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ABSTRACT

A statewide conference organized by the Regents of the University of the State of New York explored the potential uses of cable television to meet educational and instructional needs. Participants included both municipal and town officials and chief school and higher education administrators. The conference examined several aspects of cable television--its legal problems, methods for using cable systems, and ways in which cable systems can be incorporated into or can supplement both already existing uses of communications in various towns and cities, and institutions of learning. The speakers included leaders in national and state affairs having knowledge of cable television systems, as well as lawyers, educators, and administrators. (WDR)

PROCEEDINGS OF THE REGENTS CATV CONFERENCE

September 25, 1973

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The University of the State of New York
THE STATE EDUCATION DEPARTMENT
Bureau of Mass Communications
Albany, New York 12224

THE UNIVERSITY OF THE STATE OF NEW YORK

Regents of the University (with years when terms expire)

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FOREWORD

The Regents of the University of the State of New York held a statewide Regents Cable Television conference in Albany on September 25, 1973. The purpose of the conference was to bring together municipal and town officials with chief school and higher education administrators to examine the potential of the use of cable television to meet educational and instructional needs.

The thrust of the conference was to provide insights and indicate opportunities which would help to shape the use of cable and permit its use for local level action and community need.

The conference examined several aspects of cable television -- its legal problems, methods for using cable systems, ways in which cable systems can be incorporated into or can supplement already existing uses of communications in various towns and cities, as well as institutions of learning.

The speakers included those leaders in national and state affairs who have knowledge of cable television systems, as well as lawyers, educators, and administrators.

Registration for the conference included approximately 100 school superintendents, more than 40 college presidents and deans, 50 city, town, or village mayors, managers, supervisors, aldermen, and trustees, and more than 200 persons from administrative positions in schools, colleges, cities, and libraries.

ACKNOWLEDGEMENTS

The Regents Cable Television Conference was coordinated by Mr. Gerald Bates, Associate, Bureau of Mass Communications, and Mrs. Bonny Dore, Television Production Supervisor, Bureau of Mass Communications.

Facilities and staff assistance were provided through the Office of the Speaker of the Assembly, Perry B. Duryea, Jr., and in cooperation with the Office of General Services.

Sony Video Display equipment was arranged through Mr. John McDonnell of Sony Corporation of America, in cooperation with Audio-Video Corporation of Albany, New York, under the direction of Mr. Ken O'Toole.

Graphic support for the conference was by courtesy of the Audio Visual Center of the State Education Department, Mr. Bruce Meservey, Chief, Bureau of Publications; Mr. Fred Haber, and Mr. Leo Malone.

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SUMMARY OF MAJOR ISSUES TOUCHED UPON IN THE
REGENTS CABLE TELEVISION CONFERENCE

General Comments:

- The educational potential of cable television is powerful but must be developed. Present Federal law reserves educational access until 1977. If educational access is now exercised, the access reservation may be terminated.

- Of the more than 3,000 cable operations now in existence throughout the United States, only a moderate number have addressed themselves to educational and municipal needs.

- Cooperation between the cable operator, the school, and the community is a matter of mutual accommodation, optimum feasibility arrangement, and the dynamics of the relationship of the school or educational institution to the city or community.

- A major planned cooperative use of cable television is necessary to demonstrate an exemplary use of cable television under carefully controlled local-use approaches.

- In order for public access, local government, and educational channels to be available in all markets, community interest for this must be demonstrated. Education, too, must demonstrate its capabilities to use that which it requires of cable television franchisees.

- The New York State Commission on Cable Television was created by statute to develop a statewide telecommunications policy; to promote rapid development of the cable television industry in response to community public interest; to guarantee that cable television companies provide adequate and efficient service; and to encourage programs in the public interest as developed by public and private institutions, municipalities, associations, and organizations.

- The Board of Regents has encouraged the creation of an independent State Commission on cable television. It has envisioned the Commission's concerns to be: setting guidelines for technical matters, protection of the subscriber to cable services, determining logical parameters for minimum channel capacity for each system, and determining how many and how channels may be made available for educational and public service needs. In the State of New York, opportunities for software exist as in no other state, and at no cost. It is up to educators to provide the raw stock material to take advantage of such service.

Cable Uses and Needs

- The Commission on Cable Television is anxious that educators shall take advantage of cable television and use it effectively and responsibly.

- Educators and cable operators must work together to ensure the educational use of cable television.

- Education must accept technology as a means for increasing educational opportunity and must look on cable television as a means for providing service to education that cannot readily be provided in any other way.

- Cable television offers the opportunity to involve the community more closely with the schools and to help the young people of the community become more involved in community affairs.

- A unique aspect of cable television is that it offers educational service which can be delivered directly to the home, to convalescents, and to shut-ins.

- Video tape and cable television selectively used can become the libraries and lecture halls of the future.

- The cable industry must, by its very nature, support and cooperate with educators who wish to use its technology.

- The educator must demonstrate his ability to use at least one channel before the need to expand to multiple channels is sought.

- If education is not responsive in terms of planned use of cable television channels, it is likely to lose the opportunity to ever claim such channel usage in the future.

Monetary Aspects of Cable

- To provide a maximum service to the community, the CATV operator must see an adequate financial reward.

- Planned use of existing fiscal resources can make for maximal educational effectiveness of cable television availabilities.

- Interconnection of cable systems is a necessary and desirable aspect of cable television. Consortia should be formed to use such interconnection systems so that the benefits of interchange and costs of original programming can be shared.

- There are no technological obstacles or excessive costs which can slow the advent of the educational use of cable. The use of cable for education is a matter of educational decision and specifically planned use for content, number of recipients, and time of day.

- Channel use cost per hour is relatively inexpensive. As now projected, a cable system can have an almost unlimited channel capacity.

- The need to produce adequate materials for the educational use of cable is primarily a problem of capital investment. Cost sharing by users will cut the cost of software to the individual institution while at the same time maintaining a high support level for such materials if consortia or multiple users are investors in the materials.

- Appropriately planned and used cable systems can carefully channel the direction of signals and therefore keep operation costs at a minimum.

The opening "Plenary Session" of the Regents CATV conference concerned itself with two major topics:

(1) The State of CATV in New York State. This topic was addressed by the Chairman of the New York State Commission on Cable Television.

(2) The Economics of Cable Television. The speaker for this subject was Donald A. Dunn, Professor of Engineering-Economics Systems of Stanford University.

Joseph W. McGovern, Chancellor of the Regents presided.

Opening Remarks

CHANCELLOR JOSEPH W. MCGOVERN:

On behalf of the Regents of the University of the State of New York, it is my privilege and pleasure to welcome you to this New York State Conference on Cable Television.

The President of the University and Commissioner of Education, Ewald Nyquist, has also asked me to extend his greetings to those attending the conference and to wish you success in your efforts to promote the wise use of cable television systems for the benefit of the people of New York State.

Let me briefly introduce to you our distinguished panel of speakers and guests. I do this, not to praise them so much as to give you an opportunity to identify them, since many of you have not yet made their acquaintance. We do plan ample time for discussion following the presentations in each session throughout the day and also hope to give you an opportunity to discuss your own community needs with these gentlemen between sessions. So that you may recognize these people then, I'll ask each of them to stand momentarily as I call his name.

First, the Chairman of the New York State Commission on Cable Television, the Honorable Robert Kelly. I understand we have some of the commissioners with us today -- Commissioner Jerry Danzig, Commissioner Eli Wager, and Commissioner Edward Wegman. Michael H. Prendergast extends his regrets at not being able to share this conference with you.

Next let me introduce my fellow Regents who are present. They are Regent Francis McGinley and Regent Edward Warburg, who will be chairing other sessions during the conference, Vice Chancellor Everett Penny, Regent Helen Power, Regent Alexander Allan, and Regent Theodore Black.

There are many other guests of note in the audience, from the legislature and the cable television industry. Our registration indicates that there are approximately 100 school superintendents, more than 40 college presidents and deans, 50 city, town, or village mayors, managers, supervisors, aldermen, and trustees, and over 200 from other administrative positions in schools, colleges, cities, and libraries.

We are gratified with this demonstration of your interest in the future of cable television within New York State.

The Regents of the State of New York have long felt the need to share our interest in cable television development in the State,

especially as it may affect our communities and our children. You may be aware of cable television's historical beginning in the hills of Pennsylvania 24 years ago. That relatively simple idea to establish a master antenna on a high point of land and then send television signals down a wire to houses in the valley below has been rapidly expanded. That expansion -- like a child's first patchwork quilt -- was uneven. There was little imagination or planning in its design. Scraps of programming were borrowed from wherever they could be found. Cable services were weakly sewn together.

With experience, we viewers have become somewhat sophisticated and are not so easily pleased by those first humble efforts. We wish to help control the system's design so that we may be more satisfied by its benefits. Today our communities are not just concerned with programs from the "big city." Today we are concerned with a broad selection of programs through 20 to 40 or more channels, access to information networks, political debates, sporting events, shopping by cable, two-way talk-back systems, and even instant referendums by push-button voting. Schools and government can and should reach the public through CATV. Special training can be provided. Town meetings can and should be seen and heard by every citizen who wants to be where the community action is. There is no doubt that the potential of cable television is powerful. But most of this potential remains only that. The benefits of cable television to the public have too often been abused in competitive struggles for profit or for political ambition. Educators and public administrators have kept their peace and lost opportunities for service by default and ignorance.

Our best considerations are demanded by this industry. As educators and public leaders we must take the time to understand the future impact of cable television before long-lasting policy decisions are made. Ten years from now we will enjoy the rights and privileges which we provide today. Of the 3,000 cable operations in existence today, only a moderate number have any obligation or intention to provide for educational or municipal access to the system. Your local effort to involve townspeople and educators is critical to thoughtful franchise provisions. We must provide options for CATV service, and encouragement to the CATV operator that he be financially rewarded while providing maximum service to his community.

These are some of the reasons why we have asked you to gather here today with notable spokesmen in the Nation and this State who will influence the industry's attention to educational and community needs. We all must share our thoughts and concerns about service and programs; we must not insist on going separate ways. Each community franchise must reflect that central "unified" premise if the cable operator is to seriously honor it. We cannot merely ask him to help. We must be ready with concrete and reasonable suggestions.

Our task today is to exchange the best and most practicable ideas on how to proceed reasonably in negotiating community and educational

services from cable operators. I emphasize the word reasonable. Cable operators have a profit motive as do operators in any other industry. We as educators and government administrators must recognize and respect that motivation of the cable operators if we are to form a responsive and mutually beneficial alliance. Together, the industry and school and community administrators must face several knotty issues. Those issues are political, social, economic, legal, and of course, technological. They are serious issues demanding the very best thought from us, or we will continue to suffer under a patchwork quilt of meaningless franchise agreements and practices by default.

New York State is determined to support you in reaching the optimum feasible arrangements. One of the key forces working with you in this regard is the New York State Commission on Cable Television. We are honored to have the Chairman of that Commission with us today. He has a distinguished career as an assemblyman from Brooklyn since 1960 until his appointment in cable television this year. He has served on the Assembly Committees for Codes; Health; Mental Hygiene; Public Service; Corporations, Authorities and Commissions; Banks; and Rules. As Assemblyman, he shepherded the legislation to create the New York State Cable Television Law and the Commission through the Assembly. There is none better qualified to clarify "The State of Cable Television in New York State" than the Honorable Robert F. Kelly.

THE HONORABLE ROBERT F. KELLY:

The State of Cable Television in New York

Twenty to twenty-five years ago, television was a new and exotic technology. It fascinated us. Very few people owned television sets and I can remember stores - mostly radio and appliance shops - selling televisions. They had them displayed in the windows and there were crowds that would gather on the sidewalk. People would just stand around and say, "My God, look at this," and "Hey, get a load of that." There was excitement. And what were they watching? Junk - a wrestling match or maybe a fashion show with strange clothes. But everyone was watching those strange boxes.

We have certainly come a long way since then. We have a far better idea of what television can do for us and to us. As regards cable television, we now have an opportunity to take that knowledge and use it to shape a communications system that will serve us to the fullest extent. We are still at a stage where we can actively mold this technology to fit our needs and desires. The challenge is a formidable one, but the results can be equally impressive.

Three years ago, the Regents of the State of New York issued their statement on cable television. In it, they and the Department of Education displayed foresight in recognizing the challenge and the promise that cable television offers. Due in part to their recommendation, an independent commission to oversee CATV growth in New York State is now a reality. Their knowledge of, and involvement in, the development of relevant legislation helped to make this reality possible.

I would like to take this opportunity to thank the Regents for their help. We at the New York State Commission on Cable Television are now working to implement the technological advances that they envisioned.

Today, the state of cable television in New York is one where the general confusion that marked the late '60's and early '70's is being eliminated. In its place will be a state-wide telecommunications policy. This transition has been, and will continue to be difficult, but the potencial for New York is great.

In its 1971 session, the New York Legislature imposed a moratorium upon the issuance of cable television franchises by municipalities in New York. In that legislation, it was made clear that the State intended to regulate cable television in some manner, but the legislature was

uncertain as to the type of regulation it wished to adopt. Therefore, a moratorium on new franchises was imposed in order to preserve the status quo.

In the 1972 session, the legislature adopted legislation which created the Commission on Cable Television and granted the Commission broad regulatory powers. The Commission came into existence on January 1, 1973 and the Moratorium expired on April 1, 1973.

