use of advertising. While distant signal carriage continues to be regulated, the following statement indicates the FCC's new attitude toward an expanded CATV concept:

> "CATV program origination offers promise as a means for increasing the number of local outlets for community self-expression and for augmenting the public's choice of programs and types of service, without use of spectrum. Whereas television broadcast stations are usually located in or near a central community and are intended to serve a much broader area encompassing other communities, almost every community of any appreciable size could have its own CATV system and therefore its own local outlet. The CATV system is not handicapped by limited channel capacity . . . and thus has the technical flexibility to provide different types of programs or services on some channels without affecting the service simultaneously provided on other channels. . . . The CATV operator has more flexibility to present programming of minority interest. . . ." (Midwest Television, Inc., 13 FCC 2d 505-506).

The potential uses for CATV, then, seem almost limitless. Opinion polling, utility meter reading, burglar surveillance and fire alarm systems, facsimile print out capabilities, and data retrieval systems are not far in the future. More importantly, the state of the art is now such that, with the assistance and support of the community, local origination programming, including the televising of City Council meetings, high school sporting events, sectarian and non-sectarian religious productions, adult education programs, and local political campaigns can now be made available via CATV.

The CATV industry, however, is not alone in its optimistic assessment of the future of cable. Numerous studies, reports, and articles that have investigated the CATV industry support the view that future full utilization of cable channel capacity will revolutionize the communications industry. One such study conducted under a Ford Foundation Grant by Leland L. Johnson of the Rand Corporation noted as follows:

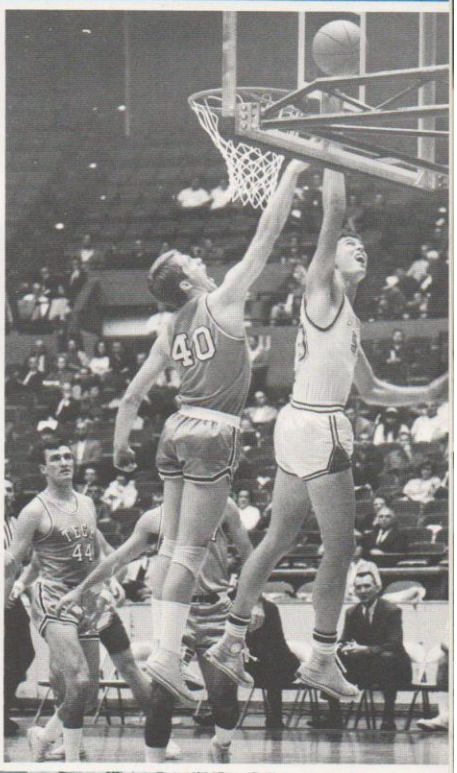
> "The use of cable has attracted widespread attention in recent years because of the exciting potential of its large multi-channel capability. In the near term, it offers prospects of a far wider range of informational, instructional, educational, and recreational programming than is possible today over the air. In particular, television may play an expanded role in job and literacy training, in providing instruction at all levels of education from pre-school to graduate training, and in supporting directly the functions of government agencies in information dissemination. For the more distant future, there has been much talk of employing cable for facsimile reproduction in the home of newspapers, mail and other documents; computer links to home and office providing inquiry and response and information retrieval (perhaps leading to the checkless society); municipal surveillance for fire detection, traffic control, and protection against crime; and for many other applications. Plans are already underway to provide syndicated programming designed expressly for cable originations . . . ." Leland L. Johnson, *The Future of Cable Television: Some Problems of Federal Regulation;* The Rand Corporation, pp. 10-12 (Jan. 1970).

