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ABSTRACT

This bibliographic review of publications in the field of cable television begins with an introduction to cable television and an outline of the history and development of cable television. Particular attention is given to the regulatory activities of the Federal Communications Commission and the unfulfilled potential of cable television. The literature of the field is described and evaluated in narrative fashion. The main areas into which publications are divided are: cable television primers and history, bibliographies, abstracting and indexing services, directories, organizations and associations, cable television periodicals and newsletters, cable television operations and equipment, and government materials and regulations. The discussion and references are extensive in all sections but particularly so in the history and primers section. (WH)

CABLE TELEVISION
A BIBLIOGRAPHIC REVIEW

by

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Submitted to the New York City Public Library

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History

Community-antenna television (CATV) promises to do for public communications what Henry Ford did for public transportation. Quite simply, CATV is a method of distributing television signals along a shielded cable rather than broadcasting them over the air as is done by the large commercial networks. Though there is some dispute concerning the inventor of cable TV -- some attribute it to John Walson of Mahanoy City, Pennsylvania, while others point to Ed Parsons of Astoria, Oregon -- everyone agrees that experiments in community television were taking place as early as 1948-49. A need for cable arose two decades ago when broadcast television was first catching on as a popular medium in urban centers. At that time FCC regulations prohibited broadcasting beyond a 35 mile radius of the station, hence reception was severely limited in rural localities and practically impossible in hill-locked communities where the signals could not penetrate. Understandably, the residents of rural American wanted to participate in the novelty of their big-city neighbors -- thus, the demand for extending television service was created. It was not long before enterprising TV appliance dealers and local do-it-yourselfers combined talents to erect large antennas on nearby mountain tops in order to draw in the distant signals. Coaxial cable was strung from the cable tower (the "headend") into the town where people could hook-up their sets at an installation cost of about $125 and a monthly rental fee ranging

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from $2 to $10 dollars. Surprisingly enough, the strength and quality of the CATV signal, after being amplified at the cable facility, was superior to that received in most areas of the originating city. A sharper image was had because of the lack of signal interference (popularly called "snow") that results from high surrounding buildings or varied atmospheric conditions.

At the outset this expansion of the television audience was looked upon favorably by the public, the big networks, the telephone companies, advertisers, and the FCC. The cable industry was again stimulated by the FCC's freeze on new stations between 1948-1952, which threatened to restrict television to a privileged few. Though the capability for receiving numerous channels over the cable was present from the start, CATV programming was generally confined to a rebroadcasting of the programming being offered in the cities. When cable's growth began to spiral in the late 1950's and 1960's (and the potential for profits and alternative programming became apparent), there developed a power struggle concerning the legality of rebroadcasting programs without compensating the parent station. In short, it was a copyright problem and the various parties who hold a stake in cable have been at each others' throats ever since. At the same time, the pioneers of CATV have also maintained a close watch on the actions of the regulatory agencies -- federal, state, and municipal -- that have claimed jurisdiction over the cable. In fact, it seems that all the various interest groups and their legal counsels have been vigilant. Everyone, that is, except the public. As might be expected, at the heart of the issue is money. Even now broadcast and telephone industries lobby against cable's threat to their highly lucrative monopolies.

The Federal Communications Commission

The Federal Communications Commission, whose regulatory power in such matters is still being hotly debated, has made a number of important decisions over

the years affecting the fate of cable, some in direct conflict with earlier pronouncements. This has led many cable advocates to feel that the Commission and Congress, which has the ultimate authority in overseeing FCC policy, are in the pockets of the three networks. For instance, between 1966 and early 1972 the FCC halted cable's rapid growth by prohibiting the importation of distant signals into any of the nation's top one hundred TV markets. The latest Cable Television Report and Order (February 1972) issued by the FCC, however, has lifted this virtual ban of CATV development in the large metropolitan areas.

While reasserting its right to regulate cable, the 1972 Order offers a good deal of freedom to communities in contracting franchises, thereby inviting experimentation and innovation. From the FCC's viewpoint, the challenge of cable is to promote the technology for the public good without smothering it with overregulation and, at the same time, avoiding the possible abuses of having no regulations at all. The new regulations went into effect 31 March 1972 and allow cable entrepreneurs to import a certain number of distant signals; furthermore, they require that all new cable systems for the 100 largest TV markets provide a minimum capacity of twenty channels. Other significant points require: a) a local programming channel if the system has over 3,500 subscribers, b) leased channels for pay TV that would be optional to the subscriber, c) community access channel, d) an educational access channel, and e) a municipal channel. The last three "access" channels are to be provided free of charge for a period of five years; at the end of this period if the cable operator can demonstrate that such services are not being utilized, they may be curtailed. (Hence the urgency from public interest groups to get involved before it is too late.) In addition, the new rules require a built-in capacity for two-way communication and a "Certificate of Compliance" from the FCC before cable systems can begin operations.