Our statute charges us with several responsibilities, including:

(1) the development of a statewide telecommunications policy;

(2) the promotion of the rapid development of the cable television industry responsive to community public interest;

(3) the guarantee that cable television companies provide adequate, economical, and efficient service;

(4) the encouragement of programs in the public interest developed by public and private institutions, municipalities, associations, and organizations.

What we hope to accomplish is the reasonable and orderly growth of cable television as an integral part of the total communications picture in New York State.

Prior to the formation of our Commission, hard data on cable operations in New York were scarce. We are constantly in the process of gathering information on all phases of cable activity in the state - numbers of systems, types of services rendered, number of people served, etc. For example, we are now making an extensive survey of the types of local organization programming now being cablecast in New York. In the past, this material has been lacking. However, it is essential in formulating a coherent policy for New York State.

Today, 600,000 subscriber units are served by cable television in New York - a figure which represents approximately 2 million people. Eight hundred thirty thousand homes are passed by cable trunk lines. This means that we currently have the capacity to serve 3 million individuals in New York State.

The Commission is in the process of issuing Certificates of Confirmation as required by our rules. All CATV franchises must receive such confirmation if they are to continue in operation. To date, we have received 361 applications for certification. These represent systems which were in operation or under construction prior to the moratorium - before January 1972.

So far, we have received a number of applications for confirmation of new franchises. Our rules require that municipalities undergo

certain specific procedures before granting franchises. The procedures are designed to insure that municipalities act with "due - diligence." One of these procedures requires that municipalities prepare a detailed study of the kind of cable systems they desire. Because the moratorium was lifted only this past April, municipalities are only beginning to follow our procedures. We expect new requests for certificates of confirmation from new franchises to be coming in shortly.

In these activities, the Commission is attempting to proceed in a thoughtful and reasonable manner with an eye on the interests of the public at large and the cable companies. Even in our first months of operation, significant issues have been raised. These have involved such problems as:

(1) the issue of small systems vs. large systems. Does the New York State Commission in its rules consciously or unconsciously favor the growth of one over the other?

(2) the question of pole attachment rates charged by the telephone and utilities companies to the cable companies. How much should the rates be and who has jurisdiction over them?

(3) the landlord - tenant question. Does the landlord have the right to require a charge for cable television brought into an apartment building? If so, what is a reasonable charge?

(4) the question of penetration. How can we best regulate cable companies and also ensure the maximum penetration of cable services?

These are only some of the issues we are dealing with at present. All the above will have a bearing on the educational impact of cable television.

Reaction to the Commission has been varied. The verdict of the cable companies is not yet in. To date, their responses have been mixed. Many, of course, would rather see no regulation at the State level. Some would rather see Federal than State oversight. However, I would warn the cable companies that if the Federal Communications Commission pre-empted all regulation this would probably lead to a situation that would be less flexible for the cable owner than under the present system in which the State plays a regulatory role. The Commission is not out to clobber the cable companies - but rather to insure that cable service is developed in the best possible way.

At first, the reaction of municipalities to the Commission was mixed. They were unsure as to the nature of our role and the meaning of our rules. However, now that they have had contact with us and have seen how we can be of assistance to them, their reaction has been overwhelmingly favorable.

I would like to turn to the question of how all this affects you, the educator, in bringing about the enlightened use of cable television. The Federal Communications Commission's regulations concerning educational uses of CATV are a good place to begin.

The FCC has adopted a wait-and-see attitude toward the education community's requests for preferential treatment in the operation of new cable TV systems. The FCC's recent regulations give the education community an opportunity to prove its intentions to take advantage of cable's potentialities.

The FCC rules and regulations provide that cable systems operating within the top 100 television market areas must supply one channel for educational use during a developmental period. This means that cable systems operating within a 35-mile radius of New York City, Buffalo, Albany, Syracuse,and Rochester must supply this educational access channel. In addition, this rule would apply to cable systems in New York State which operate in municipalities located within 35 miles of the New Haven - Hartford - Waterbury zone. There are communities in Nassau, Suffolk, Westchester, Putnam, and Dutchess Counties where this situation prevails.

Use of the educational access channel will be without charge from the time subscriber service is inaugurated until 5 years after the completion of the cable system's basic trunk line. After this initial developmental period the FCC will decide whether to expand or curtail the free use of channels for such purposes. These access rules will be applicable to all new systems that become operational after March 31, 1972. Systems in operation before that date will have 5 years to comply fully with this requirement.

It is important to note that cable systems operating in municipalities not located within the top 100 television markets are not required to supply an educational access channel. In April of this year when the Commission adopted interim rules, it recognized that it could require all Municipal franchises to include provisions for educational access channels. However, at that time there was little evidence of a demand for these channels from local educators and even less evidence of a capability to utilize them. The Commission thus felt that under the circumstances a mandatory education access requirement would be a burden to the small cable operator. However, when the Commission becomes convinced that the benefits of such a rule would tend to outweigh the burdens, it will, of course, take appropriate action.

Thus, the FCC regulations have put the educational planner on the spot. He must act quickly and effectively to ensure that educational uses of cable television are not pre-empted by profitable entertainment and commercial services. Clearly, the education community must now justify in deeds the case for preferential treatment it has made in words. I want to especially stress the fact that you can have a channel - perhaps even more than one. We want you to have a channel. But you must show that you can use that channel.

The law which brought the Commission on Cable Television into being charges us with promoting cable television across the State. To this end we are currently working with municipalities and cable operators in an attempt to bring adequate cable services to the public at the earliest possible date. But it is up to the local school boards and local educators to promote the educational use of cable on the local level. Local educators must inform the public about the educational aspects of CATV and must show that it is not merely a toy. They must show that the advantages of cable TV are worth the initial increase in educational expenditure. If this local groundwork is not accomplished, localities simply will not vote the money for educational video.

Educational and instructional programs of all kinds on cable television channels have been touted as a great social benefit. Blue ribbon cable study groups frequently attest to the need for multiple channels for educational purposes. However, bargaining for free time for educational programming is about as far as we have gotten. This is because few have been willing to pay for the development of programming to fill the bargained-for channels. Of course, there have been some fine examples of locally supplied programs carried on the cable. However, for the most part, access channel availability has gone begging.

Educators and cable operators can and should work together to insure the educational use of cable TV. Ultimately, however, it is up to the education community to develop methods to promote and finance educational uses of CATV on the local level. The Commission on Cable Television is now in the process of making this new technology available across our State. We can, we should, we want to help the educator use this excellent tool, but it is now up to the educators of New York to promote and use this technology effectively and responsibly. We're giving you the ball - we'll help you carry it - but it's up to you to run with it.

Educators can serve as catalysts in a number of phases of cable growth and development. They can and should work with local government officials in assuring that the potential for educational access is built into the system. At a minimum this would include provisions for school hookups and separate educational channels. Very important here is the need for the cable system to be built in such a way that programming can be originated from school studio facilities - whether they be public or private institutions--primary, secondary, college, or university. Schools that already have such studios must be able to utilize them. Schools that do not have studios must acquire them in order to provide greater learning opportunities.

Educators should work with cable companies in insuring the acquisition and use of videotape equipment; the construction of studios that would be to the benefit of the entire community - not just the cable operator; and an agreement on an early date for operational two-way capacity. Local educators should plan for the future interconnection of systems so that nearby school systems, colleges, universities, special education institutions and institutions of correction concerned with education for its inmates can be linked electronically. They should also

form consortia with other users or interconnected systems to share the benefits of interchange and the costs of original programming.

There can be little doubt that television can contribute positively to the educational process in a number of important ways. It can do so:

(1) by increasing the physical accessibility of education;

(2) by providing services to education that cannot readily be provided in other ways;

(3) by improving the quality of education;

(4) by decreasing the unit cost of education.

However, despite the evident potential of the new communication technologies, the effective use of television in American education is slight. Demands for educational access to CATV on the State and National level have not been met by action on the local level.

The major problem regarding CATV and education is, bluntly stated, the education community's frequent lack of interest in, and occasional outright resistance to, major change. We frequently have the impression that education is waiting to find some new aspect of technology that it can turn down. Within the system, traditional classroom practice is accepted as the core of the educational process almost without question. Educators accept materials that support their usual ways of operating, but they continue to resist change, and agents of change, that replace humans. TV, where acceptable, is still largely conceived as an "audio-visual aid" - a supplement to the "business as usual" classroom procedure. Very few school systems have broken far enough out of this restrictive mold to achieve even part of the potential for instruction offered by the television medium.

Reasons for this resistance to change are not hard to find. Teachers, administrators, students and the community react in complex and subtle ways. Materials and methods must be appropriately fitted together to support these human interactions. This complexity can turn the development and implementation of change in the educational process into a nightmare. It is no wonder that most school administrators would prefer to live with processes that at least run smoothly and that run themselves to a large extent. However, they must nevertheless fight those pockets of educational resistance that are opposed to individualized study, self-study, and even the now well-proven external degree.

Today, in our cities, most learning is occuring outside the classroom. The sheer quantity of information conveyed by the press, magazines, film, TV and radio far exceeds the quantity of information conveyed by traditional school instruction and texts. CATV can help revitalize the

classroom. It can bring the experiences of the outside into the classroom where they can be explored and examined. Students, themselves, have demonstrated that they, too, can produce shows that help to bring the real world to the classroom. One thing is certain - if educators fail to make use of television within the school, then television outside the school may increasingly make traditional classroom teaching less relevant and less impelling.

Educators should aim at programming which might be called "edutainment" - that is, both educational and entertaining. The promise of cable TV is not to merely put the "talking face" on television, but to develop the learning and teaching potential of the entire television medium. For example, local and national video groups have developed highly instructive programs on ecology and health which make full use of the medium. They are exciting and educational. The Regents, themselves, have done this with nationally syndicated series. Students enjoy watching them and learn much in the process.

Video tape and cable television, wisely and selectively used, can become the libraries and lecture halls of the future - whether they be in the school, in the home, or somewhere in between. With building costs skyrocketing, cable may prove to be an excellent method of bringing education to the people at relatively low cost.

Educational video-cassettes are currently on the market. Many more will be available in the coming months. The Regents make such materials available at no cost in New York State - and they are the only State educational agency in the United States that do so. It is up to the school boards and the legislature to insure that money is available for cassette use.

New York State has developed two impressive videotape libraries which are housed in Albany. Through the facilities of the State University and the State Education Department, schools can borrow or reproduce tapes for local replay. These tapes include materials for primary, secondary, and college students. Again, it is up to local educators to utilize these materials.

There are a number of locally based video groups across the State which are currently producing programming that is educational and excellent. These programs run the gamut from a study of senior citizens (a group with which public school students rarely have contact) to tapes on local aspects of the environmental crisis. These video sources should not be overlooked. The Commission is currently in the process of developing a list of these resources so that they can be better utilized by our educational systems and the public in general.

Cable television can offer the opportunity to keep teachers abreast of current developments in their fields. Inservice courses for teachers could be aired on the cable for viewing at home during the evening.

Some school systems have already recognized that cable television offers an excellent opportunity to involve the community more closely with the schools. Informed parents and taxpayers are likely to be more understanding and supportive of the school's efforts. For example, cable television systems have been utilized by some schools in the following ways:

(1) showing taped sessions of the social action committees established at the junior high school to work for better human relations;

(2) providing information about new school programs;

(3) airing entertainment by student musicians and dancers;

(4) providing instruction in various skills for pre-schoolers, accompanied by manuals for parent participation. Shows such as Sesame Street and Misterogers have laid the groundwork for this sort of programming. There is great opportunity here for local educators to build upon this foundation.

(5) providing retraining for the unemployed and underemployed; post-secondary training in professional skills; and adult basic education for use in home and industry.

Cable television and videotape can help kids get involved in their communities. For example, cable can be used in innovative and exciting ways in the teaching of government and social studies. Local government proceedings can be taped by students and brought into the classroom for all to see and discuss. Other aspects of community life can similarly be captured on tape, including the concern and involvement of high schoolers in health activities as you will see in a later session of this conference.

It should also not be forgotten that numerous educational experiments show that kids enjoy television production and work hard to cablecast programs. The educational benefits provided by such experience are varied. Much of this work concentrates on the language arts: reading, writing, and spelling. Science and math are taught not only by the content of the programs the kids can produce but also through the technical requirements of TV production which involve the principles of light, sound, chemistry and physics. The arts are also dynamically connected with production. All of these activities help to break down the artificial barriers between subject areas. The transmission of these programs by CATV adds an exciting new dimension to the school curriculum and, indeed, to all of learning.

Twenty-five years ago, a television serviceman in Langsford, Pennsylvania got tired of watching snow and interference on his television set. He erected a large antenna on a nearby mountain and

ran wires from the antenna to the homes in his town. Result - excellent reception. Thus was born cable television.

Now, in 1973 the great potential of cable television still lies greatly untapped. We at the Commission on Cable Television are working hard to make cable's great capabilities available to the people of New York. You, the educators of this state, have a stake in insuring that these capabilities are utilized in the most foresighted manner. It is up to you to develop and implement the educational uses of cable In this endeavor our Commission will work with you, lending assistance where it can.

In closing, I would like to beg one question. I know some of you are saying to yourself, "Kelly's got some pretty grandiose ideas, but we can't pay for video with water!" The educational uses of cable that I have outlined will certainly cost money. But, if we agree on the desirability of these programs, the challenge then becomes not just getting new money, but making more deliberately planned use of present existing money for maximum educational effectiveness.

The education community must lobby to insure that adequate funding is made available for the implementation and use of cable TV. In this regard, the Commission will support realistic legislation designed for such purposes. Ultimately, however, the task will lie with you. The time has now come to turn our great ideas into great deeds.