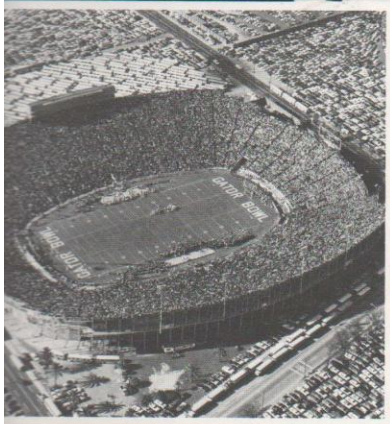
The economics of CATV production, when viewed in the context of favorable governmental regulation and technological advance, are such that the development of local interest, community programming is inevitable. It is the firm conviction of Coaxial Communications, Inc., that the utilization of additional channels for local interest, educational, and recreational programming will prompt more people to subscribe to the cable. The President's Task Force on Communications Policy supported this view in its Final Report to the President on December 7, 1968:

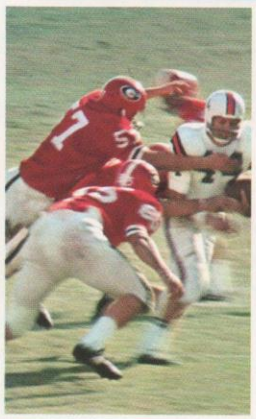
> "(The cable operator) has a positive incentive to offer a varied programming mix, including items which would not attract a commercial sponsor, even if that required him to shoulder a portion of the programming costs. Many individuals may only be persuaded to subscribe to the cable service if it provides programs of particular appeal which they would otherwise be denied — for some, a series of local college plays or a foreign film festival; for others, a continuous stock ticker; for yet others a college-level lecture series, or a channel dedicated entirely to the problems and talents of one of the particular subcommunities of the city — an ethnic, religious, or service group. Having an abundance of channels, the cable operator will be motivated to provide such programming." (P. 38).

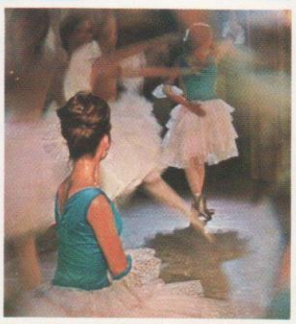
From its inception as a simple method of improving television reception to its present capability to perform as a meaningful outlet for local expression, the function of cable television has undergone and continues to undergo a fundamental change in character. At first a mere extension of traditional broadcasting facilities and techniques, cable television now presents both a supplement and alternative to off-the-air video transmission. By performing both of these functions, the industry can and will open a virtual window to the world for each CATV viewer.

