DOCUMENT RESUME

ED 092 138 IR 000 697

TITLE	The Wired Public Library; Who Needs It? What Will It Cost? Who Will Pay For It?
INSTITUTION	Atlantic City Free Public Library, N.J.
SPONS AGENCY	New Jersey State Library, Trenton.
PUB DATE	Oct 73
NOTE	56p.; Report of study conducted by Dorland and Sweeney, Inc., Atlantic City, New Jersey
EDRS PRICE	MF-$0.75 HC-$3.15 PLUS POSTAGE
DESCRIPTORS	Broadcast Industry; *Cable Television; *Educational Television; *Feasibility Studies; Instructional Media; Library Services; *Public Libraries; Television; Video Equipment
IDENTIFIERS	*Atlantic City; New Jersey

ABSTRACT

A cooperative study, sponsored by Atlantic City and Cape May County, New Jersey, investigated the prospects for extending library services throughout the seashore resort/rural areas with the use of cable television. A review of the evolution of cable TV, CATV, two-way television and the interactive cable concluded that the equipment and technology is available now but is very costly. Many examples of various combinations of telephone and CATV usage were found to be in experimental stages. A survey was mailed to the local area, Atlantic City. The results indicated a relatively high interest in library services but not sufficient to override the consensus of national leaders who feel that the market for this complex and expensive technology has not yet developed. It was recommended that local libraries make use of existing CATV channels as they are granted and develop the "consumer research" needed to justify the expense of the more elaborate and complete two-way systems. (WH)

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THE WIRED PUBLIC LIBRARY

WHO NEEDS IT?

WHAT WILL IT COST?

WHO WILL PAY FOR IT?

PREPARED BY:
DORLAND & SWEENEY, INC.

OCTOBER 1973

ILLINOIS AND PACIFIC AVENUES • ATLANTIC CITY, N. J. 08401 • 609-345-2269

March 7, 1974

The following study was conducted through the auspices of The Atlantic City Free Public Library and The Cape May County Library on a grant received from the State of New Jersey.

The firm of Dorland & Sweeney conducted the study on behalf of the Libraries, while working with myself. In addition, the results of the study were discussed in person at The Middle Atlantic Regional Conference held here in Atlantic City in October, 1973.

I, personally, feel that Cable Television is still a very valuable tool, which should be used where possible and economical for libraries. Although the results of this study indicate the immediate problems in implementing Cable TV use for libraries, it should not be considered to encourage abandonment of all interest.

Richard T. Sweeney
Library Director

RTS:amb

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FOREWARD

Stereotyped attitudes about libraries as passive repositories of information, and librarians as passive keepers of the nation's information storehouses, are being altered as a new breed of information scientist emerges.

Born during the Atomic Age. Schooled during the Space Age. And practicing their skills with one eye on the 21st Century, this new breed has demonstrated an unwillingness to accept the status quo, and is energetically restructuring the role of the library as an information catalyst.

Questioning traditional methods of information transmittal, the new breed is determined to take advantage of newly emerging technologies -- not merely to supply information, but to create a demand on the part of the public for the kinds of services that heretofore have been available only in academic or technical settings; to use telecommunications not only to transmit existing library services, but also to create new services which will stimulate library users.

THE PROJECT

"Can we create a low-cost community oriented, direct-access library information system today, using existing equipment and technology?" This fundamental question, posed by Richard T. Sweeney, M.A., M.S., Director of the Atlantic City Free Public Library, provided the impetus for a cooperative study between the Atlantic City and Cape May County, New Jersey libraries to investigate the prospects for extending library services throughout the seashore resort/rural areas with the use of cable television.

The idea is disarmingly simple: Given a library user with a telephone and an installed TV cable, shouldn't it be relatively easy to add the library as a transmittal source (microfilmed materials, films, slides, audio tapes, etc.) and

a few electronic "gadgets" to create a direct-access system? As this report will detail, there is no "yes" or "no" answer to the question.

Take the innovative, creative field of information science; add three highly volatile, rapidly changing industries - CATV, peripheral direct-access equipment manufacturers, and telephone interconnect systems; toss in a profusion of Federal, State and local government regulatory bodies; mix with an apathetic, largely uninformed population of end-users, and the outlines of the problem facing the development of a practical CAT/direct-access public library information system begin to form.