CHAIRMAN JOSEPH W. MCGOVERN:

Thank you, Mr. Kelly.

Let me remind our audience, again, that there will be an opportunity to raise specific questions and observations regarding the work of the Commission on Cable Television and the remarks made by Mr. Kelly. This will be done at the close of the session.

There is another general topic of importance, we believe, to all participants in this conference. I had previously mentioned some rather remarkable prospects in educational and municipal uses of cable. As every administrator knows, prospects are realized only when they are economically feasible.

We are fortunate in having with us today a most distinguished professor and Associate Chairman of the Department of Engineering-Economic Systems at Stanford University. In recent months he has actively examined the economics of public service and other phases of cable television.

While associated with the Stanford Research Institute in 1968-69, he directed a study of the interdependence of computers and communications for the Federal Communications Commission.

He was a consultant on a study of satellite communications for the President's Task Force on Telecommunications and on a study of telecommunications in urban systems. He was a member of the Twentieth Century Fund Task Force on International Satellite Communications.

He is a research scientist, an author, and has practiced law as a patent attorney. Donald Dunn has served on review panels for the National Science Foundation and the National Academy of Sciences. At Stanford he is a member of the University Committee on Cable Television and is chairman of the School of Engineering Committee on Instructional Television.

Let me introduce to you at this time, Mr. Donald A. Dunn.

PROFESSOR DONALD A. DUNN:

The Economics of Cable Television-Based Educational Services*

(1. Introduction)

Cable television is an information and entertainment delivery system capable of providing essentially any number of TV channels to homes, schools, or businesses that users are willing to pay for. The costs of such channels are sufficiently low that educators leasing channels in systems with up to 10,000 subscribers will find that software costs will be substantially higher than the hardware cost per channel hour, even for minimum cost educational programming. Although cable systems can be used to supply programs to classrooms in existing schools, the unique feature of cable is the fact that it reaches the home and offers the possibility of educational services delivered to the home. It is this application that I am concerned with here.

If only 2 percent of the U.S. TV viewing audience of 50 million were to switch to an educational cable channel for one hour per night 200 nights per year, and if each viewer were to pay 1 dollar per hour for educational services associated with the use of the channel, cable-based education would have become an industry with an annual market of $200 million. The purpose of this paper is to attempt to answer three obvious questions. Why doesn't this industry exist? Will it exist in the future? What are the economic hurdles that must be overcome for cable television-based educational services to become a reality?

(2. Capacity and coverage)

The cable television industry today is still basically an industry based on retransmission of over-the-air signals. It now serves somewhat more than 10 percent of the TV homes in the U.S. and the rate of growth is about 15 percent per year. This growth rate has persisted through a considerable number of years, in spite of a wide variety of regulatory obstacles and problems which have arisen out of conflicts between the cable industry and the broadcasting industry.

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*Paper presented at Regents CATV Conference, Albany, New York, Sept. 25, 1973. This work was supported by NSF grant GS 33832.

Most existing cable systems are 12-channel systems with only a small number of unused channels. If educational services are to reach their full potential, it is my belief that they will have to eventually provide service over at least four channels during prime time, and probably substantially more than this number of channels will eventually be needed to meet the diversity of demand for educational services.

Nevertheless, it is probably not necessary to start supplying service with more than one or two channels, in order to establish an economically viable cable-based educational system. Therefore, most U. S. cable systems can supply what is needed to get started in the way of channels. The cost of retrofitting existing systems with new amplifiers capable of 20 or more channels is much less than the cost of a new system, so as demand increases, it should not be a serious economic problem to acquire more channels in most communities.

Thus, it is my conclusion that there is no real capacity or coverage obstacle to the initiation of cable-based educational services. The industry is continuing to grow at a rate that educators will be hard pressed to match, and most systems in place have at least one channel that could be used for education.

(3. Support from the cable industry)

I believe that there is a substantial coincidence of interests on the part of educators and the cable industry. As educational services begin to be supplied over cable, there will be an increase in demand for cable service generally and an increase in the number of cable subscribers. Many cable operators believe that the first new market beyond entertainment that will be established on cable is education, not home shopping, or voting, or meter reading, or alarm systems, or any of the other new information services that cable is capable of supplying in the long run. Therefore, the cable industry, rather than being an obstacle to the establishment of this new educational service industry, will, I believe, be a continuing source of support and cooperation to educators who wish to enter this field.

(4. Technological and hardware cost limitations)

Figure 1* is a schematic diagram of a one-way cable system of the type found in most cable systems. As remarked above, most U.S. systems now have only 12-channel capability, but there is no technological obstacle to increasing the number of channels to 20 or more in most of these systems. Obviously, there will have to be a pretty good indication

*All figures referred to are grouped together at the conclusion of these remarks.

that a market for more channels exists, in order for a cable operator to make the additional needed investment. Thus, educators will probably have to establish their ability to make use of channels that exist, before an expansion of channels can be economically justified.

The possibility exists in many cities that educators will be able to obtain access to cable channels at no cost during a startup period. Where free channels are not available, leased channels may be available at a reasonable price. The cost of providing a channel for an hour is very modest, if the channel is utilized for a sufficient number of hours. I have, in Ref. (1), estimated the average cost per channel hour for a 24-channel system serving 10,000 subscribers, assuming 400 hours per month usage, an 8 percent interest rate, a 10-year life, and 10 percent per year maintenance costs. The cost is $2.38 per channel hour, if the cost is based on national average trunk line costs for underground systems. If typical central city trunk costs are used the cost is higher, $5.44 per channel hour. The utilization rate assumed here, however, corresponds to heavy usage. If 80 hours per month usage is assumed, the average costs are 5 times the costs given above. However, even these rates are not excessive. As will be discussed below, software costs will be substantially higher than channel rental costs, even for the lowest cost programming and the highest cost channels. For a more detailed discussion of these and other costs, see Ref. (1).

There are a number of additional technologies that cable systems of the future will have available to them which will enhance the usefulness of cable in education. However, none of these is, in my view, as important as the simple fact of unlimited channel capacity, already discussed.

Interconnection of cable systems and subdivision of large cable systems is technically feasible today. The importance of these capabilities to educators is that they offer the possibility of either enlarging the market for service or of shrinking the region covered when a larger area coverage is not needed, in order to reduce cost. In many situations the area covered by a cable franchise will not be the best area coverage for cost-effective delivery of educational service. For example, a school district may encompass half a dozen cable system franchises, and an interconnected system which links all six cable systems will provide a better area coverage for this school district's programs than would any single cable system.

Figure 2 shows a large metropolitan cable system subdivided into nine neighborhood districts. The cost per hour of transmitting a program to only one of these districts would be roughly one-ninth of the cost of transmitting to the entire city. If most of the students participating in a given educational service lived in one district, it would thus be possible to cut costs by transmitting only to that district.

Figure 3 shows schematically three cable systems interconnected by a microwave point-to-point relay system. A multipoint distribution

system is shown in Fig. 4. In this system, a central rebroadcast station rebroadcasts the signal received from any cable system to all the other systems in the region. This type of system is widely used for inter-school and similar types ot TV distribution in ITFS systems (2). Exactly the same technique of interconnection is provided by the satellite system shown in Fig. 5. Where the multipoint distribution system of Fig. 4 is ideal for interconnection of cable systems within a metropolitan area of up to 50 miles or so in diameter, the satellite system is suited to interconnection of statewide or multistate regions (3).

The cost of any of these interconnection systems is less than 10 percent of the capital cost per subscriber required to provide local cable distribution, and in many cases the interconnection cost is less than 1 percent of the local distribution cost. Thus, in the long term educators can expect to obtain subdivision or interconnection of cable systems, in order to reach the user market of interest, at a cost which is insignificant in comparison with the cost of the local channels used. In the short term, interconnection and subdivision may not be available and action may be required by educators to cause them to be made available.

Another basic technological option of the future is interactive cable television. E. B. Parker and I have discussed this type of system in a recent publication and a discussion of both the operation and costs of such a system is described there (1). Our present view is that this type of system, while extremely important in the long term, is not going to be available to any significant extent before 1980. What will become available during the next few years is pay cable. The basic terminal configuration for one type of pay cable system is shown in Fig. 6. In this system the user inserts his telephone handset into the pay unit for a few minutes while he signals his request to a computer by dialing a set of numbers on his telephone dial. The computer responds, authorizing his use of a given channel and billing him for the use of the channel. The handset is then returned to the telephone for normal use. Not shown is a noise generator which normally "jams" the pay channel but which is switched off when the computer sends its authorization to use the channel. This system provides a very limited form of interaction between the user and the computer. Its significance lies in its potential for introducing a new form of payment and billing for educational services. A policy question of great significance for educators that is going to be coming up in the next year or so concerns the right of educators to access to pay systems. The technology for this type of system is available today and, because it offers an important alternative to advertiser-supported television, it is both attractive to cable operators and viewers, and is the subject of bitter opposition by the advertiser-supported broadcasting industry.

In summary, there are no technological obstacles or excessive hardware costs which would act to slow the advent of the educational use of cable. There are also a number of new technologies coming along which will be valuable to educators, but which are not necessary in order to get started.

(5. Legal and regulatory obstacles)

If the cable system to be used is in one of the top 100 television markets and is a new system built after 1972, educators are granted one free channel for 5 years after the completion of the trunk lines, and if this channel becomes heavily used, provisions are included in the 1972 FCC rules to guarantee expansion of the system to meet the demand for channels. In older systems and systems not in the top 100 markets, educators will probably have to pay for channels, but the Federal rules guarantee nondiscriminatory access to cable channels. Access to pay channels has not yet been settled, and as noted above, educational access to pay channels may be very important for the development of educational services in the future.

Perhaps the most significant point about educational access to cable channels and other regulatory questions relating to educators and cable is the generally favorable attitude of the FCC toward education. If educators do encounter difficulties with the cable operator in their area, and if they are ready to provide an educational service, I believe that they will receive very favorable treatment before the FCC, if any legal or regulatory obstacle stands in their way. There are many complexities and unresolved issues concerning the educational uses of cable in both the long and the short term, but the present situation is one which can best be characterized as extremely favorable to educators. However, as Commissioner H. Rex Lee has described the situation regarding the free educational channel, it is up to educators to "use it or lose it."

(6. Software costs)

Instructional programming and related software costs can range from about $100 per hour to $100,000 per hour. For $100 per hour a lecturer giving his regular lecture to his students can be videotaped in a special TV classroom. The $100 includes the cost of the lecturer's time for one hour, the cost of the videotape, the cost of engineers and technicians to operate cameras and other equipment, and equipment and classroom rental costs. It does not include the lecturer's preparation time for the lecture or any special visual effects or facilities. About $300 per hour would include these items. Sesame Street and similar professional quality programming has costs in the vicinity of $100,000 per hour.

In the long term we would like to see many channels of programming of Sesame Street quality covering a wide range of subjects for all ages and levels of students. If such a situation were to become a reality, the software cost per student hour would not need to be very high, even though the materials being used cost $100,000 per hour to produce. What is necessary, of course, in order to make the cost per student hour reasonable is enough sharing. For example, if over the program's life, a $100,000 program were to be shared by 100,000 students, each paying $1 per hour, the capital cost could be recovered.

The other problem with software is the need to develop fairly large blocks of coordinated software at a time. For example, Sesame Street required an investment of about $15 million to produce a full "season" of programming. The same condition applies to most educational programming, i.e., a series of at least 10 to 30 programs will ordinarily have to be produced as a unit and the accompanying software, textbooks, notebooks, and student problems would be developed as a part of this unit.

In summary, the software problem is primarily a capital investment problem. If sufficient cost sharing is possible even very large capital investments can be repaid. But to obtain wide cost sharing requires the existence of a large market. Sesame Street aimed at the broadcast market with millions of viewers. If similar quality programming is to become available for cable-based education, there will have to be a market in being. In other words, although quality software costs are not too high if they are widely shared, they cannot be widely shared until there is an established market.

(7. Establishing a market)

It is critically important to the future development of educational services on cable that there be some way of getting started without waiting for the capital for $15 million units to be obtained. In my view, the production of more Sesame Streets for all ages is clearly justified and a highly appropriate activity for both State and Federal agencies concerned with education to support. However, also in my view, there is another way of getting started that is within the grasp of essentially any educational organization. What I have in mind is the $100 per hour type of programming and associated startup capital investments of the order of $100,000.

I believe that there is a substantial market for post-secondary educational services delivered to the home which are of no greater quality than are now being provided to students who go to classes on campus. If this opinion is correct, any post-secondary institution which now has the capability to provide a full range of educational services including classroom teaching, student-faculty group meetings, counseling, testing, evaluation, and certification, can establish a cable-based instructional system with only a very modest investment. It may be preferable for such institutions to purchase videotaped lectures from other sources rather than producing them locally, in order to get the advantage of top quality lecturers, and I would expect a market for such tapes to begin to develop as soon as a significant number of institutions get started. But regardless of the source of taped lectures, it is the ability of existing local institutions to provide all the other components of educational services which makes them the right initiating organizations for cable-based education.

What is needed most critically for such organizations to move into and to establish this market are detailed financial plans. Each organization has a unique history and set of capabilities. Each city and cable operator is unique, so a single kind of plan for this type

of system will not do the job. Each city/cable operator/educational institution group will have to develop its own plan. Without an adequate financial plan which considers the local market and local costs and which provides a cash flow estimate including the most important risks and contingencies, it would be unsafe to start such a program. However, it is my view that when a number of such plans have been prepared, it will be found that the entry into this market is neither too costly nor too risky for most educational organizations.