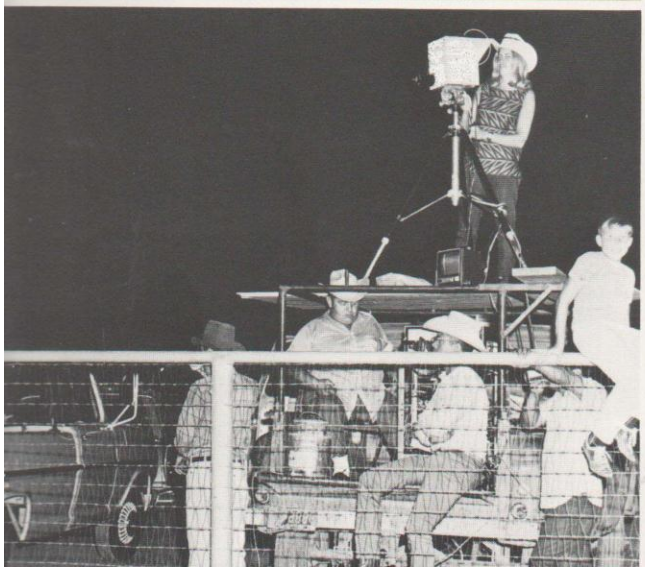
What Coaxial will do for You

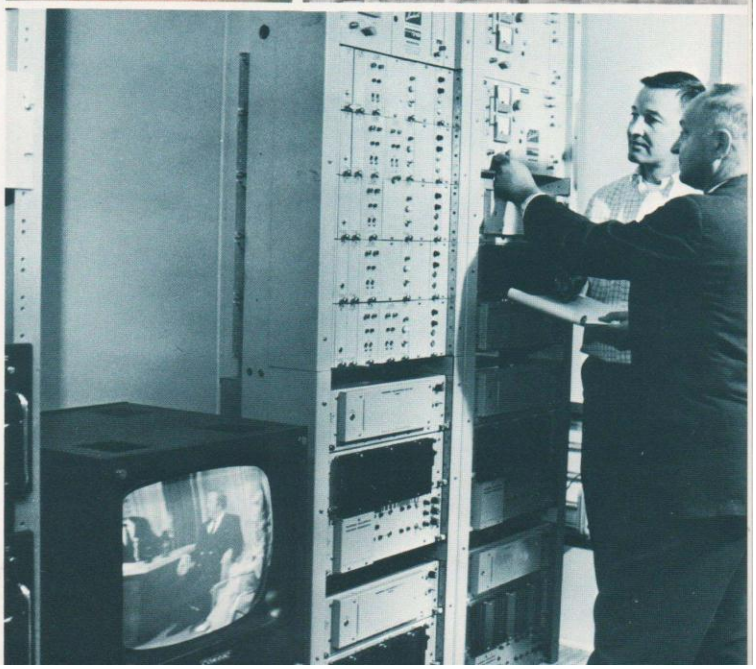












Recent developments at the Federal Communications Commission have indicated that the restriction on importation of distant signals into the major television markets may soon be lifted. The new Chairman of the Commission, Dean Burch, has clearly expressed his position that CATV companies should be permitted to carry signals from outside the major markets upon the payment of copyright royalties. Proposed copyright legislation now under consideration in the Senate of the United States also contemplates the lifting of distant signal restrictions. For you, these legislative or rule-making proposals will mean the addition of previously unseen channels for your viewing pleasure.

With respect to CATV service in your city, Coaxial Communications, Inc., will make every effort to acquire appropriate permission to carry a full complement of both local and distant signals. Non-duplicating network programming, distant city sports events, independent UHF and VHF stations, and educational channels will be carried on the system to the extent permitted by FCC rule. While these added channels do constitute an important feature of major market cable television, these distant signals are in no way essential to a successful CATV sytem. Coaxial will provide a wide array of other services and facilities in your city to fulfill, not only the entertainment and recreational requirements, but also the educational and public service needs of your citizens.

To supplement presently available programming, Coaxial will establish at no cost to the city a cablecasting studio in your city that will function both as a traditional entertainment source and as an outlet for local expression. Our cameras and videotape equipment will permit the transmission of live, filmed, and recorded programming. Moreover, Coaxial's mobile videotape vans will scan the city for on-the-spot coverage of local events and news. Providing movies, sporting events, cartoons, game shows, serials, and documentary films, this studio will in effect constitute an additional independent television station in your city. On the other hand, these facilities will be made available to the city and local groups at no cost for production of specialized programming high-lighting various items of interest and personalities on a neighborhood, city-wide, or regional basis. Live or taped coverage of City Council meetings, political debates, and neighborhood meetings could be provided to bring the people closer to local government and inform them of local issues. With the cooperation of local educational authori-

ties, videotaped and live coverage of high school football, basketball, and baseball games will be furnished. Little Theatre and Community Player acting groups could perform before larger audiences via cable, and other programs of cultural benefit would be aired.

To facilitate programming of this nature, Coaxial will reserve at least one channel to itself and allocate one channel free of charge to the city for these purposes. Through the use of our studio and equipment, the possibilities outlined above will become a reality. In addition, at least a 6 megacycle bandwidth will be provided on the system for use by the city for two-way voice and data transmission. This service will permit voice communications between city office buildings and the interconnection of computers and other data retrieval equipment used by the city. To aid the city in its law enforcement and public protection role, Coaxial will provide, subject to the Rules and Regulations of the Federal Communications Commission, emergency broadcast capabilities whereby the city, in case of public emergency, can use all channels on the system to instantaneously alert the public of such emergency. Police and fire departments will also be connected to the system to permit the development and utilization of police call and fire alarm systems.