METHODOLOGY

Application for an Incentive Grant to assist in funding experimental video tape and cable TV services was made by the Atlantic City/Cape May County libraries to the New Jersey State Library and was received. Including contributions from local budgets, the total project funding amounted to $10,000.

As conceived, the project was to achieve three goals:

(1) the development of a body of knowledge regarding library uses of cable communications,

(2) the establishment of a CATV production capability for use by area (Southern New Jersey) libraries and the public, and

(3) the demonstration of a CATV/library access system at the Middle Atlantic Regional Library Federation (MARLF) Conference at Atlantic City in October 1973.

A request for bid proposals was distributed to a number

of individual consultants and consulting firms. The firm of Dorland & Sweeney, Inc. of Atlantic City and New York was selected and, in conjunction with the project directors, it was agreed that the project would:

(a) Report on the state of the art.

(b) Construct a questionnaire that could be used to determine equipment availability and topics of interest to a sampling of local public library users.

(c) Develop local library programming for the CATV services, and,

(d) Demonstrate a CATV/library-access system that might be adapted for use by other local libraries.

The State of the Art

CATV

For those who are not yet "cable conscious," a brief explanation of CATV is in order. CATV or community antennae television as it was known in its earlier days, was first developed in the late 1940's to improve television reception in mountains or isolated areas such as in Pennsylvania or Oregon, where TV signals were weakened by distance or blocked out by mountains.

In these areas, cable companies built high towers or antennae that would catch broadcast signals better than smaller home antennae. Signals thus captured would then be amplified by the cable company and delivered to the home via a cable system paid for by the homeowner by virtue of a one-time home installation

charge, plus a monthly service charge.

In the Atlantic City area, for example, a coastal site at the edge of the Boston-Washington megalopolis, the local cable company offered the added inducement of Broadcast TV channels from both Philadelphia and New York and achieved an extremely high level of market penetration (the Atlantic City system was the 11th largest U.S. CATV system as of 1970.)

As original cable company managements realized the installation costs could quickly be recovered, and that high levels of depreciation could be used to offset company profits in early years, creating high profits in subsequent years, Wall Street recognized the industry as one with lucrative growth potential, largely unregulated by government bodies.

Municipalities routinely granted permission to CATV

companies to build antennae and lay cable at will, especially when companies offered the incentive of a guaranteed percentage of gross income as a franchise fee. Meanwhile, conventional broadcasting industry management paid little attention to the cable industry. Many television stations welcomed cable as a means of expanding their viewing audiences and thereby attracting advertising sponsors and revenues.

In 1952, the United States had 70 CATV systems with 14,100 subscribers. Just ten years later, in 1962, 800 systems had been developed with a total subscriber households count of 850,000. By 1972, there were 2,750 existing CATV systems in the U.S., with 1,950 systems approved but not yet built, and 2,900 applications pending before various local governments. Operating systems now reached approximately 18.5 million viewers -- about

10% of the total American TV viewing public.

While most of the older systems offered between 6 and 12 TV channels, new systems carry 20 channels or more. Over 400 CATV systems have local origination capabilities (i.e., can create and telecast their own programs,) and nearly 300 of them do so on a regularly scheduled basis of 16 hours per week. Almost 800 of the systems have the capability of providing automated services such as time, weather and stock market information.*

As noted in On the Cable, a report of the Sloan Commission on cable communications, CATV today does virtually no significant programming and depends on conventional television for its "product."

*This section is largely derived from the United Church of Christ's excellent publication, Short Course in Cable, and the Urban Institute's Cable, An Overview.

However, one situation has changed dramatically. No longer do conventional broadcasting executives ignore the feisty. upstart. Today, developments in the CATV industry are watched quite closely by both the advertising and television industries, and the Federal Government.

Industry sources predict that CATV, pay-TV and cassette-TV will not present a real threat to the TV networks' ratings and economic well-being for at least another decade. Nevertheless, one advertising executive has warned commercial, on-the-air TV executives that they will face "a real crossroad by the late 1980's."

Why? How will CATV challenge the supremacy of the conventional TV networks? The answer lies in the new services that CATV can provide as a result of the development of two-way CATV capabilities.