(8. Conclusion)

I have put forward here the proposition that there are actually no obstacles to the development of cable-based educational services, particularly at the post-secondary level. However, for an educational institution to enter into this activity a substantial amount of capital of the order of $100,000 is required. Therefore, a careful financial plan is required which takes into account the unique features of the local educational institution and of the city and cable operator with which it must work. The first few such plans will be important to do correctly and the first few experiments which are based on these plans could provide a great deal of information to educators throughout the U.S. Therefore, I believe that State and Federal support for this type of planning and startup activity would be extremely valuable during the next few years.

References

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2. B. Cooper, ed., ITFS: What it is ... how to plan, Nat'l. Education Assn., Washington, D. C., 1967.

3. H. A. Rosen, "A satellite system for educational television," Astronautics and Aeronautics, pp. 58-63; April 1968.

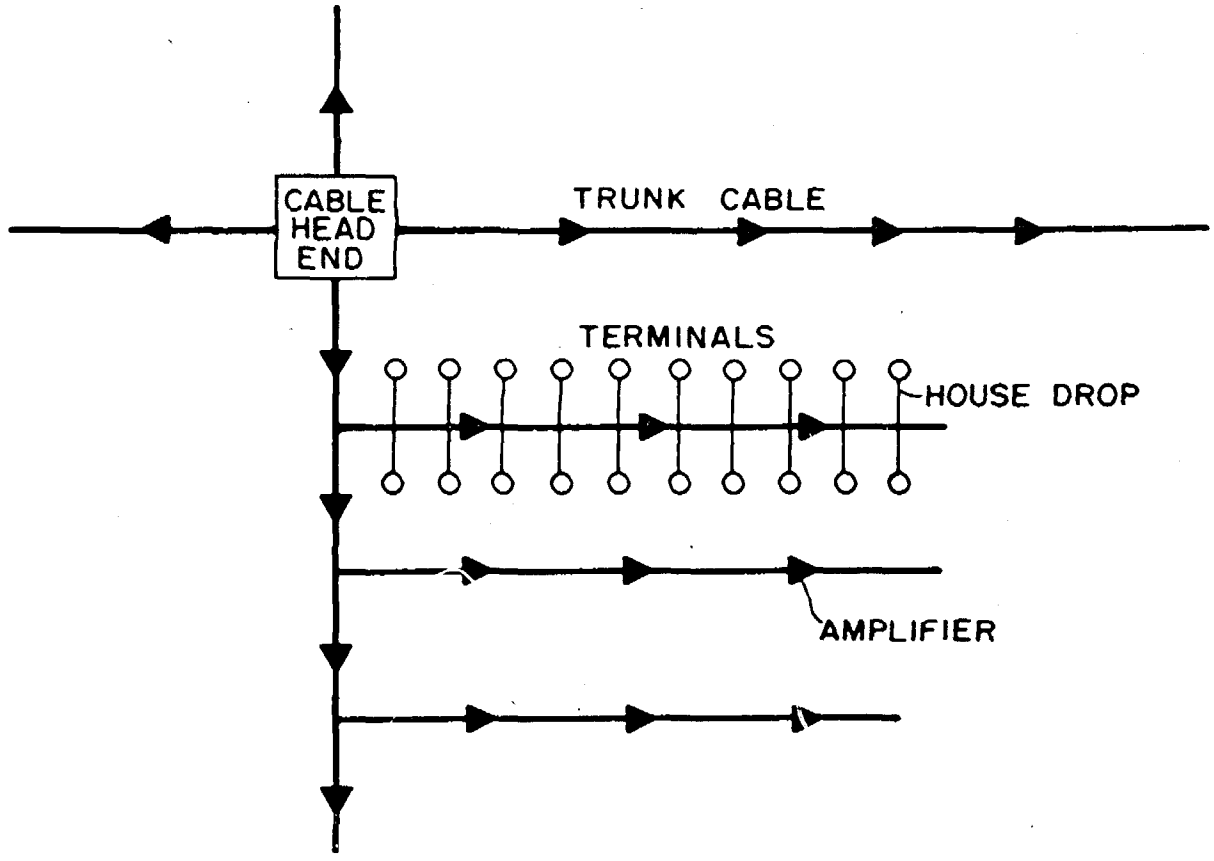

Fig. 1. A one-way cable television system. Trunk cables include amplifiers spaced regularly throughout their length capable of amplifying a bandwidth corresponding to, typically, 24 TV channels in the frequency range from 54 MHz to 270 MHz. House drops connect TV sets (terminals) to the trunks and typically do not include amplifiers. Since sets switch only twelve VHF channels, either set-top converters that will handle 24 or more channels are required, or two cables can be used for house drops, and a simple two-position switch can be added at the set.

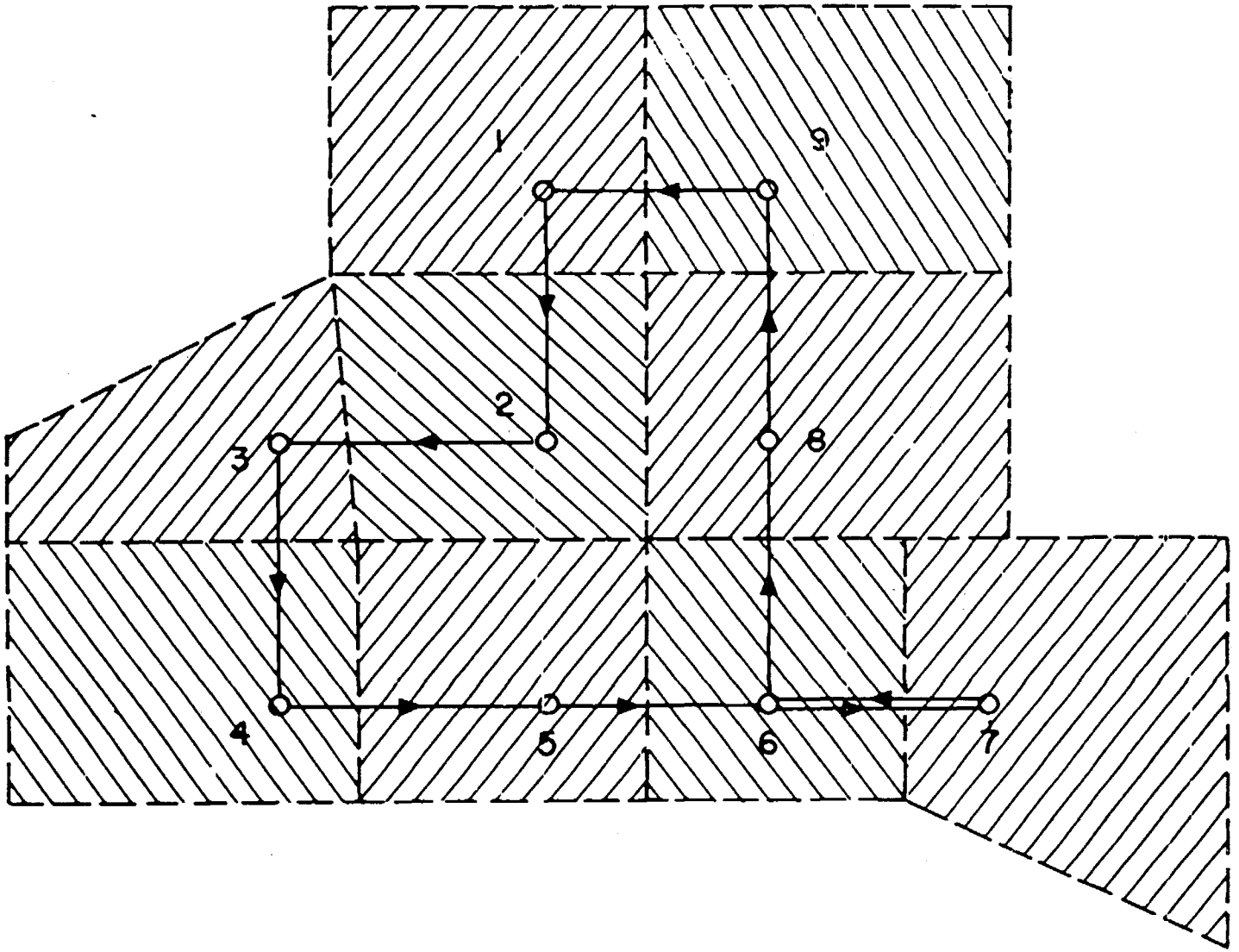

Fig. 2. Main trunk line for a cable system in a large city which has been divided into nine neighborhoods. Circles represent studios which allow any neighborhood to originate programming for that neighborhood or for the system as a whole.

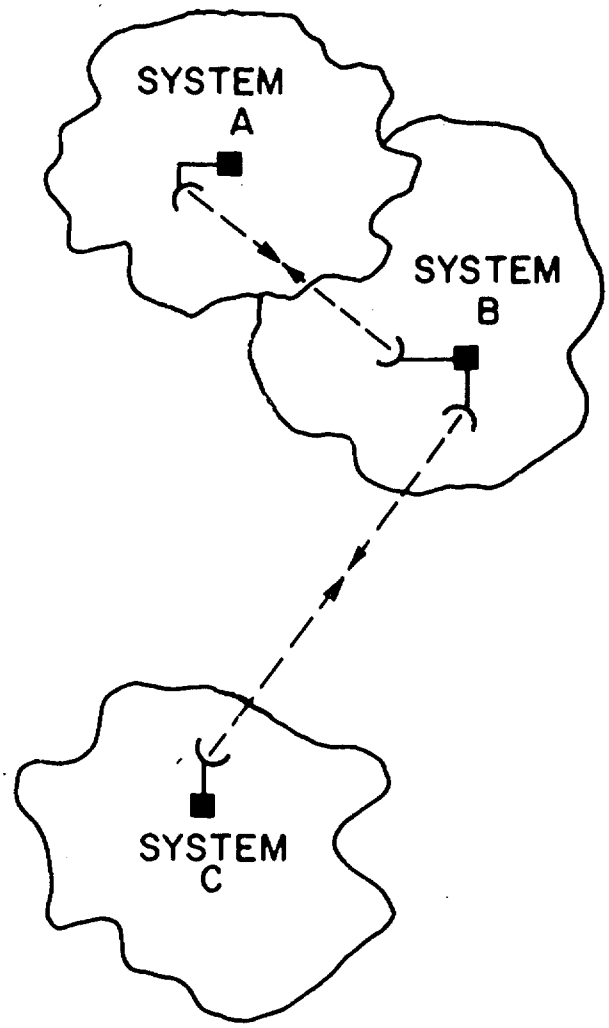

Fig. 3. Three cable systems interconnected by terrestrial microwave relay links. Any of the systems can originate programming which will reach the subscribers in any two systems or all three systems.

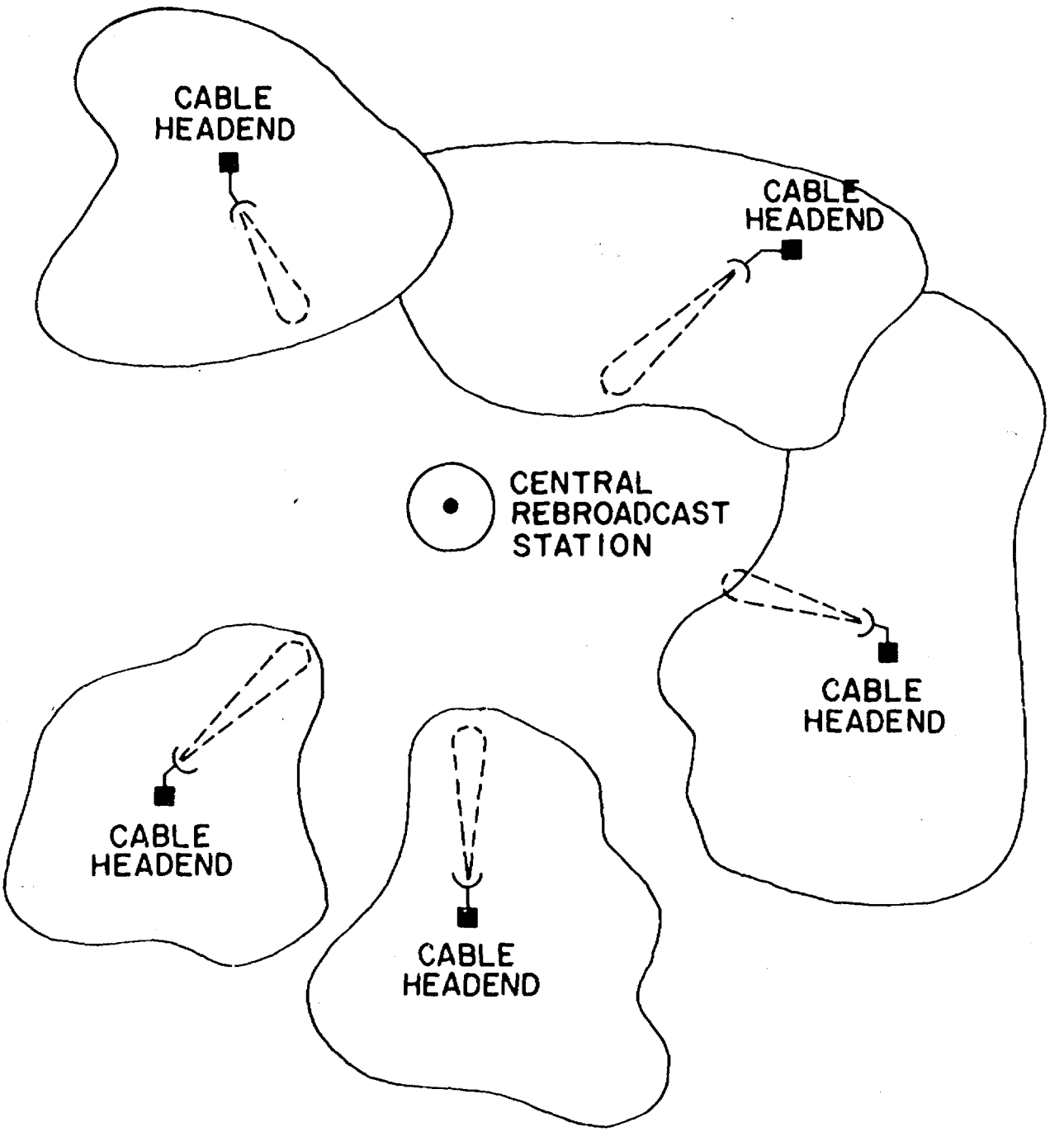

Fig. 4. A cable television interconnection system using a microwave multipoint distribution system. Any cable system can originate programming which can be distributed to all of the other cable systems. Each cable system has a narrow beam antenna aimed at the central rebroadcast station which has an omnidirectional antenna.