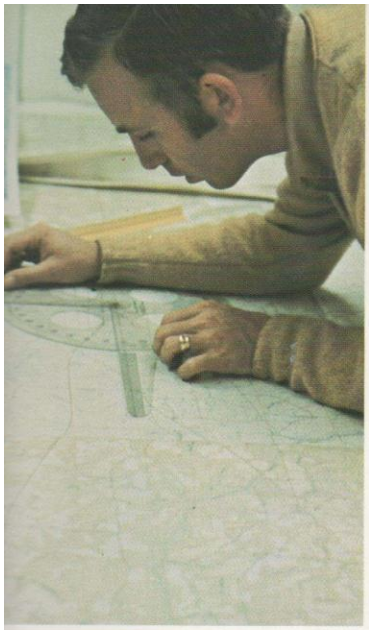
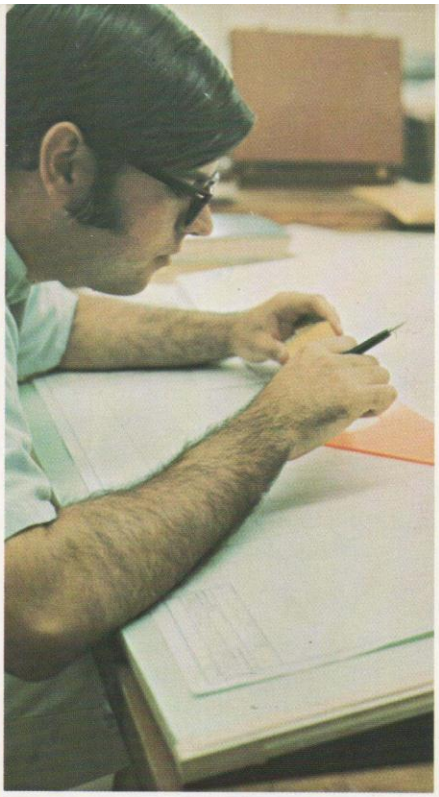
With respect to the educational role of television, Coaxial Communications, Inc., will make available facilities, techniques, and advisory personnel to perform this function so often neglected by traditional broadcasting sources. In Coaxial's studio, job training, foreign language drills, how-to-do-it programming, and class room type instruction can be produced and transmitted. Program packages from the National Educational Television network can also be made available.

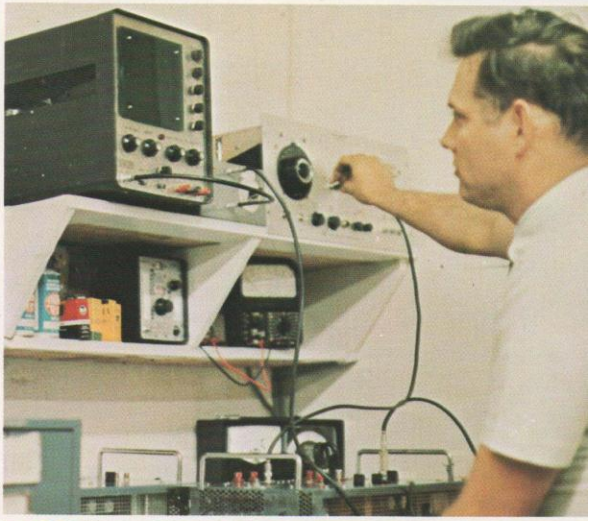
While this type of programming will perform an invaluable educational function, many educators believe that a more intensive, specifically directed type of instruction is also required. To fill this need, Coaxial proposes to install at no cost to the city a special educational television network interconnecting all public and private schools inside the city limits with a central programming location. This interconnection facility would allow each school to receive both standard cable television programming and the programming originated on the interconnected network. Educational instruction could be