The end result of the latest rulings leave much of the decision-making up to the community. Grass-root decisions will determine whether cable television becomes a tool to enrich the lives of millions, or just another vapid wasteland with programming aimed at the lowest common denominator. Up to now many of the vital decisions about cable have been made behind closed doors by powerful business and government interest groups. As a consequence, the corruption in awarding franchises to cable companies has been so rampant over the past few years that some states have imposed temporary moratoriums on the granting of new contracts. Because many of the local decisions are yet to be made, there exists an opportunity for a well-informed and responsible citizenry to play a major role in the direction that cable systems take. Indeed, the time is at hand for those who still have the sensibility to feel shame and embarrassment over the state of American television. The chance to do something to improve the current state of affairs may not come again.

Programming

Present-day technology has made available the hardware to handle as many as 80 channels, with all new systems employing two-way communications. Other experiments are being conducted in microwave telecommunications -- an alternative to coaxial cable that holds immense possibility. The extent to which this broadband technology may revolutionize the average person's lifestyle (for better or worse) is truly astounding. This is especially apparent when one considers that thus far most cable systems have simply been rebroadcasting the standard fare of "Gilligan's Island" and "Hogan's Heroes." But what might happen if the local college could "cablecast" a serious drama, or the high school offer a course in auto mechanics, or a minority group organize a rent boycott, or a library network begin to meet the day-to-day information needs of the people?

Charles Tate outlines most of the possible applications of cable in his Cable Television in the Cities: Community Control, Public Access, and Minority Ownership (Washington: The Urban Institute, 1971):

a) Work activity: speeding information (e.g., mail) by facsimile; local job information programming; allow businessmen to carry on their activities from the home (thereby reducing trips and air pollution in the cities).

b) Data collection: increased computer accessibility and interaction (e.g., homes on-line to vast resource information networks, instantaneous credit-card checks, banking by code number and creating a "checkless" society, cutting the country's paper needs in half).

c) Politics: providing low-cost access to candidates who cannot afford to buy time; voting in political elections from one's living-room.

d) Transportation: video-monitored and computerized traffic control; dial-a-ride bus service.

e) Public safety: providing emergency communication in fighting crime; home surveillance systems for burglary and fire protection.

f) Education: employing two-way response, greatly extending the availability of a college degree; housewives or children unable to attend regular classes receiving course credit in the home; doctors and scientists taking part in a conference held hundreds of miles away.

g) Entertainment: increased variety, and decreased dependence on mass audiences might begin to realize the early expectations of television.

h) Consumers: offering consumer advice and education in the home; remote retail shopping; air and water pollution surveillance stations.

In the area of community development, CATV can show live broadcasts of city council meetings, cover local civic organizations, or -- for the first time -- allow a private citizen a wide audience to voice his own cause. High school

athletic events, neighborhood topics of concern, political ward rallies; practically nothing would be too small to attract an interested audience! Because the content of each channel need not appeal to the masses, cable offers a unique opportunity for minority groups who have received little exposure in the past. For those willing to pay an extra fee, pay TV might offer coverage of important sports or cultural events, perhaps even show first-run movies.

The Cable Industry

An estimate of the scope of the cable industry may be had by citing the following figures taken from the 1972/73 CATV Systems Directory, Map Service & Handbook: Currently there are approximately 3,079 cable television systems operating in about 6,000 communities. Their combined signals reach into 6,007,815 homes, constituting about 12% of the total television audience. The annual revenue from these services, exclusive of installation fees and extra outlet charges, is $381,376,096 dollars. In reference to the 1972 FCC ruling that requires a cable system with more than 3,500 subscribers to originate its own programming on at least one channel, statistics show that 771 or 39% of all CATV operations are providing local broadcasting. However, many of these "programs" are only weather reports, news, or stock market ticker tapes, many of them automated. The average size of a cable system is estimated at 2,520 subscribers, with the largest one in San Diego serving about 52,800 households. A number of smaller franchises serve fewer than 100 subscribers. The average number of channels carried is 8.8 (15% can carry more than 12 channels) and the average subscriber is charged $17.67 for installation and $5.29 per month rental.

As of early 1972, about 47% of the industry was owned and operated by other media interests, with the largest part controlled by broadcasters (38%). Newspapers, publishers, and the motion picture industry collectively control 17% of the cable industry. It seems safe to assume that the above interest groups will

try to preserve the status quo and retard original programming as much as possible. Obviously, they have the most to lose, should cable become a way of life.