Two-way Television and the Interactive Cable

The first applications of two-way television did not involve cable TV systems. The original direct-dial access system was developed for education by the now-defunct Chester Electronic Laboratories in 1960. As the corporation described their beginnings:

> Start with a telephone. Nothing mysterious about that. You pick it up, dial a number, another phone rings somewhere, and you can communicate with the person you're calling. Simple and effective. So why not apply the same technology to education? Only instead of a person at the other end of the line, have information. Simply dial a number corresponding to a program, the tape machine starts automatically and the information is delivered. (emphasis added)

Chester Laboratories, during the 1960's, was involved in the development of scores of direct-dial-access systems for educational institutions and industry. Chester systems consist primarily of an

ordinary telephone-type dialing (or touch-tone) mechanism, appropriate switching gear at the head-end (transmission source) to permit random access to programming and multiple transmission, automated audio and visual transmission devices, and listener-viewer equipment, self-contained at a single, convenient location.

Because the Chester systems are switched systems (operate from point-to-point like ordinary telephones) and are operative in a tightly controlled environment, lack of privacy and multiple, simultaneous use of program sources present few problems.

But what happens when these systems go "public," when they transmit their information over open cable systems? Copyright problems; questions concerning privacy and exclusivity; local, State and Federal regulations, not to mention costs and a host of other spectres, rise to confront the innovative information scientist.

Nevertheless, nearly five years ago, the Buck Rogers 21st Century projections of the potential of two-way CATV were outlined in a submission of the Industrial Electronics Division of the Electronic Industries Association (IED/EIA) to the Federal Communications Commission (FCC.) The concept of "the wired nation," with its promise of bank by wire, shop by wire, education and health information services by wire, and the like, has captured the public's imagination. But like the tantalizing grapes renowned in Greek mythology, the idea of direct-access to all of the world's information from the confines of one's home or office continues to lure the attention, yet elude the grasp of the nation's information scientists.

How two-way cable works

At one end of the system is the headend, the transmission source that sends a TV signal downstream to your home. It may transmit TV signals picked up from the air by antennas or microwave receivers (the conventional uses of CATV) or it may transmit signals from programs produced in local studios.

Wherever the TV signals originate, they are strengthened and converted to proper frequency at the headend, then they are distributed over the cable through what is sometimes referred to as a "trunk-branch" system.

The cable that leaves the headend is the trunk line. The trunk line is connected to smaller feeder lines which run past rows of houses, or along roads where homes are located. From these feeder lines, individual drop lines run into each household.

Amplifiers are inserted about every two thousand feet throughout the system to keep the signals from losing strength.

The home terminal is at the opposite end of the CATV system from the headend. In its simplest form, it consists of a TV set and connectors, (sometimes called adapters) that connect to it to the cable feeder line. The terminal may also include more complex equipment, such as set converters to expand the capacity of the TV receiver beyond the standard 12 VHF channels. In the future, the terminal may also include such equipment as videotape recorder; a facsimile receiver with the capacity to print-out newspapers, "mail," or library information where permanent copies are desired; an alphanumeric keyboard similar to a pushbutton telephone to send messages back to the headend; and a minicomputer control center to store and manipulate various bits of data.

Since the cable is a neutral device which works equally well in both directions, signals can also be sent upstream, i.e. from the terminal back to the headend, and with some modification, eventually among the subscriber terminals. Whether two-way communications are carried out in this manner, or by the use of an additional cable that retraces the configuration from the home terminal to the headend, it is the potential for interaction that has aroused the interest of the industry and the public.

From the pilot projects to practical use -

What will it cost? Who will pay?

To date, two-way cable communications is largely a test-tube phenomenon confined to a few small communities, or small sections of larger cities. According to Cable Data, Cable Television Information Center/The Urban Institute, Washington, D.C., as of July 1972, 18 two-way experimental cable systems had been counted across the country.

While current two-way technology may be divided into two classes -- (1) to a headend computer, and (2) complete audio/video/digital return which allows interaction with a computer that can handle random requests for information -- most of the current experiments have tested digital responses only.

As reported in Cable Data contemporary experiments include:

. An Orlando, Florida study in which 24 terminals, each equipped with a 10-character numeric keyboard and a separate switch for pay-TV, were used in four merchandising experiments and one credit card verification test.

. A digital two-way experiment in Jonathan, Minnesota that plans to evaluate six interactive services using terminals with 12-character keyboards. Estimated costs of wiring the entire community (1,000 to 1,500 buildings) are $4 million. Only 50 to 100 buildings will be included in the test.

. An El Segunda, California evaluation of 15 three-key and 15 ten-key terminals with pay-TV, security alarm systems, and remote meter reading capabilities.