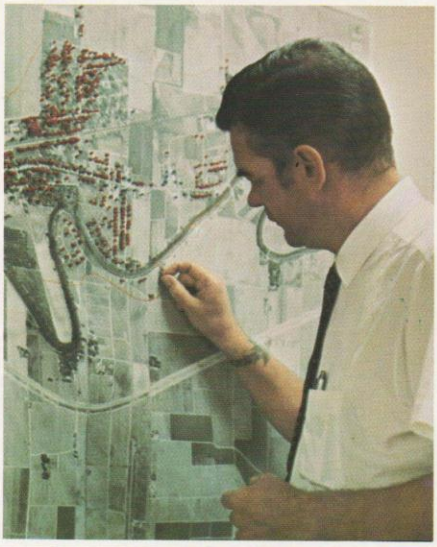
cablecasted from any school and viewed at any or all other schools in the city. The system would also permit questions from individual classrooms to be relayed to and answered at the programming location. Because many channels would be available on this system, several programs could be carried simultaneously to various schools or classrooms on the system. A science class in one school could be viewing a previously taped experiment while literature classes in other schools could be viewing a lecture delivered by a guest author or critic. In this manner, CATV will more fully perform the educational function of television.

In addition to the above services, Coaxial will, at no charge, connect at one point in each building and provide service to all city office buildings, police stations, fire stations and hospitals in the city limits. All of the programming carried on the system would be available at these locations, and appropriate city officials could assure themselves that the system is functioning properly. Coaxial will also utilize two channels to provide automated service information. Constant time and weather news, continuous news from the wire services, and stock market information will be carried on these channels.

While the proposed channel allocation indicated above provides a full complement of CATV services, several channels will not be utilized. Coaxial will reserve these channels for future use as needs and demands arise that require expansion of the services outlined above. It is the intent of Coaxial to fulfill these needs as they become apparent. Our goal is to assure that the city realize the full present and future potential of cable television.






Cable TV by Coaxial

The Company
Construction Technique
Technical Specifications

The Company

Coaxial Communications, Inc., has formed a subsidiary corporation to operate a CATV system in your city. This subsidiary is the result of contractual and joint venture relationships between Coaxial, the Welsh Group and certain leading financial institutions. This system will be successful because the combined expertise of Coaxial, its investors and co-venturers will provide the necessary ingredients for a successful cable system, that is, construction and operational experience and financial capability.

Cable television is a capital intensive industry, i.e., one in which many dollars of capital have to be invested for each dollar of revenue received. Over the next ten years Coaxial will have to invest over $100 million of capital funds in its subsidiaries. To provide the financial framework this requires, Coaxial has associated itself with a broad range of financial institutions, some of whom have assets in the billions, and at their direction entered into an agreement with the Harris Trust and Savings Bank in January, 1970, establishing a First Mortgage and Collateral Trust Indenture for the express purpose of funding cable systems as a semi-public utility.

The financial institutions associated with Coaxial range over the entire financial spectrum. For example, in addition to the Harris Trust, one of the leading Midwestern commercial banks, Coaxial has associated itself with the Hambro American Bank & Trust Company, which is the American branch of the Hambros merchant banking family of London, England, and Value Line Development Capital Corporation, part of the Value Line Companies managed by Arnold Bernhard & Co., Inc., one of the country's leading financial and investment firms. Another member of the group of banks, insurance companies, and financial institutions associated with Coaxial is CNA Financial Corporation, one of the nation's largest financial holding companies. Among its better known subsidiaries are Continental Assurance Company, the sixth largest stock life insurance company in the United States, Continental Casualty Company, the ninth largest stock casualty company in the United States, and the Manhattan Group of Funds, one of the largest mutual fund groups in the United States.

The foregoing examples of the financial institutions associated with Coaxial have been presented because a cable company in a semi-utility, capital intensive industry cannot merely rely on its own internal resources if it is to grow to substantial size and serve a community properly, but must instead develop substantial sources of long term capital that have enough confidence in its management to make the funds available as needed. We are proud of our relationships with our financial associates.