The Literature

The literature of cable television is abundant and varies widely in quality and subject. It is easily limited by date; nothing was written prior to the late 1940's. However, the size of published output is so all-encompassing that one could compile lengthy guides to the literature in many areas, e.g., CATV's impact on education, libraries, legal ramifications, hardware and software equipment, and business and corporate data, to mention but a few. I have chosen a rather broad approach so that this paper might prove useful to anyone as a departure point, regardless of one's particular interest. Considering the vast array of information and sources available, it follows that my search has been highly selective. Moreover, time did not permit me to read all the items cited, and I have left out some excellent items that are out of print. Somewhat arbitrarily, it is divided into eight sections: 1) Primers and Histories, 2) Bibliographies, 3) Abstracting and Indexing Services, 4) Directories, 5) Organizations and Associations, 6) Journals, Periodicals and Newsletters, 7) Operations and Equipment, and 8) Government Materials and Regulations.

1. CATV Primers and History

There is no lack of useful and interesting introductions to the field of cable television. One of the best overviews is Cable Television: a Guide for Citizen Action by Monroe Price and John Wicklein (Philadelphia: Pilgrim Press, 1972). The paperback edition sells for $2.95, is easy reading, and gives much of the background information one needs to appreciate the complexity of the cable industry, as well as solid suggestions for citizen action. Chapters discuss what one can expect from cable, what some cable groups have accomplished, the franchising process, how to improve an existing cable system, and other pertinent

topics. The book's six appendices include a wealth of information on the then-proposed FCC rules, a bibliography, a list of organizations that can help, typical production costs for public access programming, some pointers on what to ask for in the cable franchise, and an outline of the MITRE Corporaation Plan for the Washington, D.C., area.

Since 1969 the Rand Corporation has prepared a number of papers on the publice policy issues raised by CATV. They include:

Cable Television: Opportunities and Problems in Local Program Origination by N.E. Feldman.

The Future of Cable Television: Some Problems of Federal Regulation by Leland L. Johnson.

Cable Television: The Problem of Local Monopoly by Richard A. Posner.

Cable Television and UHF Broadcasting by Rolla Edward Park.

Cable Television and Higher Education: Two Contrasting Experiences by Leland L. Johnson.

State Regulations of Cable Television by Michael R. Mitchell.

Potential Impact and the Question of Protecting Local Broadcasting by Leland L. Johnson.

The Future of Cable Television: Some Problems of Abundance by Leland L. Johnson.

Additional Rand reports study cable's relation to satellites, education, urban development, broadcasting, and First Amendment rights.

A grant to the Rand Communications Policy Program from the National Science Foundation has recently brought into print a most important series of books on cable. Research at Rand has resulted in the following reports, each preceded by the series title Cable Television.

R-1133-NSF, A Handbook for Decisionmaking, by Walter S. Baer.

R-1134-NSF, A Summary Overview for Local Decisionmaking, by Walter S. Baer.

R-1135-NSF, The Process of Franchising, by Leland L. Johnson and Michael Botein.

R-1136-NSF, Citizen Participation in Planning, by Robert K. Yin.

R-1137-NSF, Technical Considerations in Franchising Major Market Systems, by Carl Pilnick.

R-1138-NSF, A Guide to Federal Regulations, by Steven R. Rivkin.

R-1139-NSF, Citizen Participation After the Franchise, by Monroe E. Price and Michael Botein.

R-1140-NSF, Applications for Municipal Services, by Robert K. Yin.

R-1141-NSF, A Guide to the Technology, by Carl Pilnik and Walter S. Baer.

R-1142-NSF, Making Public Access Effective, by Richard C. Kletter.

R-1143-NSF, Uses in Education, by Polly Carpenter.

R-1144-NSF, A Guide for Education Planners, by Polly Carpenter.

The first of this series -- Walter S. Baer's Cable Television: A Handbook for Decisionmaking -- was released in February of 1973 and is unquestionably the most up-to-date and comprehensive manual for local planning. It is specifically addressed to citizen groups, local government officials, and others interested in community cable development. A good idea of its contents can be had from a listing of its ten chapters: 1) Getting the picture (providing basic facts about cable), 2) Cable technology, 3) Cable system economics, 4) Ownership options, 5) Planning for a cable system, 6) Franchising the system, 7) Local responsibilities beyond the franchise award, 8) Making public access effective, 9) Public services on cable, and 10) Looking to the future. In addition to its numerous diagrams, charts, graphs, and statistics, perhaps the book's greatest value lies in the fact that it is the first comprehensive guide to take into account the new FCC regulations.

Probably the most formal history of cable to date is Mary Phillips' CATV: A History of Community Antenna Television (Evanston, Ill.: Northwestern University Press, 1972). Her book starts out as a very readable story of CATV's pioneers, but about mid-way through becomes a recitation of one commission study after

another until the reader begins to think that Ms. Phillips is writing a government report herself. I would recommend it for the serious student of cable who needs an exhaustive background. Her history also includes a bibliography.