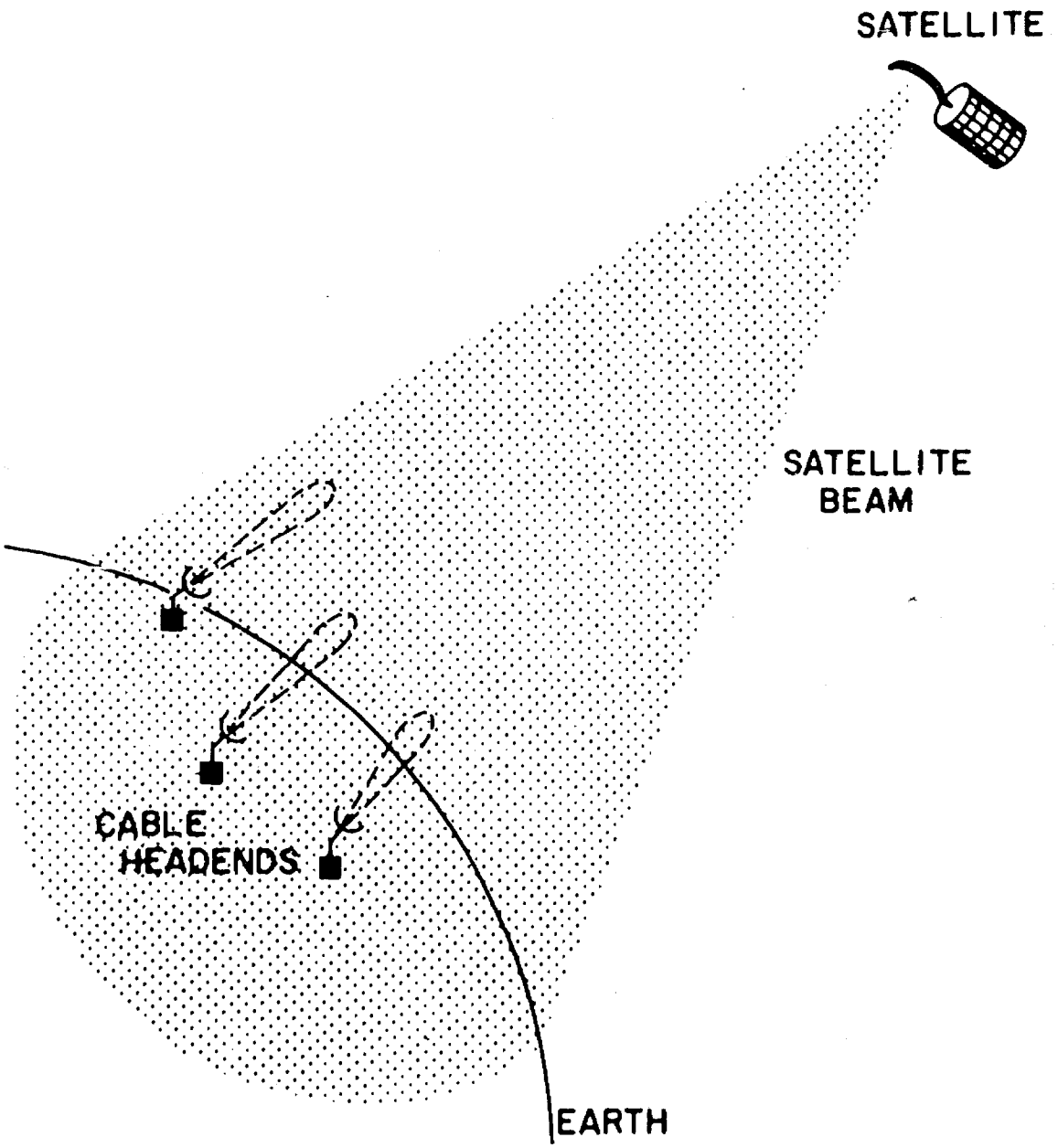

Fig. 5 A cable television interconnection system using a synchronous earth satellite as the "platform" for a microwave rebroadcast station. Earth stations are located at cable system headends which lie within the area covered by the satellite beam.

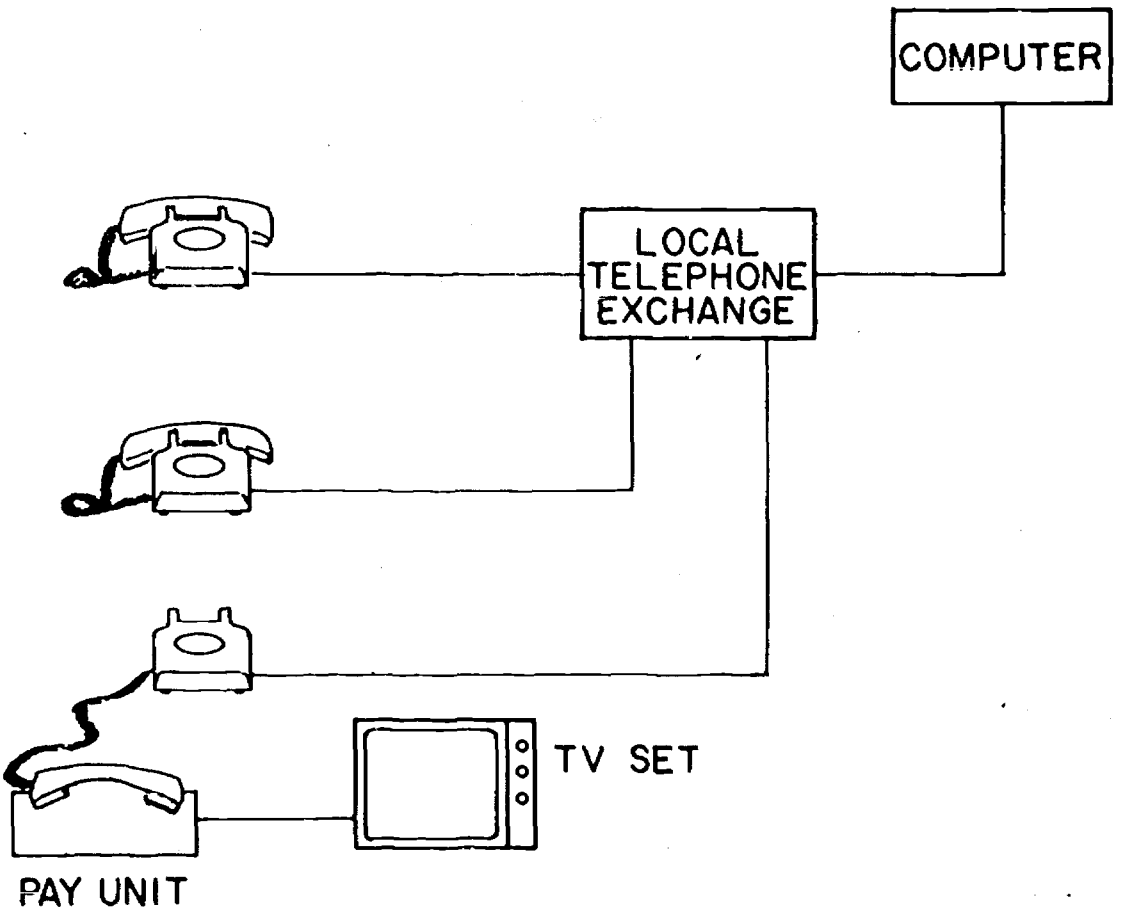

Fig. 6. Pay-by-program capability provided through the telephone system. Data signals are sent from the subscriber's telephone to a computer at the central studio which sends data back over the telephone line to individual subscriber terminals including a pay unit and TV set.

Three concurrent "clinics" followed the plenary session. These were repeated after the luncheon recess, giving all participants an opportunity to attend at least two of these clinics.

The first clinic was chaired by Regent Francis W. McGinley. Its topic was:

CATV Legalities, Community Planning and Franchising Affecting Education and Municipal Use.

The discussants were:

Ian Volner, Attorney
Cohn and Marks, Washington, D. C.

Joel Yohalem, Counsel
New York State Commission
on Cable Television

C. Lynn Wickwire, Executive Director
New York State Commission
on Cable Television

REGENT FRANCIS W. MCGINLEY:

You may recall that in this morning's introduction to the conference the Chancellor referred to the complexities we, as educators and municipal administrators, face in shaping cable television franchise arrangements for the public benefit. You have probably surmised, by this time, that there is a great deal of genuine work to be done by each of us if we are to achieve that end.

This particular session will deal with the specific legal framework in which we can make CATV function. Hopefully, the gentlemen who are to discuss these matters with us will clarify the provisions of Federal and State law which require certain cable services...but only in certain designated "markets"...and only when cable franchises have 3,500 or more subscribers. What is it that we can legally expect of an operator and what is it that we may only legally request of an operator?

What advice do our panelists have on community involvement in early planning for city/town and educational services,...what ought to be included in every franchise agreement?

Because we are novices in cable television experience, how can we build into our franchise agreements a provision for change as our experience and capabilities increase in the next few years?

I think these gentlemen can respond to these questions and others which you may have following their presentations.

I will ask Mr. Ian Volner to first acquaint us with community planning in the context of Federal regulations. Mr. Volner is not a stranger to our state. He was born and raised in the New York City metropolitan area and graduated with high honors from Colgate University. He also received his LL.B.cum laude, from Columbia Law School. Mr. Volner has been associated with the faculty at the Columbia Leyden University Law Program, was an associate in one of New York's leading law firms, has been a member of the staff of the Federal Communications Commission including a position as senior staff attorney before joining the law firm of Cohn and Marks in 1970.

Mr. Ian Volner.

MR. IAN VOLNER:

Community Planning For The Uses Of Cable Television In The Context Of Federal Regulations

My comments will deal principally with the Federal regulations -- those of the FCC -- affecting educators and municipal officials as users of cable television. The Federal Communications Commission contemplates two somewhat separate roles for municipal officers and educators in the development of cable. Under what the FCC calls "deliberately structured dualism," you will have a significant responsibility for the regulation of cable. You will be responsible for the issuance of franchises and for assuring that the systems are constructed and operated in accordance with your own rules, those of the State, and of the Federal Government. In addition, the FCC believes that cable can be used by educators and municipal officials as an educational aid and an instrument of government.

While I may have some unkind things to say about the FCC, on this one point I will concede that it was entirely correct: you do have an important role to play in the regulation of cable television; equally important to you and your constituents is the use which you make of the new medium. I prefer to discuss your role as a user of cable, frankly, because it has more sex appeal; even the problems you face are exciting and the benefits cable offers you are truly enormous. The key to both of your roles, it seems to me, in the development of cable is planning. Let us see, then, what the rules require and permit and what sort of planning and action is called for on your part, as a result.

1. What is Legally Available and Who Can Use it?

The Commission's regulations provide in substance that cable systems in the so-called "major markets" must maintain one special channel for use by "local educational authorities" and a separate special channel for "local governmental uses." At first blush, it appears that the FCC has handed you, as educators and governmental officials, cable television on a silver platter. Almost immediately, two problems become apparent: (1) What is available in the way of educational and governmental channels outside the major markets? (2) Who, in fact, is entitled to use the channels?

The Commission has provided a partial answer to the first question. For our purposes there are 5 major markets in New York State: New York City, Buffalo, the Tri-Cities (Albany/Schenectady/Troy), Syracuse, and Rochester; and all communities within 35 miles of each of these cities. In those areas you can be assured of some cable service to the educational and governmental authorities.

What, then, of communities which do not lie within the 35-mile zone of these five cities? The FCC's rules say that you may require the provision of a governmental and an educational channel as a condition to

the issuance of the franchise. However, you may not require more in the way of educational and governmental cable service than the FCC's rules themselves require in the major markets. In other words, in communities outside of the major television markets you will get a governmental and educational channel if -- but only if -- you have, through planning and coordination, developed a strong enough bargaining position with the prospective cable operators to demand them.

The second question, who is entitled to use these channels, arises because the FCC did not define "local educational authorities" and "local governmental uses." The absence of a definition presents problems.