As indicated in a previous section of this brochure, the restrictive governmental regulation in the major markets caused a slow down in cable television's rapid growth from 1966 to late 1968. As a consequence, there are no really large cable systems serving metropolitan markets in the United States. Even the New York system is relatively small at the present time with less than one hundred miles of plant being operated by any one company. This is not the case in Canada where cable television in major markets has had phenomenal growth and success. The largest Canadian systems are operated, managed and partially owned by the Welsh Group of companies which represents probably the most experienced cable operations management in the world today. The group has the world's largest plant in Montreal with approximately 1200 miles of cable and the world's largest cable system in Vancouver serving over 110,000 customers. In the aggregate, this group serves over 330,000 customers in its systems which exceeds that of any other cable group in the world. The Welsh Group's management and experience also includes very substantial program origination. For instance, in Montreal over 40 hours a week of programming in four languages are produced by the Welsh Group for its Montreal system alone. As a member of Coaxial's cable team, our Canadian counterpart affords a source of experience and expertise unique in the industry today.

The final member of the team, Coaxial Communications, Inc., is a privately held Delaware corporation, although one of its stock holders is a publicly held corporation, the Value Line Development Capital Corporation. With the liberalization of the FCC's cable policy position in 1969, Coaxial has recently expanded its operations to the major markets. Prior to that time as a result of this regulation, Coaxial through its various subsidiaries had specialized in rural and small town markets conventionally associated with the history of cable television. Many of the Coaxial markets presented construction difficulties and operational problems in that they were very small and were considered by other companies to be uneconomical. Coaxial, through its research subsidiary, Coaxial Scientific, Inc., developed new techniques and new equipment for placing cable in these areas. Coaxial manufactures 40% of the dollar value of its electronic equipment, and has as well a capability to install underground cable TV systems at a rate unmatched in the cable field. Of the 20 systems Coaxial presently has in operation or under construction at this time, well over 90% of the cable plant is underground. Although this fact indicates Coaxial's policy to install cable underground

whenever feasible, the same experience and expertise displayed in Coaxial's underground construction assures aerial CATV installation of the highest caliber.

Construction Technique

Typically, when Coaxial Communications, Inc., is awarded a franchise, it proceeds to design, engineer, and construct a CATV system in the following manner: Prior to the installation of any CATV plant, extensive preconstruction engineering procedures are employed. Aerial photographs of the area to be served are obtained through both private and governmental sources. These photos are blown up to allow clear identification of the location of each potential subscriber and therefore provide the best possible basis for a preliminary system design that is prepared by Coaxial's Preconstruction Department.

After a visual inspection of the proposed cable route to determine the physical characteristics of the city, the Preconstruction Department ascertains where underground and aerial CATV installations are appropriate. The underground system design is then scrutinized by the Obstacle Mapping Crew which is equipped with metal locators and maps of all existing utilities. Proceeding on a block by block inspection of the cable path, this team locates and identifies underground utilities and other potential obstacles on a map prepared for each city block in the system. In the case of aerial construction, all existing power and telephone poles are located, and the determination is made as to where new poles and private easements will be needed. Utilizing this information, Coaxial's System Designer prepares a revised system route designed to assure safe and feasible construction.

During this system design phase of preconstruction, other critical functions are also performed. Preliminary signal survey tests are conducted at potential tower site locations, and the results of these tests are compared to computer predictions of reception in the area. These tests assure the proper selection of receiving equipment and allow Coaxial to obtain a tower site with maximum signal gain.

On the basis of information provided by the Preconstruction Department, Coaxial's Legal Department obtains all state and county road permits, leases,

easements, building permits, licenses, pole agreements, and FCC approvals required to permit actual construction of the system.

Using the block maps previously prepared by the Preconstruction Department, the various elements of Coaxial's Construction Department proceed along the cable route constructing underroad crossings beneath the city streets, installing trunk line cable in the public easements, and stringing aerial cable on utility poles. Amplifier housings, pedestals, splitters, amplifiers, splices and directional taps are then installed by Coaxial's Pedestal and Device Crew. At the same time, the Tower Crew constructs a specially designed tower or parabola on the best available site as indicated by the signal survey tests. When the system is energized (turned on), these components serve to receive, route and regulate the signals being carried. Finally, a System Balancing Team, staffed by trained technicians, conducts performance tests, energizes the system, and balances the signals.