. Irving, Texas operators expected to have 1,500 terminals with a 5-character keyboard and

switch for pay-TV installed by late 1972. Services were to include Burglar and Fire alarm systems, emergency assistance and utility readings.

Three additional projects involve not only digital return, but a complete audio/video/digital system. One study, conducted under the direction of Mr. Gordon Harring, Research Director of Telecable, Inc., of Norfolk, Va., was completed in Overland Park, Kansas. It was designed to provide school-at-home services for two handicapped children. Each child was able to interact visually and verbally with a teacher and with each other, using a standard TV set with a converter, a separate handset with 12 pushbuttons and a microphone.

Another project, involving two hundred homes in Dennisport, Massachusetts used a random-dial access system to

obtain grocery prices posted at a local store through a system that allowed users to select from 12 available channels.

The most ambitious project, heralded as the most sophisticated interactive system in the country, was designed by the Mitre Corporation for the community of Reston, Virginia. Developed in cooperation with the Reston Transmission Company, one of the companies operated by TeleVision Communications, Inc., a multisystem operating division of Warner Communications, the Reston experiment was ongoing from 1971 to January 1974.

While Mitre Corporation evaluations of various component configurations and their costs are continuing (and will be reported on shortly) the basic components of the system have included a 12-button Touchtone phone, a refresh memory consisting of a videotape recorder fitted with a special silicone storage

tube attachment to permit selection of individual frames ("frame-grabbing") of information called from the computer and a standard TV set.

Costs for these systems are not available, although in the words of one project director; they are "considerable." One of the initial objectives of this report was to provide comparative information about direct-access systems. As research progressed, however, it became apparent that this objective was unrealistic, since it is based on the assumption that certain "standards" are operative in the field. Our investigations have established that this assumption is not warranted.

The state of the art is such that each system has been "custom developed" to satisfy the specific objectives of its creators. And while certain, basic kinds of equipment may be

"standard," each system is the result of a series of decisions made, considering various alternative components of the system, which decisions will be influenced by such parameters as cost, technologic capability, availability, and the like. Costs for mass-produced terminals (which currently do not exist) are estimated to range from $50 to $100 for audio (voice) alone, to more than $1,500 for voice plus video. Computer costs are still undetermined.

Estimated costs were the subject of a portion of the study conducted for the City of Palm Springs, California by the Mitre Corporation and reported in July 1973. Reconstruction of the existing 12-channel one-way CATV system in 1973 would cost 1.4 million, and would take two years, said the report. Construction of an extended system containing 20 channels with possible pay-TV

capabilities, but no two-way services, would cost $2.6 million and take five years to complete.

To create a full 30-channel, two-way CATV system with dual-trunk, single-feeder distribution; individual TV set-top converters, plug-in return amplifiers, and terminals, would cost $3.6 million and take five years or longer to complete. In addition, $1.1 million cost of equipment and installation of converters would have to be absorbed by subscribers ($200 to $300 per unit.) This system would allow expansion of services to include interactive educational, polling and shopping services similar to the Reston system.

One figure should be of particular interest to a library contemplating the addition of CATV services to its list. Headend and studio costs are estimated to be $90,000 exclusive of space

and annual operating costs. It would seem that a library director would be well-served to consider the following remarks from the 1973 RAND report:

Cable Television: A Handbook for Decision Making:

> The urban cable system faces a real chicken and egg problem in providing more than better reception and a few more TV channels. Until new services are developed, cable may not attract enough subscribers to warrant large-scale commercial construction. But until new systems are built and large subscriber markets are assembled, new services will not be profitable. The result may be a slower pace of system construction than some previous accounts have projected.

The words of a colleague, perhaps, brings the fundamental issue into even sharper focus:

> I don't think you'll find much published on the subject. In fact, I'd bet that you're going to find it difficult to get anyone to talk about it for publication. I certainly wouldn't want to be quoted. But I think that one of the biggest hurdles we have to overcome is the actual usage of these systems.

> If you go to meetings and gossip a bit, that's where you find out that while these technologic advances are exciting from a professional point of view, you'd be pretty hard-put to justify them today on the basis of what they cost, vs. how much they're used.
>
> (name withheld by request)

In other words, despite the expenditure of millions of dollars in research funds, countless hours of effort, and a blizzard of foundation reports, scholarly articles and lay press coverage, the fundamental questions facing the public librarians who would expand the scope of their services to include CATV/direct-access facilities remain unanswered: Who needs the services? Who will pay for them? Are they worth the cost?