Nicholas Johnson, one of the FCC Commissioners, devotes an extremely informative chapter in his How To Talk Back to Your Television Set (New York, Bantam, 1969) entitled "CATV: Promise or Peril" to the dangers of commercial interests dominating the cable industry. It first appeared in Saturday Review, vol. 50, November 11, 1967, pp. 87-98.

The following periodical articles also provide good background to CATV:

Alpert, Arthur. "Crossed Wires: Cable TV and the Public Interest," Washington Monthly, July 1969.

Browing, Frank. "Cable TV: Turn On, Tune In, Rip Off," Ramparts, April 1971.

Friendly, Fred. "Asleep at the Switch of the Wired City," Saturday Review, October 10, 1970.

Joint Council on Educational Telecommunications. "CATV and the Future Cable Communications," JCET Data Base, September 1968.

L'Heureux, Robert D. "The History, Nature and Scope of CATV," TV Communications, October 1969.

Malarkey, Martin F. "Smart Bets in the Cable Stakes: A Frank Look at Our Future," TV Communications, May 1969.

Walker, Gerald M. "Special Report: Cable's Path to the Wired City is Tangled," Electronics, May 8, 1972.

At the risk of enumerating too many items, there are two other books that cannot be left out of a basic cable bibliography. The first, ranking alongside of Price and Wicklein's Guide as an indispensable introducation, is The Wired Nation. Cable TV: The Electronics Communications Highway (New York: Harper & Row, 1972) by Ralph Lee Smith. The paperback edition is priced at $1.95. An earlier form of this book appeared as an article of the same title in a special issue of The Nation (May 18, 1970). It is well-written, packed with valuable information on cable and other aspects of telecommunication, and will no doubt

be a "classic" on cable for years to come. Its value is further increased by the inclusion of a superb 12-page annotated bibliography by Jon Shafer.

A second good primer, equally useful as an operational handbook, is Cable Television in the Cities: Community Control, Public Access, and Minority Ownership. Edited by Charles Tate, this comprehensive guide was published under the auspices of the Urban Institute -- a nonprofit research organization established to study the nation's urban problems. In addition to the topics mentioned in the title, Tate offers a broad range of practical advice on cable at the local level, programming techniques, and where to go for help. It can be ordered for $3.95 from: The Urban Institute, 2100 M Street, N.W., Washington, D.C. 20037.

Finally, a special issue of the Yale Review of Law and Social Action (vol. 2, no. 3, Spring 1972) contains a collection of controversial essays, all dealing with cable television. The issue is presented as a counter source of views on the potential benefits and harms of CATV, mostly in reaction to the Sloan Commission's report On the Cable. Kas Kalba, its editor, and others make a strong case for implementing a national policy for franchising since local decision makers lack the comparative data on which to award contracts.

2. Bibliographies

A number of selected bibliographies have been published over the past few years -- most notably those of the Rand Corporation and those appearing in the Journal of Broadcasting. Since 1971 Rand has made available four such bibliographies, all of a specialized nature:

Harrison, Annette. Bibliography on Automation and Technological Change and Studies of the Future. 1971. (P-3365-4)

The Rand Corporation. "Communication Systems," A Bibliography of Selected Rand Publications. 1972. (SB-1021)

The Rand Corporation. "Education," A Bibliography of Selected Rand Publications. 1972. (SB-1026)

The Rand Corporation. "Television," A Bibliography of Selected Rand Publications. 1972. (SB-1031)

A special bibliography of Rand publications on cable television can be had by writing the Publications Department, The Rand Corporation, 1700 Main Street, Santa Monica, California 90406.

The single, most comprehensive bibliography I have seen was compiled by Don R. Le Duc while working on his doctorate at the University of Wisconsin. It is entitled "A Selective Bibliography on the Evolution of CATV 1950-1970" and appears in the Journal of Broadcasting, vol. 15, no. 2, Spring 1971. Le Duc indicates the problems of bibliographic control when he writes that more than 3,000 of the nearly 4,000 articles, studies and reports on CATV published between 1950 and 1971 appeared in print after 1960. Le Duc's bibliography is a wide sampling of scholarly, legal and trade literature. The 1,200 plus references are arranged chronologically within topic headings. This invaluable work would be the starting point for any in-depth study of cable.

An excellent legal bibliography -- "A Bibliography of Articles About Broadcasting in Law Periodicals" -- was prepared by Kenneth Compertz in an earlier issue of the Journal of Broadcasting, vol. 14, no. 1, Winter 1969-70. Gompertz surveys 146 law reviews, journals, and other periodicals listed in the Index to Legal Periodicals, the Index to Foreign Legal Periodicals, the Legal Periodical Digest, and the Business Law Articles. The primary index is by title but there are additional indexes for subject, author, and publication title. Of the 497 citations listed, 42 are devoted to CATV and can be found under the subject, Community Antenna Television.