In a recent case the Commission was asked to decide whether the educational channel was to be controlled by the public school system or by the university which happened to be located in town. Both the public school system and the university claim that it was the "local educational authority," as that term is used in the rule. Each was, of course, willing to allow the other some rights to use the channel, but the question was fundamentally one of control

A dispute of this sort is, in my judgment, a direct consequence of a failure by both sides to plan and anticipate problems. It is apparent to me that neither the university nor the public school system gave much thought to its projected use of cable television as an educational tool. It is also futile to think the FCC is going to help you resolve this type of problem. In the example I have cited, the Commission quite properly simply sent the matter back to the town, saying in substance, "work this out among yourselves."

The solution to this problem is obvious: If you have any reason to believe that there will be more than one educational authority or more than one governmental body in your community interested in use of the channel, you should work out -- in advance -- how the use of the channel or channels will be allocated and shared.

The need for coordination among groups which may be interested in using the educational and governmental access channel has yet another dimension. Largely for historical reasons, the FCC considers each separate community to be a separate cable television system. Unfortunately, however, the operating realities of cable television do not reflect this nice definition. Very frequently, a single cable operator may have a system which serves as many as ten or more adjoining communities. These multi-community systems have been given the unfortunate label, "conglomerate systems."

Read literally, the Commission's rules would require that a conglomerate system provide each one of the communities it serves with its own governmental and its own educational channel. But, the FCC has not read its own rule literally. Instead, it has permitted conglomerate cable systems to provide some lesser number of governmental and educational access channels than the community-by-community rule would otherwise require. It is assumed that the channels will be shared by all of the educational and governmental authorities on the conglomerate system.

The FCC has developed no hard and fast standards for determining the number of governmental and educational channels which a conglomerate system must provide. It needs your help in resolving this problem. If your community is a part of a conglomerate system, you should coordinate your plans for the use of the governmental and educational channels with the other affected communities. You should project each community's individual needs for governmental and access channels and the aggregate needs of all the communities on the system. You should provide this information to the FCC. I have been to enough town council meetings to know that the successful accomplishment of this type of coordination among different communities is no mean feat. However, if you do not coordinate your plans and proposed uses with those of the educators and governmental officials in the other communities on the same system, you may well find too few channels available for too many communities.

2. What can you do with the channels?

The FCC's rules give you an extremely broad latitude in the uses which you make of the governmental and educational channels. The only restrictions on the use of the educational channel are those designed to prohibit the presentation of advertising, lottery information, and obscene or indecent programs. No restrictions whatsoever are imposed by the Commission's rules on the use of the governmental channel.

The very latitude of permissible uses of these channels afforded requires that you plan -- and plan carefully -- your projected uses. The Commission considers this whole matter of offering channels to educators and municipalities an "experiment." This should be taken as something of a warning: what the FCC gives, it can also take away. If the channels the FCC has made available to you are not used extensively and imaginatively, the risk that they will be withdrawn is real.

3. Who Pays for All This?

You may be thinking that all of this is nice, but largely irrelevant: the use of the channels will be expensive; and we all know that educators and governmental officials in New York, as elsewhere, are not suffering from an excess of funds. Fortunately, the FCC's rules provide you with some help on this matter of financing and there are ways by which you can help yourselves.

The rules provide that, for the first five years after the system begins operation, the governmental and education access channels must be made available "without charge." The rule applies only in the major markets. Outside of those markets you will have to bargain for free service.

Do not read more into the rule than is actually there. All you can get is the right to use the channel without charge. You will still have to pay all the costs incurred in producing programs, all the costs incurred in buying any special equipment you need for program production, and all the costs of cameramen, technicians, and the like. Is there some way in which you can get the cable operator to bear these additional costs as well? The answer is "yes," as a practical matter and "maybe" as a matter of law.

As I am sure you are aware, it is the custom for governmental authorities to charge cable operators a fee for the privilege of the issuance of the franchise. The FCC's rules prohibit you from exacting from the cable operator a franchise fee which exceeds 3 to 5% of gross subscriber revenues; and if you propose to charge more than 3%, you must establish to the FCC's satisfaction that the additional amounts are necessary to your regulatory program. This rule would seemingly limit your ability to call upon your franchisee to help finance program production.

But, the rule is delightfully vague and you may be able to take advantage of some of its loopholes to fund program production. For example, the rule does not prohibit you from requiring as a part of your franchise that the franchisee lend you -- without charge -- the equipment and technicians that you need to produce programming. It does not appear that the cost to the franchisee of these "loans" would be treated as a part of the FCC's franchise fee limitations. There are other, perhaps less subtle, ways of calling on your cable operator to bear a part of the program costs. The more direct they are, the more likely it is that they will be disapproved by the FCC. However you work the problem out, the critical element is once again, advance planning and preparation. You should know -- and should be prepared to show to the FCC -- exactly how much money will be involved in program production for the governmental and educational channels, and exactly what you intend to do with that fee you receive from the franchisee.

There are other aspects of the FCC's rules which we could consider, but time is running short. The essential point is that at every step, compliance with the FCC's rules and effective utilization of the channels which the FCC has made available depend upon a single element -- planning. Planning is indispensable, if cable is to be effectively harnessed to the public good. This is a new field. The FCC itself has spent nearly a decade devising, revising,and abandoning policies with respect to its supervision of cable television; and we have no assurance that the rules we have just been discussing are definitive. Moreover, the very complexity of the FCC rules themselves is going to make the formulation of cohesive intelligent policies extremely difficult. The rules threaten -- in John Kenneth Galbraith's words -- to make "technocrats" of us all. Nevertheless, I see no alternative to planning if cable is to be properly harnessed. If its benefits are realized, they will, in my judgment, far outweigh the transitory problems that you faced in bringing cable under control. The fact that the State Education Department was sufficiently concerned to hold this cable conference and you were deeply enough interested to attend, strongly suggests that you will succeed.

REGENT MCGINLEY:

Our second speaker is Joel Yohalem, counsel for the New York State Commission on Cable Television. Mr. Yohalem received his Doctor of Law degree from the University of Chicago and has been admitted to practice in the District of Columbia, the United States Supreme Court, and the First and Tenth Circuit Courts of Appeals, as well as in New York State. He has had considerable government and private experience with the Federal Power Commission, the firm of Wolf and Case in the District of Columbia, and the New York State Public Service Commission as a Special Assistant to the Commission and Assistant General Counsel before joining the New York State Commission on Cable Television.

Mr. Joel Yohalem.

MR. JOEL YOHALEM:

I appreciate the opportunity to be here and to discuss with you Article 28 of the New York State Executive Law, the statute which created the Commission on Cable Television and which describes its powers and responsibilities. I should make clear at the outset that the views I am about to express are my own and do not necessarily coincide with those of the Commission or its members.

As you may have gathered from Mr. Volner's remarks, the body of law and regulations governing the relationship between cable television operators and educators is quite limited. At this juncture, the only Federal provision is the FCC regulation requiring cable systems in the top 100 markets to furnish an educational access channel free of charge. At the state level, at least in the State of New York, there are a handful of statutory provisions that have a bearing on this relationship, of which you should be aware. Allow me to hazard a guess at the reason for the relatively undeveloped state of the law in this area.

My guess--and it is only a guess--is that neither cable television operators, nor educators nor, most importantly, the various legislatures and regulatory authorities really understand how cable television and education overlap or how the cable television medium can contribute significantly to improved educational programs and opportunities. I can assure you that I am very ignorant of the potential in this area, and you should bear in mind that cable television is a relatively new (and a very rapidly changing) industry, and that many of those of us engaged in efforts at cable regulation are novices in the field.

The reason I call your attention to what I believe is a virtual vacuum of understanding is to underscore the necessity for you to educate the Federal, State, and local regulators who are in a postion to assist you in implementing new ideas that may have occurred to you. You should not expect the FCC or the State Commission or the local franchising authorities to generate good ideas by themselves out of thin air. You should consider it your job to conceive, package, and "sell" the good ideas to the cable operators, either directly, or through the regulatory process.

I think it is fair to say that New York State, which took the lead in terms of creating a regulatory framework adapted to the unique features of the cable television industry, has attempted to afford the broadest possible opportunity to educators with ideas concerning cable television.

To begin with, the statute expressly sets forth the legislative purposes underlying its enactment and includes among these the desire—

> to stimulate the development of diverse instructional, educational and public affairs programming with full access thereto by cable television companies, educational broadcasters and public and private institutions operating closed circuit television systems and instructional television fixed services.

I don't believe the legislature had a particular project in mind when it wrote that language; rather, I believe the legislature was writing a very broad invitation to anyone interested in instructional and educational programming to come forward and seek the assistance of the State Commission insofar as any project along these lines is involved.

There are other provisions in Article 28 to indicate that the legislature was aware of, and sympathetic to, the interests of the educational community in using cable television for educational purposes. Thus, the statute provides that, to the extent possible, the field of "education television," among others, should be reflected in the membership of the Commission on Cable Television. I should note parenthetically that Edward J. Wegman, one of our Commissioners, is a man of broad experience in the creation of educational program materials and serves as Chairman of the Board of Trustees of the Erie County Community College. The Commission also is expressly empowered by Article 28 to join in "cooperative arrangements" with a number of State agencies--including, specifically, the Board of Regents--to assure "maximum utilization of existing expertise in communications technology" and the effective implementation of Article 28 itself. Section 825 of the statute, which prohibits discriminatory and preferential rates for cable television service, goes on to state that reduced rates or free service to educational institutions shall not be deemed unduly discriminatory or preferential. And Section 829 of our statute attempts to ensure acsdemic freedom on the cable by making clear that neither cable television companies, nor the Commission on Cable Television or any municipality, may prohibit or limit any program or class of program presented over a channel made available for educational purposes.

The foregoing provisions may be of some interest to you; but in my view, the provisions that should interest you the most are those in three sections of the statute which I haven't yet mentioned.

Section 815, subdivision 2(b), of Article 28 requires the Commission to prescribe minimum standards for inclusion in franchises. The franchise, of course, is the document which contains the basic rules by which the cable television game is played: franchises, once approved by our Commission and the FCC, have the force of law. Among the various types of standards to be set by the State Commission for inclusion in franchises are those regarding "access to, and facilities to make use of, channels for educational snd public service programs." The Commission has yet to prescribe any such standards. But before anyone suggests that Commission has been derelict in discharging its responsibilites under Section 815, allow me to mention that, to the best of my knowledge, no one from the educational community has suggested what sort of standard or standards might be appropriate for adoption by the Commission. In my view, the Commission has been entirely correct in declining to act with haste in this rather delicate and uncharted area.

Like all of you, the Commission has priorities. I am confident that, despite numerous other competing demands for its attention and time, the Commission will in due course institute an investigation

and rulemaking proceeding concerning educational access channels. But if you want this matter given top priority, you should tell the Commission. And you should provide constructive suggestions that will make it easier for the Commission to do whatever it is you want it to do.

Subdivision 7 of Section 815 is another provision of Article 28 which you should keep in mind. Subdivision 7 provides that the Commission shall -

> ...stimulate and encourage cooperative arrangements among organizations, institutions and municipalities in the development of regional educational, and public affairs programming services.

This provision ties in neatly with the recitation of legislative purposes in Section 811 of the statute, to which I referred a few moments ago, and provides the Commission with a specific authorization to use its powers to resolve impasses and remove obstacles that stand in the way of new programming services. Sometimes, disagreements between otherwise cooperative parties tend to stymie a project which would be mutually beneficial to them and beneficial to the public as well. In such circumstances, the intervention of a third party is sometimes useful. If you feel the Commission can be helpful in this respect, you should indicate to us which heads you want knocked together, and how hard we should knock.

Perhaps the most significant provision in Article 28 is Section 823, which authorizes the Commission to require the interconnection or coordinated operation of cable television systems and facilities. In the long run, I expect to see cable systems throughout the state fully interconnected--whether by microwave or land lines or satellite--so that programming originated in a cable studio in Manhattan will be made available simultaneously in Buffalo, Rochester, Syracuse, Albany,and Long Island, and all intermediate points. But more modest forms of interconnection may be appropriate right now. If, for example, you know of a cable system that originates educational programs which your local cable operator does not carry, why not ask the Commission to order interconnection? If the educational authorities in Cable Community A are exploiting their free access channel with programming of interest to the educational athorities in Cable Community B, interconnection may be the answer. Interconnection applications under Section 823 may be filed by "any interested party," and I have no doubt that educational authorities will be in a position to demonstrate an interest without difficulty. So keep the word "interconnection" in the back of your mind as you begin to grapple with cable television problems.

I'd like to close with just a word or two about our Commission's Rules. One rule conspicuous by its absence is the educational access channel requirement about which Mr. Volner has spoken. It is true that New York Commission has not required an education channel where the cable system is located outside one of the top 100 television markets. But this does not mean that the Commission has rejected such a requirement; it simply means that the need for the requirement has not yet been

demonstrated to the Commission in sufficiently convincing fashion to warrant the cost and inconvenience that extension of the FCC rule would mean for the affected cable operators. Once again, it's up to you to make the necessary showing.

Our most important rules, from your point of view, are those that establish the procedures to be followed by municipalities in awarding cable television franchises. Among other things, these rules mandate "planning," the importance of which Mr. Volner has stressed. The Commission's planning rule itemizes some of the matters that should be considered in the planning process and makes particular reference to "access channels and the facilities for utilizing such channels." In more general terms, the rule requires each municipality to appoint a person or group of persons to analyze "the various potential services that can be made available from (a cable television) system and the costs associated with the construction and operation of such a system and with the provision of any particular service options." If you want to maximize your influence with regard to the medium of cable television, I suggest you take Mr. Volner's advice and involve yourselves in the planning that is now underway in many communities. And the earlier you get started, the greater the impact you are likely to have.