Existing library CATV programs

"Someday." "When." "In the future....." These are the tentative words and phrases used to describe the state of the art as it applies to comprehensive library/CATV facilities. For the present, however, a number of locally oriented, small scale projects provide an indication of the kinds of innovative services a public library can provide.

The public library as a CATV production facility has been amply demonstrated by the projects conducted since 1971 by the LaCrosse Public Library of LaCrosse, Wisconsin. Beginning with the taping of preschool age and older children's story hours (actually 15-minutes in length,) library CATV programming has steadily been expanded to include community activities that take place in the library's new

250-seat auditorium, such as school board meetings, local symphony orchestra concerts, and meetings of other community groups. In addition, the Associated Press (AP) newswire is displayed for library patrons on a TV set at the library. In this case, TV production equipment is provided by the local CATV company.

The public library video reference center has become a reality in Mobile, Alabama. One channel on the local cable is assigned to the library. Anytime from 9 A.M. to 9 P.M. Monday to Friday, and 9 A.M. to 6 P.M. on weekends, any cable subscriber can call the library and request visual display of material. Although this system does not provide point-to-point transmission privacy, no names or addresses are asked for, thus assuring anonymity to the requesting patron in the event that the material is of a private nature. Assistance with classroom

presentations, community service information, shoppers' comparison data, and the like, are among the information requested. Library-produced CATV programming for airing over the local cable system includes a nightly bedtime story read by a "friend," the children's librarian, and a multi-media (slides, film, photos and illustrations) local history programs. The Mobile Public Library has embarked on the construction of a library production studio with the help of Federal and State grants.

The National Cable Television Association calls the Natrona Public Library project in Casper, Wyoming, "the most advanced cable-library project in the country." The Natrona Library has its own studio and CATV channel, which it uses for both a video reference service and for the origination of

local community programming. As reported in the NCTA's Cable Television and Education (March 1973.), the key to success of the Natrona project has been the availability of production equipment that is easily used by people with no formal training in TV production. The studio consists of one black-and-white and one color camera, a zoom lens, and a portable VTR, plus supporting equipment. The local cable company leases one channel to the library for $1.00 a year. The lease runs for five years, with maintenance costs absorbed by the library. A recent grant from the National Humanities Foundation will enable the Natrona group to produce a series of 21 community forum shows discussing issues of local interest in a town meeting format. Production of "how to do it" shows on such subjects as how to use the library, basic crafts and skills, and how to use the library's video equipment are just a few of the programs being contemplated

by the library.

As Mr. Robert Freedman, Manager of CATV projects, National Education Television, (NET), New York, New York observed:

> CATV and libraries are natural bedfellows because both are in the business of transmitting information. The public library is the natural watchdog over CATV developments because it fulfills three vital criteria in the public interest:
>
> (1) It is a public institution.
> (2) It is communications and information-oriented and,
> (3) It is essentially non-political in nature.

Projects like the Natrona Library's programs suggest the kind of role that libraries play in public access to CATV. Libraries equipped with TV studios, cable channels, and production know-how, can quickly become community access centers.

One other project deserves brief mention. Under a grant

from the New York Council on the Arts, despite the lack of an existing cable TV facility within the community, the Port Washington, Long Island, New York library began to educate the community in the uses of Porta-Pak videotaping equipment. About 200 hours of tape have been preserved, catalogued and stored, and playback equipment is available for viewing at the library. Most importantly, over 700 people representing a complete cross-section of the community have learned to "produce" CATV programs.

Questionnaires and Responses

Five hundred households were selected at random from Atlantic City cardholder lists and received questionnaires (see Appendix I) on available equipment, use of library services, age and education levels. One hundred and thirty-five usable responses (27%) were received, a response rate that was considered to evidence a high level of interest in the subject matter.

Essential equipment is available in more than 90% of the households sampled in the Atlantic City area (see Appendix II for tabulation summary.) For example, 97% of the households have telephones; 95% have television sets -- an average of 1.7 TV sets per household, and 91% are equipped with cable TV. These results led project leaders to conclude that home equipment

availability would present no deterrent problems during the development of a CATV/library direct-access system.

Not surprisingly, leisure reading, reference information and education, were the leading topics that library users mentioned when asked what they used the library for. Several respondents commented that they looked forward to the extension of these services through the use of CATV. Project leaders were encouraged by the relatively high level of responses for newly developed Atlantic City library services such as music loans, (cassette tapes,) the microfilm index, and consumer information.