Michael H. Molenda has put together a helpful bibliography with an educational slant, "Annotated Bibliography on the Educational Implications of Cable Television (CATV) and Video Cassettes," which appears in the April 1972 issue of

Audiovisual Instruction, vol. 17, no. 4. Another excellent bibliography was prepared in 1972 by the Wisconsin Library Association; it is 38 pages in length and can be purchased for $1.50 from the Association's office in Madison, Wisconsin. The author is Professor William Stroud and it is called "Selected Bibliography on Telecommunications (Cable Systems)." In general, Stroud's bibliography takes up where Le Duc left off, though it is not historically arranged and there is some regional bias favoring the State of Wisconsin. It is divided into six sections: I) Introduction to CATV, II) Exploratory Studies (with bibliographies), III) Special Research Reports/Publications and Selective Topics on CATV -- Telecommunications, IV) Model Ordinances: CATV, V) State of Illinois/City of Chicago Hearings on CATV, and VI) Bibliographies. What makes this compilation so special is its useful organization. For instance, the first part introduces and divides CATV into eleven "points of view": 1) A neutral point of view; 2) A popular point of view; 3) The CATV operator point of view; 4) The broadcaster's point of view; 5) A local government point of view; 6) A federal government point of view; 7) The business point of view; 8) A technical (engineering) point of view; 9) The minority point of view; 10) The American Newspaper Publishers Association (ANPA) point of view; and 11) The educational point of view. Regardless of one's interest, he will find an easy entry into one of these topics. Stroud also provides a short but informative introduction.

Another bibliography worth noting was recently published by the U.S. Office of Telecommunications Policy. Titled "Cable Television Bibliography", it can be ordered from NTIS in Springfield, Virginia (PB 208 363). This is a 27-page staff research paper prepared for the Executive Office of the President.

One note of warning on these bibliographies: Stroud points out in his introdcution that because the impact of cable spans such diverse disciplines as computer science, law, education, etc., conventional search techniques can prove a

tedious and frustrating pursuit. I strongly recommend working from one of the above bibliographies, especially Le Duc's or Stroud's.

3. Abstracting and Indexing Services

While there are no A & I publications devoted specifically to cable television, a great deal of material can be found through the general social science and legal indexes. A non-technical approach to periodical articles can be had by searching the Readers Guide to Periodical Literature under the subject "CATV" -- prior to 1968 under "Television", "Broadcasting" and "Community Antenna." Though the quality of the citations vary, the periodicals are at least widely available. Education Index carries a few entries under "Television Antennas-Multiple Outlet Systems," most of which are useful. Social Science and Humanities Index lists citations under "CATV", and prior to 1968 under "Television, Antenna." The New York Times Index is another good source of cable information, especially for activities in the New York and Washington areas; items can be found under "Television and Radio - Community Antenna Television (CATV)." For a business approach the Wall Street Journal Index lists information under "Communications, Radio & TV." The economic side is also well-documented in the Business Periodicals Index under "Television", "Broadcasting" and "Community Antenna." One of the most prolific indexes to CATV information is the Public Affairs Information Services Bulletin, under the subject "Television relay systems." Articles treating the legal implications of cable are represented in the Index to Legal Periodicals under the entries "Television - Cable Television" and "Radio and Television." Two other important CATV sources are the Index to Foreign Legal Periodicals (look under "Radio and Television"), and the Index to Periodical Articles Related to Law (see "Television").

4. Directories

It is sometimes necessary to know the names and addresses of cable operators, their relative size, and whether or not programming is originated by them. Fortunately, there are a number of good directories available to fill such needs. Probably the best one is CATV Systems: Directory, Map Service & Handbook, published annually by TV Communications, 1900 West Yale, Englewood, Colorado 80110. It sells for $8.95 if purchased separately, but is free of charge to subscribers of CATV Magazine. It provides listings of cable suppliers, operators and systems locations. The table of contents of the 1972/73 issue has sections devoted to: Complete TV industry statistics; CATV Ad/programming markets; Summary of current FCC rules; All U.S. & Canadian systems; CATV maps with systems locations; Multiple system operators; State, regional and national associations; CATV reference publications; U.S. TV station list; Congressional committees; CATV Strand map symbols; Glossary of cable TV terms; Top 100 TV market list; CATV TV program log sample; Federal agencies affecting CATV; Sample franchise ordinance; and the NCTA advertising code.