As indicated above, Coaxial Communications, Inc., typically forms a subsidiary corporation to operate a CATV system in each of its franchised areas. Each of these systems, however, is and will continue to be manned by local personnel selected and approved by Coaxial's Operations Department. To assure that each system functions properly, the local system manager and local CATV technicians are trained and rigorously tested by Coaxial at locations in both Canada and Florida. Moreover, strict compliance with Coaxial's preventive maintenance procedures insures system performance in accordance with the company's high standard of quality. While this method of selecting, training, and testing allows each system to attain the maturity required for it to function as a self-contained local unit with its own inventory and staff, the parent company's team of technical experts is always available for utilization by and consultation with the local company.

To direct this multi-faceted construction and operations endeavor, Coaxial is guided by Mr. L. B. St. Jacques, one of the top construction executives in the country, who, before coming to Coaxial, was Director of Construction for the Chemicals Division of Olin Mathieson. There he had direct responsibility for more than $80,000,000.00 of construction projects per year, specializing in the complicated task of constructing petrochemical cracking

plants. Since Mr. St.Jacques' association with the company, Coaxial has developed into a highly trained organization with each of its crews capable of laying over a mile and a half of cable per day, a figure that would not be be possible without the coordinated efficiency demonstrated by Coaxial's Preconstruction, Construction, and Operations Departments.

All of the facets of Coaxial outlined in this brochure, its experience, its partners, its people, and its services, have made the company's total approach to CATV possible. As one of the few totally integrated cable companies in the country, Coaxial assures construction of the finest of CATV systems, and assumes full responsibility for the quality of its product. The company looks forward to the opportunity to provide its service in your city.

Technical Specifications

I. GENERAL

1.1 The Cable Television system as specified herein shall include all necessary electronic equipment, power supplies, controls, coaxial cables, and other parts, components and equipment necessary to provide a complete and operational system in the frequency range of 5 to 270 MHz. Initially the system shall be equipped with amplifiers to cover the frequency range of 5 to 220 MHz. The system shall be designed, however, to be expanded to cover the range from 5 to 270 MHz.

1.2 The system shall be installed all in accordance with the best engineering practices. The installation shall conform to the National Safety Code, Bureau of Standards, Handbook No. 130 and Bell System Practices which cover joint attachment practices and shall conform to all city and county codes and ordinances.

1.3 System maps will clearly indicate types and numbers of cables, electronic equipment and other accessories and components. The system design and layout shall be on maps with the scale not less than one inch equals 200 ft.

1.4 The system shall be designed and rated for continuous 24 hours daily operation under temperature and environmental conditions encountered in the area.

1.5 The mechanics of the system and the accessibility and serviceability of all equipment shall be such that reliability of service is maximized, utilizing commonly used proven state of the art techniques.

II. System Performance

2.1 The system shall be capable of delivering all NTSC color and monochrome signals to standard EIA television receivers, including monochrome, color and FM receivers. The signal shall be distributed to individual subscribers' television sets without noticeable degradation of color fidelity, picture information, audio distortion or cross channel interference.

2.2 The system shall be operated to provide a signal level at each subscriber tap of +0 to 15 dbm as measured across 75 ohms.

2.3 The frequency response of the spectrum actually carrying television signals shall be flat plus or minus 1.5 db on the trunk system and plus or minus 3.0 db (including trunk contribution) on the feeder and distribution system, except where block tilt is employed. Where block tilt is employed the above shall apply only to the band.

2.4 The frequency response of the trunk and distribution system shall be flat plus or minus 1 db across the 6 MHz of any television channel in use on the system. This measurement shall exclude deviations resulting from changes in modulation and those from received signal level changes.

2.5 The hum modulation of any television channel used on the system shall be less than 3%, i.e. the 60 cycle per second excursions of the detected DC component of the carrier shall be less than 3% of the DC component.

2.6 The trunk and distribution system signal to noise ratio across the 6 MHz of any television channel shall be no less than 43 db when amplifiers are at operating gain.