Although Atlantic City has a high percentage of senior citizens in its permanent population (47,899,) the survey revealed a low order of library usage by retired people (14%.) It was anticipated by project leaders that this sector of the population

might be one of the principal beneficiaries of a CATV/library direct-access system, and these data would seem to support that assumption.

Students (42%) and employed persons (35%) make up more than three-quarters of the library user population at the Atlantic City Library. These data tend to support an idea advanced by project leaders that local library services might be tied-in with local schools and a suggestion by Dorland & Sweeney, Inc. that perhaps local businesses might be encouraged to support the development of a CATV/library direct-access system through a subscription or grant-in-aid program.

One important question that was not included in the Atlantic City Library survey, but should be included in any future surveys is: "Would you be willing to pay for such a service?"

An important by-product of this project was the realization that it is essential for any community library embarking on the development of such a service to provide data that will clearly demonstrate essential community needs for such a service.

Competition for funding between various community sources, i.e. libraries, schools, health centers, etc., and costs of sophisticated information retrieval equipment are such that the local political bodies with responsibility for budgeting for various community services will require extremely accurate data and objective reports before they will consider these expenditures. Without such data, it is very unlikely that expenditures for such esoteric equipment as encoders/decoders for addressable point-to-point CATV transmission ($18,000 to $20,000) will be authorized. Conversations with librarians throughout the country have convinced us that this aspect of library management

has largely been neglected. Much work needs to be done at the local level.

MARLF Demonstration and Local Program Production

Under the direction of Mrs. Doris Grady of the Cape May County Library, a black-and-white videotape PortaPak system was purchased and some sixty programs with a total viewing time of about 40 hours were produced by Mr. Robert Giddes and Mr. Keith Anderson. Appendix III details subject matter, which was divided among the arts, the environment -- a topic of particular interest in the South Jersey area, community issues, health information and workshops (how-to-do-it) projects.

The project directors decided that a simulated demonstration would satisfy the objectives of the project, due to the high cost factors involved in actually running telephone lines and TV cable into the convention facility. In actual practice, a library patron with a cable hookup will simply call a special library number and ask for the desired information or program, which will

be displayed over a special library channel on the local cable.

The demonstration consisted of two convention booths, one representing "the home" and one representing "the library." A "patron" used a printed index to select a program, then telephoned the request from the "home" to the "library." Library personnel selected the requested program from the storage racks and "cablecast" the program for the patron via a VTR unit connected to a TV set in the patron's "home." Over a thousand librarians visited the booths during the conference. A summary of conclusions was distributed and nearly one hundred requested a copy of the complete report.

Conclusions

While each of the objectives of the project has, to some degree, been achieved, the overall results are bittersweet. The technical feasibility of a library CATV/direct-access system is beyond question. However, the consensus opinion concerning the cost-efficiency of such a system is that it is currently impractical and inefficient for community library programs.

Notwithstanding this seemingly negative conclusion, most parties questioned, felt that this kind of project should be repeated and amplified, if only to provide librarians with an opportunity to develop solutions for the future problems that they undoubtedly will encounter.

As of this writing, the Federal Communications Commission regulations require that all CATV systems in the top 100 TV markets

shall have two-way capabilities by no later than 1977. While it is anticipated that this deadline will be extended, the feeling exists that any extension will not go beyond the early 1980's.

Unless the professional information scientist is willing to take a back seat to commercial or other interests in the development of interactive television, the words of American Library Association group leader John Bystrom should be heeded:

> Politics and economics will determine future development of cable systems and may foreclose the future. We will observe a process which has been repeated many times during the industrialization of the nation, the application of technology to hand methods.... A clear and convincing picture of the use which libraries and information services will make of the new cable system is needed. Innovations necessary to the exploitation of future telecommunications capability require the involvement of library management. Predictions must eventually face the rigors of application, with tests of costs, public acceptance, and operating feasibility.

> The movements of events is such that public policy toward urban cable systems is unlikely to be determined before the results of the pilot projects come in. The economic base for the new industry will be laid and capital raised on the basis of market methods already formulated. Libraries will stand with hat in hand alongside other educational users who lack financial bargaining power of an industry in search of markets.
>
> The system will be so firmly rooted as to be all but unchangeable.

Unless library management surmounts these obstacles now.