Another useful annual directory put out by TV Communications is the CATV Directory of Equipment, Services and Manufacturers; it also sells for $8.95 and is free to subscribers of CATV Magazine. Contents of this directory are taken from information furnished by manufacturers and suppliers serving the cable industry. The 1971 edition covers the following areas: Antennas, towers, and head-end buildings; Cables, connectors, fittings, and accessories; CATV test equipment; Distribution equipment, amplifiers and passive devices; Head-end electronic equipment; Local origination equipment and accessories; and Microwave antennas and equipment.

Another source for those seeking data on cable television is the two volume Television Factbook, CATV and Station Coverage Atlas. This is published annually

by Television Digest, 2025 Eye Street, N.W., Washington, D.C. 20006 at a cost of $35.00. Each issue provides television ownership and coverage data, as well as the most comprehensive statistics for the cable industry. It gives abbreviations and initials commonly used in TV, advertising agencies, associations and organizations of CATV, colleges and universities offering radio-TV degrees, consulting engineers, educational TV stations, FCC directory, instructional TV equipment, international TV directory, labor unions and guilds, management and technical consulting services, TV market ratings, program sources and services, and publications in television and related fields. TV Digest also puts out the annual CATV Station Coverage Atlas and 35 Mile Zone Maps handbook that contains valuable reference information and gives an inside view of the cable industry.

5. Organizations and Associations

There are numerous government and private organizations involved in stimulating interest and developing public policies to direct the cable industry in this country. Because the number and activities of the federal agencies are so vast, I will cite here only the major regulatory ones. In addition to those listed below on a national level, nearly every state has some sort of corresponding organization.

Federal agencies:

Federal Communications Commission (Cable Television Bureau)
White House Cable Television Committee (Cabinet level group)
White House Office of Telecommunications Policy
Office of Economic Opportunity - Communications Development Division
U.S. Department of Justice - Community Relations Services
U.S. Department of Commerce - Office of Telecommunications
Senate Commerce Committee - Communication Subcommittee
House Commerce Committee - Communication Subcommittee
Senate Judiciary Committee - Copyright Subcommittee
House Judiciary Committee - Copyright Subcommittee

One of the most active and influential private associations is the National Cable Television Association (NCTA). Its offices are located at 918 16th Street, N.W., Suite 800, Washington, D.C. 20006. It was founded in 1952 as a national

trade organization representing the CATV industry before the FCC and state regulatory bodies. It now includes about 1150 operating CATV systems and 210 associate members, including manufacturers and suppliers of CATV equipment, CATV brokerage and consulting firms, and related interest groups. Upon request they will send a packet of CATV information and a list of their publications. NCTA offers many items on different aspects of cable's past, present and future. Most are light reading, but the historical summaries are useful. They also sponsor an annual national convention and seminars and meetings throughout the year, covering a variety of cable topics. There are about 45 state and regional cable television associations which work closely with NCTA on matters of mutual interest.

Another independent organization that has done much to enlighten the public on the issues of CATV is the Office of Communications of the United Church of Christ, 289 Park Avenue South, New York, New York 10010. The Office of Communications was established to assist groups in programming and obtaining employment in broadcasting. It provides community associations with advice, staff assistance on franchising, and legal help in formulating petitions to deny license renewal. It has made possible the publication of Cable Television: A Guide for Citizen Action by Monroe Price and John Wicklein, and also distributes a 13-page introduction to cable entitled A Short Course in Cable; single copies are available free of charge by writing the New York office.

Communications Satellite Corporation (COMSAT) is another private company interested in CATV communications. The Communications Satellite Act of 1962 chartered this agency to build and launch a domestic satellite system for the nation. COMSAT's offices are located at 950 L'Enfant Plaza South, S.W., Washington, D.C. 20024.

The Center for Analysis of Public Issues, 415 Madison Avenue, New York, New York 10017 is currently monitoring progress on the public access channels in

Manhattan and investigating the manner in which the government and the public respond to local programming. It has published an account of the cable experiences and abuses of New Jersey municipalities in Crossed Wires: Cable Television in New Jersey (Princeton: Center for Analysis of Public Issues, 1971). The book includes information about important issues in franchise negotiations, as well as a sample franchise that might be used for beginning community groups.

The Sloan Commission on Cable Communications was established to find out how cable television can best meet the social and economic needs of the cities, to make a technological assessment of CATV, and to provide information to city governments concerning franchising. Its final report, On the Cable, is basic to any CATV collection; two appendices provide extremely useful data on costs, potential profits, and cable hardware.

The MITRE Corporation, whose home office is in Westgate Research Park, McLean, Virginia 22101, studied future cable applications in the District of Columbia. Working under a grant from the John and Mary Markle Foundation, MITRE published in May of 1972 an extensive study entitled Urban Cable Systems. This is a research report concerning the feasibility, technology, and the economics of wiring Washington; in addition, it contains a wealth of data that is applicable to the creation of cable television in other urban environments.