There are roughly 1600 cities, towns, and villsges in the State of New York with power to award cable television franchises. Less than 500 of them have already awarded such franchises. This leaves lots of room for new ideas and improvements. So we are asking you to help us to do our job more effectively by participating in the franchising process and in proceedings before our Commission. I hope you will begin thinking about this today--tomorrow is frequently too late.

REGENT FRANCIS W. MCGINLEY:

Our final speaker for this session is Mr. C. Lynn Wickwire, Executive Director of the New York State Commission on Cable Television. Mr. Wickwire received degrees from Western Maryland College and Yale University. He has also attended the Graduate School of Public Affairs, State University of New York at Albany. His experience is in public service with the Office of Planning Coordination, Planning Services,and in the executive offices as an appointments officer and assistant secretary to the Governor. Mr. Wickwire was appointed Chairman of the Governor's Task Force on Cable Television in 1972 and was the Acting Chairman of the New York State Commission on Cable Television until Robert Kelly, the permanent chairman, was appointed a month ago. He is well equipped to answer your questions regarding the development of state policies and goals for cable television.

Mr. C. Lynn Wickwire.

MR. C. LYNN WICKWIRE:

As you are well aware by now, there are three levels of government which can impose mandates and specifications upon cable operators if cable systems are to be installed in municipalities. The FCC in 1972 put out its second report and order on cable television. All relevant FCC regulations pertaining to cable television can be ordered from the U. S. Printing Office, Washington, D.C.20402 (Docket No. 0400-002-76) and enclosing $2.20. In New York State, our Commission adopted Interim Rules on April 13th of this year and is now in the process of reviewing comments upon the Interim Rules before making any revisions and final adoptions of the rules. In New York State it is the municipality which grants the franchise and, therefore, is the ultimate contracting body with any cable operator. Obviously, this is the level of which the most impact can be made. By reading the FCC regulations, and our statute and regulations (and notes from today's session) you should have a fairly good idea of what is required and what can be done.

You already have heard of the need to do adequate planning and to have adequate financing if anyone is to undertake serious programming for cable television. I can only re-emphasize these points. The New York State Commission on Cable Television has received written and verbal comments stating that there really isn't any need to do planning since the local people don't know what cable is anyway, and are not sophisticated enough to understand it. This seems to me to be somewhat from the truth, and does not coincide with the intent of the Commission's rules. One purpose of our regulations relating to the planning requirement is that before a municipality grants a franchise, it should know something about cable and what can be done with cable television. It doesn't make any difference whether you're from Manhattan or Boonville or Sag Harbor. The public certainly is able to understand what cable is all about.

As far as financing is concerned, the point to be made is you have to have it. You have to educate the residents of your community and the school board, begin to develop the specific program proposals for use of the cable,and obtain the monetary commitment. This is not an easy task and it may involve education everywhere. Let me pass on to you an interesting anecdote from a session largely attended by people in the advertising, video publishing, and programming side of cable and media in New York last Friday. A panel participant who primarily sells sports programming to cable companies made the observation that generally cable operators are hardware types (engineers), not programmers, and feel that anyone who is involved in programming is infringing on their silver wire. He stated that whenever he meets cable operators and starts to discuss the future potential of cable,the operators are not interested in talking about 1980 -- BUT when your back is turned, they then begin to extoll to everyone,including current and potential subscribers, the marketing meter reading, and broadcasting board of education meetings' possibilities,to name but a few.

The programmer noted that cable operators are then unable to figure out why (after promising all of these concepts, and while still unwilling to investigate and initiate new programming ideas) they are not increasing their number of subscribers. The programmer noted that what was needed was an educational breakthrough of the cable operators so that proper programming can add subscribers and can turn a profit - and this includes educational programming.

He noted that his company had signed a package to video tape all NCAA Championships, which his company would then sell to various cable companies throughout the country. This news item was carried on the AP and UPI wires several months ago all over the country, but has yet to appear as a news blip in the National Cable Television Association Newsletter.

A further explanation of where cable is vis-a-vis education is a quick summary of the results of the 1973 Aspen Conference on Cable and Continuing Education.

1. A pre-conference study revealed few current uses of cable for the delivery of continuing education.

2. Cable operators emphasized that their principal business is not producing programs but providing a controlled distribution service between program originators and their audiences.

3. Some operators expressed skepticism as to whether education programming will be a significant factor in increasing their subscriber base.

4. There is a lack of high quality educational materials suitable for televised use.

5. Someone must assure the quality of media-based education.

6. There is a need for developing adequate and equitable funding mechanisms.

7. A campaign must be instituted to educate educators to the potential uses of cable.

8. The Institute recommended a major study of the means for financing expanded access to continuing education and the development of national system for the collection assessment and distribution of instructional materials.

What all of this clearly tells me is that the responsibility for identifying education needs and developing and implementing programs largely will remain with the educational community.

Now let me mention a couple of approaches being taken in different parts of the country from a new publication called Cable Libraries, put out by the American Society for Information Science.

In Madison, Wisconsin, the Madison Area Library Council represents libraries of all types in Dane County. The Council has been very active in setting up informal informational meetings on cable held at the Madison Public Library. The response to the meetings has been phenomenal, with a Citizens Cable Council being formed with a membership of over 250 people and recognized as the community planning group for cable by the city government. The Citizens Cable Committee also is moving toward actual use of this new technology. They are beginning to hold informal workshops to train area librarians in equipment use and in programming techniques.

The Memphis Public Library has approached city officials with the idea that the library will be the key agency in helping groups who want to get on to the public access channel. The library proposes to make available staff, studios, and equipment at certain hours to community groups and the general public.

The access channel also will be used to give others directions on how to get on the channel for a presentation. It also will be used to explain how cable can be used to get ideas across.

The Huntsville, Alabama Public Library has developed a television series entitled "Adventures in Library Land," a program for children which is a remarkable success. This program has drawn praise from New York representatives of the cable company as well as local viewers. In Orlando, the Orlando Friends of the Library gave the library a Sony three-quarter-inch cassette video tape recorder for use in their work.

The library in Kern County, California was one of the first groups to knock on the door of a new video access center. The access center will schedule as many video tapes as the library has time to create for cable casting over the center's regular time slots.

In closing, the important observation here is that libraries have been actively involved in various places around the country using the public access channel. They don't have a channel of their own, but the FCC has said that one of the three public channels in the top 100 markets will be for educational purposes. Your channel is there. You should learn how to use it, what can be put on it, and who is going to pay for it.

The second concurrent clinic on Educational Needs And Uses was unique. It combined a philosophical consideration of the uses of cable by the educational community and a "case history" report.

The clinic was chaired by Regent Edward Warburg. Its discussants were:

Stephen Bailey, Vice President
American Council on Education

Harry C. Calhoun, General Manager
U. S. Cablevision, Beacon, New York

Robert W. Young, Superintendent
Wappingers Central School Dist. #1

Resource Person:

Ted Sherman, Department Head
Wappingers Central School Dist. #1

REGENT EDWARD WARBURG:

Over the many years during which I have been associated with the University of the State of New York and its variety of educational programs, I have been exposed to a great many promising educational concepts, as you can well imagine. Unfortunately, many of these promises seem to wither too soon. None of us, I suspect, can truly divine the future of cable television any more than we could accurately project the impact of other innovations of our time. Yet your numbers here today and the eagerness with which community cable franchises have been sought by cable operators suggest great expectations for cable television. Indeed there are some unique features which cable television offers, not the least of which is subscription fees which underwrite the installation and cost of a basic cable system.

As educators, we must recognize the tremendous benefit of this unique situation. We are afforded an opportunity, by law and by practical precedents, to take advantage of a capitalistic venture. That's important. But it must also be clear to you that this feature does not relieve us of other commitments, including economic uses, if we are to achieve those goals outlined by Chancellor McGovern earlier today.

It gives me great pleasure to introduce our first speaker, who happens to be both a friend of mine and a former New York State Regent, Mr. Stephen Bailey.

Mr. Bailey is now Vice President of the American Council on Education in Washington, D. C. Mr. Bailey has a long list of credentials which I am sure would impress you. He has been a Rhodes Scholar and holds degrees from Oxford and Harvard Universities. He has served on

the faculties of Hiram College, Wesleyan University, and Princeton University. He has also been a Fulbright Lecturer in American Government at Oxford University. Mr. Bailey was formerly Chairman of the Policy Institute of the Syracuse University Research Corporation, and Maxwell Professor of Political Science and Dean of the Maxwell Graduate School of Citizenship and Public Affairs of Syracuse University.

In addition to these titles he has a distinguished career as an author and has held key offices in the National Academy of Education, the American Society for Public Administration, and the American Political Science Association. If that is not enough, he has also served on several Presidential task forces and was active in Connecticut politics.

It is my pleasure to introduce a friend, a distinguished educator, Stephen Bailey.

DR. STEPHEN K. BAILEY

Educational Cable: Five Hurdles in Search of Hurdlers

Regent Warburg, distinguished friends:

My new colleagues in Washington must become exceedingly weary when, after a discussion of almost any major education subject, I remonstrate: "But, New York is already doing that!"

"Compentency testing in the elementary schools?" New York is already doing that!

"Direct aid to private higher education?" New York is already doing that!

"Comprehensive higher education planning?" New York is already doing that!"

"External Degrees?" New York is already doing that!

"Statewide stimulation of Cable TV for education purposes?" New York is already doing that!

"Executive attempts to diminish the policy powers of the State Education Board?" New York is already doing that!

I mean, how progressive can a single state be?

When Bernarr Cooper graciously invited me to participate in this conference, I hastened to accept. Bernarr is as gracious an invitor as I know. I have a sense that if I had refused, Bernarr would either have committed suicide, or would have taken me into his tape-converter laboratory and impaled me on one of his high-speed spindles.

I am delighted to be back with my former fellow Regents and with Education Department colleagues. Although, after what happened last week in the Houston Astrodome, Helen Power and Viv Anderson must be quite impossible to live with. Personally, I think the whole match was Rigged. And what is a female chauvinist doing with a name like "King," anyhow?

Mark Twain once commented that Adam and Eve had many advantages, but the principal one was that they escaped teething. The educational uses of cable TV will, alas, have no such luck. We are in for years of experimentation, negotiation, gumming, and painful chewing. And that is ahead of us even before we get our second teeth. The greatest disservice we can do to the cause we explore today is to over-romanticize the possibilities. The possibilities are there, and they are exciting--even mind blowing. But their realization depends upon a series of prior

and concommitant developments that are difficult to conceptualize and even more difficult to execute. I mention these to you not to throw a wet blanket on the discourse, but to remind all of us -- myself included -- that the reservation of a certain number of cable channels as educational common carriers is only a tentative first step in an elaborate process of educational reform. Let me identify five hurdles that need to be overcome if cable TV is to be an effective educative instrument.

First, is the hurdle of software. Much of this pastyear, my wife and I lived in Reston, Virginia -- a delightful new town thirty minutes too far from the Nation's Capital. Reston has cable TV. We could get thirteen channels in magnificent clarity. In addition, we had "Star Channel." For six dollars a month, and by clicking a special knob or two we could see without the interruption of commercials, eight full-length brand-new feature films. In short, I have seen the future. The trouble is that I have been spending odd moments while shaving trying to discover why I was underwhelmed by the entire experience. The quick answer is that by and large the educational programs (like the B-grade Star Channel movies) tended to make the commercial wasteland look like the hanging gardens of Babylon. Aside from a few stunning exceptions like the Masterpiece Theatre, Sesame Street, Electric Company, Julia Childs, and the fortuity of the Sam Ervin Show, I found the educational fare excruciatingly uninteresting. After a hard day at the office, a panel show on "Reforming our Judicial System" seemed somehow tough on the digestion, and likely to increase the phlegm. And when we turn to entire academic courses that might be used on cable (I am referring here to updated versions of sequences like "Sunrise Semester" which as you remember was going to revolutionize higher education more than a decade ago), I involuntarily shudder. Something happens to a Professor--through wires, and flung through the ether or through attenuated strands of cable. He turns up in the viewer's tube as the original boob of the boob tube. I once prided myself on my classroom performance. McGraw Hill actually filmed me on the American Constitution, Political Parties, Congress, and the Presidency. The result was most horrid, all chir and no forehead. And my eyes kept squinting off camera as a maddeningly irregular teleprompter faded into inscrutability by a superimposed Kleeg light. As a result, my pedagogic charisma was bleached clorox clean.

Some of these grotesquenesses are, of course, overcomeable. I have witnessed a sufficient number of BBC II Open University sequences to know that good and creative work can be done on the software side. But good exposition on TV costs money -- lots of it. And it takes an unusual series of talents to act as an effective broker between the subject matter expert and the constraints of the hardware. Real friends of educational cable will start now to search for resources -- financial and human -- to improve the quality of the programs that cable will ultimately disseminate.

But if software is the first big hurdle, the second is the redundancy fears of the education profession. Most of these are probably irrational. I doubt that educational cable will displace the teacher,

any more than film strips, audio tapes, radio, and closed-circuit TV have displaced teachers. But budget cutters have a dream that automated teaching will somehow increase educational productivity, and this noise makes teachers reluctant to participate enthusiastically in technological experimentation. Lacking elemental mechanical skills, I have occasionally entertained a terrifyingly different vision of the future: I see tens of thousands of teachers, each surrounded by a few lanky, kibitzing voc-ed type pupils, interminably twiddling dials on the classroom TV set in order to get the purple goatee off of Burl Ives. If my vision is correct, teachers should welcome technology with open arms -- or at least itchy fingers. It will destroy educational productivity, not enhance it. As matters now stand, however, friends of educational cable should be making an early peace with teacher organizations if they want to develop enthusiasm for innovation whose present unknowns cause extraordinary fears in teachers' lounges.