If libraries and librarians are to play a useful role in determining the future development of library/CATV systems, it seems appropriate to consider the declaration of a moratorium on research involving flashy technologic advances in a hot-house atmosphere, and focus instead on the development of practical, local answers to lackluster, but penetrating questions of cost-efficiency.

Information concerning the various technologies needed for library/CATV programming is readily available. Information

concerning on-stream cost efficiency at the local level is virtually non-existent. And, it is our experience that, given the need for a go/no-go decision at the local level, issues of budget rather than issues of technology will, most often be the deciding factor.

Local libraries still trail far behind most local school systems in terms of comparative funding. It is almost impossible for a local library director to rationalize expenditures for expensive electronic and telecommunications equipment without being able to demonstrate essential community needs.

Dedication of one or more CATV channels by local franchise holders for library usage as a result of FCC prodding is a necessary step towards the development of a viable library/CATV

program. Projects such as this one provide librarians with the necessary tools and time to learn the intricacies of broadcast communications. To take the step from the test-tube phase to a fully operational library/CATV direct-access system, however, is going to require the kind of "consumer research" that until now, seems to have been given little attention by library management.

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APPENDIX I

Dear Library Patrons:

You may have noticed some of the new services and changes that have been taking place at your Library during the past two years - things like record and tape cassette loans, paintings and art loans, streamlining of the new facilities, children's reading programs and the like.

Now, in cooperation with the State of New Jersey, we are exploring the possibility of developing an exciting new library program using Cable TV and your home telephone. Would you please take a moment to answer the following questions for us? You can then mail or bring this form to: MAIN CIRCULATION DESK
Atlantic City Free Public Library
Illinois and Pacific Avenues
Atlantic City, N.J. 08401

Thank you for your cooperation,

Richard T. Sweeney

Richard T. Sweeney, Director of the Library

INSTRUCTIONS - Please check the appropriate answers:

SCHOOL COMPLETED
Grammar School _____
High School _____
College _____
Graduate School _____

AGE
Under 18 ____
18-30 ____
30-40 ____
40-50 ____
50-60 ____
Over 60 ____

DO YOU HAVE A TELEVISION?
Yes _____ No _____
Is it Cable TV? Yes _____ No _____
Is it Black & White? Yes _____ No _____
Is it Color? Yes _____ No _____
How many TV sets do you have? _____

DO YOU HAVE A TELEPHONE?
_____ No _____
Is is button operated? _____ Is it dial operated? _____

I WOULD USE THE LIBRARY FOR:

_____ Education _____ Children's Programs
_____ Reference Information _____ Microfilm Index
_____ Leisure Reading _____ Consumer Information
_____ Music Loans _____ Art Loans
_____ Other

I AM A:

_____ Student
_____ Housewife
_____ Employed, Type of Business or Occupation _____
_____ Unemployed
_____ Retired

COMMENTS: _____

APPENDIX B

RESULTS OF QUESTIONNAIRE

SCHOOL COMPLETED

High School	-	62
Grade School	-	39
College	-	18
Graduate School	-	12
No Answer	-	4
		135

AGE

Under 18 -	46
Over 60	25
30 - 40	20
40 - 50	17
50 - 60	6
18 - 30	15
	129

T.V. SETS

YES	-	125
NOS	-	8
INVALID	-	3

CABLE - 120 of 125
B & W - 85
Color - 66
SETS - 214 (1.7 sets per responder)

TELEPHONES

Dial	-	102
Button	-	26
No Phones	-	5

USE

Leisure Reading	-	85
Reference Info.	-	83
Education	-	76
Music Loans	-	28
Consumer Info	-	21
Microfilm Index	-	18
Children's Program	-	14
Art Loans	-	8
Other Misc.	-	5

I AM A

Student	-	55
Employed	-	46
Retired	-	18
Unemployed	-	-
Housewife	-	13
No Info	-	3
		135 Replies