The Cable Television Information Center (2100 M Street, N.W., Washington, D.C. 20037) provides a series of reports designed to help local government officials. A complete set of these papers, along with all future ones, can be purchased for a fee of $25.00.

6. CATV Journals, Periodicals, and Newsletters

The only effective way of keeping abreast of the latest happenings in the cable world is to read the various trade journals and periodicals. The ones discussed here offer reliable and up-to-date coverage of important policy actions,

mergers, franchise acquisitions, and developments in systems technology.

Broadcasting Magazine is the single most important trade magazine in the field. It is published weekly ($14.00/year) and can be ordered from Broadcasting Circulation, 1735 DeSales Street, N.W., Washington, D.C. 20036. Broadcasting is devoted to the entire broadcast industry, announcing new equipment, job promotions, stock listings, coming events and conferences, and finances; it is especially noted for its FCC coverage. CATV Magazine, published weekly ($33.00/year) by TV Communications, is a news magazine for systems owners, management executives and all those interested in cable television. Each issue contains detailed reports of new developments from the magazine's Washington Bureau, franchise activity and grants, construction progress reports, financial and personality reports, new equipment and services, plus hard-hitting editorials.

Television Digest, published weekly ($137.00/year) by Television Digest, Inc., is the most authoritative source of empirical and general trend information about cable. It not only covers cable television, but all other agencies -- public and private -- with interest in broadcasting. Consumer electronics equipment is reviewed, including video cassette models, with comparative ratings. The Black Communicator, published monthly ($5.00/year) by the Urban Communications Group, 1730 M Street, N.W., Suite 405, Washington, D.C. 20036, gives a voice to minority interests in the telecommunications media. It provides general information on public news, on broadcasting, media monopolies, license challenges, and federal agency actions. Cable/News Weekly, a business-oriented news flier put out by Cable Communications Corporation, 146 Executive Building, 2801 Northwest Expressway, Oklahoma City, Oklahoma 73105, started publication in March of 1968.

Broadband Communications Report, published semimonthly ($48.00/year) by Broadband Information Services Inc., 274 Madison Avenue, New York, New York 10016, serves as a clearinghouse on technological developments, cable systems, regulation,

financing, programming, and public access. An excellent newsletter on the use of broadband cable communications for the purposes of government, institutions, private and public organizations, business, and individuals in urban areas is the Urban Telecommunications Forum, which is published monthly ($17.00/year) in association with the Urban Telecommunications Workshop, 276 Riverside Drive, New York, New York 10025. It covers current research and practical uses of cable with an emphasis on the public benefits of cable communications.

Cablecasting and Educational Television, a monthly ($18.00/year) published by C.S. Tepfer Publishing Company, 140 Main Street, Ridgefield, Connecticut, is the best source for ITV and educational applications of cable. Another periodical of importance is TV Communications, a monthly publication ($10.00/year) that is billed as "The Professional Journal of Cable Television". It is published by CATV Publications, Inc., 1900 West Yale, Englewood, Colorado 80110 and contains in-depth articles, primarily concerned with CATV technology and systems operation. One other journal to be considered is Broadcast Management/Engineering (BM/E). Published monthly ($10.00/year) by Mactier Publishing Corporation, 820 Second Avenue, New York, New York 10017, it covers a wide variety of practical topics relating to cable operation; it is also noted for its excellent series of individual CATV system case histories.

Two newsletters, which are free of charge, should also be of interest. The National Cable Television Association, located at 918 16th Street, N.W., Washington, D.C. 20006, circulates its weekly newsletter, NCTA Bulletin, to its members and others with legitimate interest in the field. JCET News, an irregularly published newsletter concerned primarily with regulation, is circulated by the Joint Council on Educational Telecommunications, 1126 16th Street, N.W., Washington, D.C. 20036.

7. CATV Operations and Equipment

While there is no single textbook devoted to cable techniques and equipment, Robert Cooper's CATV Systems: Management and Operation (Blue Ridge Summit, Pa.: TAB Books, 1966) offers many practical insights into day-to-day cable procedures.

From a nuts and bolts viewpoint, the Sony Corporation of America offers a series of helpful articles, limited of course to Sony equipment, in its Sony Videocorder Application Bulletins. They are available free of charge and can be had by writing Sony, 47-47 Van Dam Street, Long Island City, New York 11101. Sample articles include such titles as "Sony Aids Crimefighters","Sony Helps Dropouts", and "Sony Contributes to Mental Health."