2.7 The system cross modulation characteristics as measured using NCTA standards shall be at least -57 db down on the trunk system and -50 db down on the distribution system (including the trunk contribution).

2.8 The system spurious signal ratio for any television channel in use on the system shall be at least 30 db down where the spurious signal is the strongest signal within 1 MHz below and 4.2 MHz above the visual carrier.

2.9 The system ghost levels shall be a minimum of 30 db down from the desired channel's visual carrier.

2.10 The system co-channel levels from co-channel not originating from headend signals shall be 55 db down from the desired channel's visual carrier.

2.11 Signals in the 40 to 46 MHz band delivered to subscribers' television sets shall be 30 db down from the visual carrier of the lowest level carrier delivered to the set.

2.12 Radiation from the coaxial cable or electronic equipment shall not exceed the limitation imposed by the Federal Communications Commission Rules and Regulations.

2.13 Periodic maintenance shall include —

1. measurements of cross modulation levels,
2. measurements of signal to noise ratio,
3. measurements of signal levels, and
4. inspection of television picture quality on a high quality color television receiver by a trained technician.

2.14 Directional tapoff units and splitters used on the trunk and distribution system shall be of such construction to allow measuring of signal levels and line powering voltages with service interruption to a minimum number of subscribers.

2.15 Test equipment for routine maintenance and headend maintenance shall be kept in the system for immediate use.

2.16 The VSWR of all active and passive electronic equipment affecting the television channels in use on the system shall not exceed 1.4 to 1.

III. Installation and Construction

3.1 Location of cable, amplifiers, and devices shall be such so as to offer the highest quality, reliability, and serviceability possible. All cable shall be installed so as to provide minimum disturbance to streets, sidewalks and driveways.

3.2 All installation and construction practices shall be in accordance with franchise agreements, state, city and county ordinances, statutes and regulations and the National Electrical Safety code.

3.3 All cable shall be installed underground wherever feasible.

3.4 Jacketed coaxial cable shall be used for direct burial and in other underground or aerial installations where exposure to water or corrosive atmosphere would limit cable usage to less than 20 years. Where aerial construction requires jacket, cable connectors and exposed (unjacketed) cable shall be protected from atmospheric corrosion with a suitable plastic protective coating.

3.5 Pavement shall be cut only when bored or driven underroad crossings are not feasible.

3.6 All cable shall be buried underground at a minimum depth of 24 inches, except where otherwise specified by local or state regulations. Cable shall be placed in such a manner so as not to interfere with existing utilities. All soil shall be returned to a condition equal to that before installation was commenced.

3.7 All aerial installation and construction shall be in accordance with standard utility practices and utility pole line agreements. All equipment shall be installed so as to be readily accessible for maintenance and shall be located so as not to interfere with the climbing space or servicing of other pole mounted equipment. All strands shall be installed on the same side of the pole as the telephone facilities and where no telephone facilities exist, where practical the strand shall be installed on the field side of the pole. Wherever possible, the strand shall be installed on existing poles in such a manner as to maintain the required spacing from telephone and power lines. Down guys and anchors shall be installed in such a manner as to neutralize the effects of the strand and cable strain on the poles. All such anchor guys shall be effectively grounded and electrically continuous to earth through the anchor. Paralleled trunk and feeder cables shall be multiple lashed throughout the system wherever practical.

3.8 No trunk or distribution cable shall be of braided sheath cable. Either aluminum sheath or foam dielectric cables or copper or aluminum sheath air dielectric cables shall be used on trunk and distribution.

3.9 All coaxial cables used in the system shall have a nominal characteristic impedance of 75 ohms plus or minus 2 ohms over the entire frequency range.

3.10 Long transmission lines, super trunk, and major trunk cable shall be constructed of 0.75 inch aluminum sheath foam dielectric cable or cable of lower loss; sub trunk cable shall be 0.500 inch aluminum sheath foam dielectric cable or cable of lower loss; and distribution cable shall be of 0.412 inch aluminum sheath foam dielectric cable or cable of lower loss.

3.11 Every phase of plant construction shall be supervised by qualified engineering personnel.