97 % - 128 w/phone
95 % - 125 w/TV (1.7 TV sets)
91 % - 120 w/Cable

TOTAL QUESTIONNAIRES MAILED - 500
TOTAL NUMBER RESPONSES 135

PERCENT OF RESPONDERS 27%

POPULATION

HOUSEHOLDS*

Atlantic City 37,003

TOTAL POPULATION**

Atlantic City 47,859

* Source: 1970 CENSUS

** Source: COMMERCIAL ATLAS

Index to Video Tapes

ARTS

		TIME	TAPE #
1.....	Readings of poet George Oppen	20:00	39
2.....	Profile of Cape May Artist Nina Scull	20:00	35
3.....	Poets Charles Reznokoff; Allen Ginsberg	60:00	27
4.....	Chuck Rosenberg and the Jersey Devil	60:00	22
5.....	Novelist Sharon Spencer; Artist Tim VanCampen	40:00	19
6.....	Cape May County Teen Arts Festival	60:00	17
7.....	Pine Hill Ramblers - Square Dancing	30:00	12
8.....	Profile of Cape May Artist - Joy Smyser	20:00	11
9.....	Lolm One - Experimental Feedback	20:00	10
10.....	Poe-Pourri; Storytelling by Jim Albertson	20:00	9
11.....	Jazz Festival at Glassboro State College	60:00	7
12.....	Philadelphia Folk Song Society; Evening at Old English Music Hall	30:00	6
13.....	Highlights of Piano Recital by Cape May County Composer Robert Cosgrove	15:00	5

COMMUNITY FEEDBACK

1.....	Interview with New Jersey Natural Gas Strikers	5:00	39
2.....	Historical Legislation Symposium in Cape May	35:00	38
3.....	Cape May Summer League Basketball Championship Games	60:00	34
4.....	Wildwood Citizens Advisory Council Meeting	25:00	32
5.....	Restaurant Life - Rock Music in Cape May	45:00	31
6.....	Karate at the 4-H Fair	30:00	30
7.....	Cape May County Annual 4-H Fair	60:00	29
8.....	Antique Auto Show on Cape May Mall	60:00	28
9.....	Cape May Victorian Fair	30:00	21
10.....	Dancing at Lower Regional High School	25:00	20
11.....	Earth Week & Nixon's Boardwalk in Wildwood	60:00	18
12.....	Cape May Tax Association Meeting	30:00	12
13.....	Packer Football Awards - Womens' Legal Advice from County Library	60:00	6
14.....	Midget Football Awards	25:00	5

ENVIRONMENTAL ISSUES

1.....	Ocean City Wetlands Hearing	60:00	37
2.....	Wetlands Lecture: "The Industrial Environmental Impact Statement"	30:00	33
3.....	The Case for a Nuclear Moratorium	60:00	25
4.....	Wetlands Lecture: "Wetlands or Wastelands?".....	20:00	20
5.....	Alternate Energy Conference - Part #3	60:00	15
6.....	Alternate Energy Conference - Part #2	60:00	14
7.....	Alternate Energy Conference - Part #1	60:00	13
8.....	Tour of Wetland Institute	40:00	9
9.....	New Jersey D.E.P.A. Wetlands Hearing - February 17, 1973	90:00	8
10.....	Oil Port Hearings - Jan. 15, 1973 - Parts 3, 4	60:00	4
11.....	Oil Port Hearings - Jan. 15, 1973 - Parts 1, 2	60:00	3
12.....	Oil Port Hearings - Dec. 18, 1972 - Parts 3, 4	60:00	2
13.....	Oil Port Hearings - Dec. 18, 1972 - Parts 1, 2	60:00	1

PUBLIC INFORMATION

		TIME	TAPE #
1.....	How to Test for Diabetes	15:00	38
2.....	"Junction" Teen Dance Center	10:00	31
3.....	Homeopathic Health	30:00	30
4.....	Years with Mrs. Clem: Veganism	60:00	24
5.....	An Introduction to "Junction"	30:00	23
6.....	Don Brady on Anabolic Steroids	30:00	11

WORKSHOP PROJECTS

1.....	House Demolition in Wildwood	10:00	39
2.....	Herbalist Doug Elliot in Cape May	15:00	
3.....	Hiring and Firing at the Art Center	25:00	37
4.....	South Jersey Wrist Wrestling Championship	60:00	36
5.....	Wildwood Kiddies Fishing Rodeo	30:00	33
6.....	How to Care for Your Bicycle	30:00	32
7.....	Action at the Karate Studio	30:00	26
8.....	Founding Session of the New Jersey Citizens Cable Coalition	30:00	21
9.....	Cape Island Video News	15:00	20
10.....	The Country School - Media: A Christian Perspective	60:00	16
11.....	Oil Port Blues: A MONTAGE	12:00	10
12.....	The Raising of the Atlantic - Bocce Ball.	30:00	5
13.....	A Tour of the County Library	30:00	A
14.....	The Dedication of the New Library Facility	30:00	B