Radical Software, published by the Raindance Corporation, Suite 1304, 440 Park Avenue South, New York, New York 10016, is an information journal of the video underground and is easily the best source available for comparing equipment and capabilities. It appears six times per year and one issue carried the distinctive title Guerrilla Television. The publication provides extensive information on half-inch video equipment and their experiments in community organizing. In Guerrilla Television Michael Shamburg talks about his own experience with low-cost portable videotape cameras, video cassettes, and cable television and how they can be used to design alternate television that favors portability and decentralization. Of particular interest are the equipment comparisons and relative cost analyses.

8. Government Materials and Regulations

I had intended to divide this last section into two areas: a) government publications and b) government regulations. However, in many cases the same documents were applicable in both sections, so I decided to combine them. Some of the government agencies responsible for these publications have been mentioned in the "Organizations and Associations" section of this paper.

The Federal Communications Commission, 1919 M Street, N.W., Washington, D. C. 20554, prepares and distributes a wealth of information relating to the cable industry. For instance, one can write the Commission to find out how one's local cable system is doing by requesting its CATV Annual Financial Report, its Form 325 Report, and its Program Originations Report. There is a small xerox charge for this data. The FCC also provides public announcements on cable and significant decisions relating to it. Copies of all rules and regulations are free for the asking. FCC's Dockets 14895, 15233, and 15971 and its First Report and Order and Second Report and Order were all issued during 1965-66 and represent the Commission's first extensive rule-making proceedings in cable TV. The "second round" of cable decisions started in 1970 and culminated in the Third Report and Order as reflected in Dockets 18397, 18397-A, 18891, 18892, 18894.

A thorough balanced view of recent hearings leading up to the Commission's letter of intent on the Third Report and Order is presented in Bruce E. Thorp's "Communications Report: FCC Moves Toward Decisions on Rules Vital to the CATV Industry," appearing in National Journal, vol. 3, no. 1 (January 2, 1971). Jules S. Tewlow also provides an outstanding summation of FCC actions on CATV, as well as some of the technological advances like two-way systems, video cassettes, and satellites in a 36-page report issued in the R.I. Bulletin, no. 1029 (September 25, 1970) published by the American Newspaper Publishers Association Research Institute. A free copy can be obtained by writing: ANPA Research Center, Box 598, Easton, Pennsylvania 18042. From a legal perspective, a 46-page state-of-the-art review on cable regulation can be found in the Duke Law Journal, vol. 1971 (1971), pp. 1151-1197.

The Office of Telecommunications Policy was established in September 1970 by the Executive Office of the President to oversee all government communications, make recommendations and proposals to the President and to serve as the executive

branch spokesman for matters concerning telecommunications. The Office provides up-to-date information on cable, prepared by various federal departments.

Opinions from the state attorney generals concerning cable can be had by writing the AG's office of the specific state. The following statutes of the United States Code are also relevant: 17 USC, Sec. 1; 47 USC, Sec. 151, 152, 153, 214, 303, 307, 315, 317, and 325.

Important state and city publications include the New York State Public Service Commission's Regulation of Cable Television by the State of New York. This 200-page report to the Commission by Commissioner William K. Jones outlines CATV development in New York and makes recommendations for future policies. It can be obtained for $5.00 by writing Francis Rivett, Public Service Commission, 44 Holland Avenue, Albany, New York 12208. The Philadelphia City Planning Commission published a short study in 1970, offering guidelines for the location and distribution of public cable facilities in the city, among them branch libraries, neighborhood health centers, schools, etc. It is called Telecommunications Needs for Municipal Functions in Philadelphia: Part I, The Libraries; Part II, The Development of Public Health. A mimeographed copy can be had by writing the Division of General Research, Philadelphia City Planning Commission, City Hall Annex, 13th Floor, Philadelphia, Pennsylvania 19107.

Some good overviews of regulatory policies are available in the following articles:

Barnett, Harold J, and Edward Greenburg. "Regulating CATV Systems," Law and Contemporary Problems, no. 34, 1969.

Christiansen, Gary L. "Should CATV Be a Utility?" Broadcast Management/Engineering, December 1969.

Dietsch, Robert W. "Public Utilities: A Path Through the Maze," Nation, August 17, 1970.

"Notes: The Wire Mire: The FCC and CATV," Harvard Law Review, vol. 79, 1965, pp. 366-390.

Rivkin, Steven R. "Jurisdiction to Regulate Cable Television: Issues in the Scope of Federal, State and Municipal Powers," Sloan Commission, 1971.

Finally, I should point out that it is essential to keep up with the most current developments on the state, federal and municipal levels by checking some of the news-type periodicals mentioned above and ordering material directly from the source indicated. Much is in semi-published (e.g., mimeographed) form, and yet of considerable importance if one is to keep informed in this field. It is changing rapidly and it takes persistence and effort to keep abreast of current developments.