A third hurdle is organizational and structural. One of the great promises of cable is its copiousness: lots of channels; lots of consumer options on each channel over the course of a day and night. But who will decide what requests are to be honored? And until copiousness becomes a reality, who will decide what courses or modules will be featured? In any metropolitan area, there are dozens of competitors for educational emphasis. Is English more important than Math? History more important than Science? Fifth grade more important than 9th grade? Junior college more important than four-year college? Liberal Arts more important than vocational? Labor apprenticeship courses more important than BOCES courses? These allocative decisions call for a kind of cooperation among kinds and levels of educational institutions not always achieved in the past. What kind of educational organization and structure will be needed in each community to make sense out of competing educational demands and offerings?

Fourth, who will handle the distribution of packaged materials produced outside of a local community? Is this a State Education Department function? A commercial function? A Federal R & D function? A university consortium function? If the blind market is allowed to operate, who will gain and who will suffer? And what of copyrights and residuals--even for programs locally produced?

Finally, but not really finally, who will pay for the conveniences of educational cable, and at what rates? Through what collection devices? Will this development be entirely tax supported? Will user-fees be charged? Will cable be hooked into satellites, and on what basis of payment? Which levels of government will accept the major responsibility for front-loading and for operating costs? And on a cost-benefit basis, will cable actually turn out to be a better "mousetrap" than say, video cassettes or platters, or some simple and inexpensive device like a kodachrome slide projector synchronized with an audio-cassette?

Again, I raise these issues not to throw cold water. I believe that cable can have almost immediate beneficial consequences: for the sick and handicapped; for the dropouts and the adult learners; for helping the children of migrant workers; and for updating the knowledge and skills of preoccupied professionals.

But the full flowering of cable will not come until the entire infrastructure is examined carefully and until all of the necessary components are rationally considered and creatively synthesized.

If this conference can stimulate a realistic appraisal of what it will take to put all of the pieces together, it will have made a significant contribution to an exciting educational possibility.

REGENT EDWARD WARBURG:

I think you'll enjoy this next presentation because it is really a case history ... the relationship of a moderately-sized school district with an imaginative and helpful cable television operator. These gentlemen bring you a "nuts and bolts" experience.... They've labored hard to establish a cooperative working relationship which is beginning to confirm cable television's promise.

Let me introduce the participants in this unique industry-education effort. I think you'll see the relationship more clearly is I present them as a group. Also, as a group they present an excellent opportunity for dialogue.

First, let me introduce the man who has made this possible, Mr. Harry Calhoun. He is the general manager of U. S. Cablevision, a multiple system operator of the Colony Communication Company with offices in Poughkeepsie, New York. He is a prominent businessman from the neighboring town of Beacon, an electronics specialist, a former president of the Beacon Chamber of Commerce, a member of the Urban Renewal Agency, and a member of the Southern Dutchess Development Corporation.

With him is Mr. Robert W. Young. Mr. Young is the Superintendent of Wappingers Central School District, and the man who has taken administrative leadership in the area to explore the educational uses of cable television. Mr. Young is a former science and English teacher, guidance counselor, and school principal. He is a member of the editorial advisory board of Education Digest and is president of the Dutchess County Association of Chief School Officers.

Working closely with these gentlemen is Mr. Ted Sherman, department head of the Central Media and Libraries for the Wappingers Central School District. Mr. Sherman holds a degree from the State University of New York at New Paltz and is active in the New York Library Association, the School Librarians of Southeastern New York, and is on the board of directors of the Mid-Hudson Educational Communications Association and also the Dutchess County Chapter of the American Cancer Society. Mr. Sherman will act as a resource person on operational matters concerning cable television in the school.

Ladies and Gentlemen - here are Mr. Calhoun and Superintendent Young and the Wappingers School Story.

SUPERINTENDENT YOUNG:

Six years ago, as a superintendent in New Jersey, I approved the purchase of a closed circuit Sony outfit -- a camera, tape deck, and monitor. We had a lot of fun with it looking at each other and ourselves. We said all of the things that everyone says when he first gets his hands on this equipment: "we'll tape lectures, significant events, football, and even City Hall," never giving a thought as to whom it would be shown and how. I also told people that this is o.k. -- a portable, moveable, controllable teaching tool. This is how TV in school should be -- not more of the same thing the kids get at home, not the merciless time master of the commercial media -- but as a fancy recorder, more quickly usable than a movie projector -- great -- right on!

After four years of that kind of use, no one was standing in line waiting for the one district set, and the football coach had even discarded it and gone back to movies!

Wappingers Central School District was in this same fix two years ago. Now we have several closed circuit portables. We also have two weekly TV shows going out to the community. We also have cable drops to eight of our fourteen schools. We also have an elementary school with fifty rooms wired for closed circuitry or external feed. We are on the brink of programming to the community directly from this and other schools. We also are building a tape library. We are sharing cultural tapes with the community on a regular basis. We have adopted a community school program by board resolution, and the community sees board members, educators, students, community leaders on programs taped right from my office. These things are integral and have grown as one -- there is in fact, no other way. You cannot isolate the parts, pick and choose, and have a satisfactory experience.

How did we do it -- or rather, how are we doing it? Well, Mr. Sherman, my Media Department head, sauntered into my office one day and asked, "how would you like to make a TV program on the Old Oak Grove School?" The Old Oak Grove School is a one-room historical restoration which we also started two years ago. Mr. Sherman had already made himself known to Mr. Calhoun, general manager of the local CATV company and knew he could deliver.

The program did not win any emmies, but it succeeded. Now, while I was thinking about the value of direct communication with the public, Ted Sherman and Harry Calhoun were scheming to drop cable, to wire buildings, and were dreaming of a communications center in the school which would one day feed into the CATV Station -- allowing us to go all directions at any time.

The commercial sector, in this case represented by Mr. Calhoun, sees wider use of cable TV--advertising and all. The educators, Mr. Sherman and I, see the ultimate linkage between home and school

so long lost in the hugeness of modern America. This relationship between business and education is healthy, ethical, and productive of desirable societal goals.

In one year I made more than sixty half-hour shows. This fall I started with the football and cheerleader captains, the coaches, and a set of player equipment. The second Central View features the board president and the newest member chatting with me about education in general.

I tape leads for cultural tapes from the Bureau of Mass Communications and share the tapes with the public each week. We call it the Central Focus.

I will soon be able to present programs directly to students and staff via closed circuitry. We are developing a studio-communications center and have plans underway for student production-curriculum in all phases of production. We are also exploring CATV adult education, and the external degree.

What does it take? A willing board of directors and I have one. They like to be on the media and they understand modern technology. A local company with vision -- like Mr. Calhoun's. A media man like Sherman who can visualize a dormant tool as a "sleeping giant," and a willing school executive who recognizes the horsepower around him.

The Gayhead School was wired for $400 with donations of leftover material, time, and the energy of people in the cable company; with many PTA workers following instructions and donating work and old TV sets; and with administrators and staff giving a Saturday to guide the project. Fifty rooms were wired for $400, ladies and gentlemen.

What does it mean to education's future? If I were a young man, I would go into CATV, because it's coming on and coming on fast. The technology will be no more difficult to understand than the telephone once was. It can tie the community and its institutions together. No, you can't plunge in. There is a laborious process of learning by experience. Eventually, handling the equipment and appearing before it is done with ease and facility. It takes about thirty shows before, strangely, it gets to be fun. After that you can begin to successfully lead others into it and commit it to new uses.

Sherman can do everything like the pros -- fade-in and fade-outs, split screens, superimposing, etc. I feel like Dick Cavett interviewing guests -- a real ham, I suppose. But most importantly, the people are getting to understand us -- and their schools.

I recommend that you, as we did, get in touch with Dr. Cooper of the Bureau of Mass Communications, who can help advise you as you begin. His department has been invaluable to our development. Most of all, I advise you to begin. The potential is overwhelming, the rewards are fantastic, and undoubtedly some are yet to be discovered.

Mr. Calhoun's remarks were mainly those of discussion and reaction. He, Superintendent Young, and Mr. Ted Sherman examined the Wappingers Falls experience in response to questions and reactions from the conferences. They had prepared a brochure which summarized the cable system's cooperative venture with the school. The brochure is reproduced for its unique story.

The Wappingers Falls Cable TV Story

by Dr. Robert W. Young,
Theodore Sherman, and
Harry Calhoun

The Wappingers Falls Cable TV story began some two years ago. At that time the Wappingers Central School district, consisting of 14 schools serving 14,000 pupils and covering 110 square miles, owned one video tape recorder, one camera, and one monitor. It is not surprising to learn that video's chief use at that time was as a motivational tool for class plays or projects and as a toy. There had been no real direction in the uses of video as an educational tool.

In late 1971 the Wappingers Central School District attempted to provide some publicity about the restoration of a one room schoolhouse within the district. The usual newspaper and radio releases were used, but Mr. Ted Sherman, the Wappingers AV man, decided to investigate Cable TV. There was a local channel mostly filled with weather information. Could some use be made of this new, practically dormant media channel? Mr. Sherman viewed it as a sleeping giant, and he contacted the General Manager, Mr. Harry Calhoun.

Although there were two cable companies within the Wappingers Central School District, both systems had common ownership and management. Mr. Calhoun agreed that if the school people would produce a video tape program, it would be played on the local channel of both systems so that most people within the school district would have the opportunity to view it. It was also agreed that if the project went well this budding alliance should produce more education programs.

Cablevision offered the use of its very limited studio facilities and volunteered to have its personnel assist in production to show what could be done with very modest equipment. Modest equipment? Yes - a couple of random interlace cameras, no decent switching or fading, but tricks borrowed from the book used by commercial broadcast stations circa 1935. All these things in a 10 x 14 basement "studio." Surprisingly enough, this team was successful on many levels. Things that could be done with the school's equipment were learned. The public responded to the programming, and the new venture was off to a start looking for more and better programs.

At this point in time it was felt that TV should be available in the schools. Cablevision agreed to provide a free drop to each school that the lines could reach, and the Superintendent of Schools, Dr. Robert W. Young, authorized the expenditure for wiring at least three locations within each school. The cablevision people agreed to sell the school any materials that they could supply at their cost, and they also offered technical assistance in the design and installation of facilities for as many schools as could be equipped. With this feeling of security Mr. Sherman was ready to take the next step. Knowing that he had the support of the Superintendent and the experts to guide him, he decided to try to wire one school completely, with the hope that if this were

successful he could wire every school in the district. Faced with the same budget problems as exist in every district, Mr. Sherman decided to involve the public and to attempt to wire these schools with as small an expenditure as possible.

It was determined that a very active PTA group existed at the Gayhead School, a large elementary building in the district. This school was chosen as the first project school. Through the principal, contact was made with the PTA who agreed that if the AV Department would wire the school they would purchase, from fund raising, the necessary video equipment to insure the use of the wiring supplied by the school district. The fact is, that in addition to purchasing the video equipment the PTA members also donated the necessary labor to wire the entire school. On Saturday morning, before 8 A.M., not only the principal, teachers and parents, but the cable people, who also donated their time, appeared as a willing work party, complete with dungarees. The cable company brought blue prints, specialized tools and knowledge; the school district supplied all of the rest, thanks to PTA. Before the day was over, working together, the team wired the entire fifty room school, installing an outlet in every room. The "system" was tested and found operative. A plea was then made to all of the parents to donate their used and broken television sets to Gayhead School. Within two weeks sixty sets were donated to the school. Some of them were inoperative, but these were used for parts to repair other sets that had only superficial troubles. These repairs were made by the school district's AV Department. The Gayhead PTA had also collected a fund of $100 to repair the TV sets that they felt were worth repairing.

During the installation five extra cable lines were drawn from the Cafetorium to the Library which was to be the distribution center for the school. The RF modulator required to do this was donated by the cablevision company. The modulator was one found inadquate for commercial use yet perfect for the needs of this one school.

Simultaneously with the wiring of the schools (eight out of fourteen are wired with a drop) the Superintendent of Schools and the Board of Education had made the Wappingers Central School District a community school. It became even more important at this stage to communicate with the public and to gain as much feed back as possible in order to make the community school concept successful. Mr. Sherman, the Media Department Head, aware of the tremendous library of educational tapes available through the Bureau of Mass Communications in the State Education Department, suggested that the school use some of these programs as cultural offerings to the community. The topics available cover a wide range of subjects of interest to entire communities. Programs were chosen very carefully with the help of Dr. Bernarr Cooper, Director of the Bureau, to establish educationally sound programming, legality of presentation and credit protocol. Dr. Young consented to video tape brief opening remarks prior to each state supplied program. In this manner, it was possible to tie general program matter to local situations and needs, and provide a means for school district leaders to communicate directly with the public on local matters. A sample of some of the local opening remarks by Dr. Young goes like this:

"Welcome to Central Focus presented by your community schools in cooperation with the Mass Communication Bureau of the State Education Department. I am Bob Young, Superintendent of the Wappingers Central Schools. The State Education Department makes educational programs available to us and we are building our own TV tape library. This program will be shown to our students. We want you to know what we do in the school, and we want to share the program with you for your own enjoyment.

"Today's program is about pollution in our rivers. It has meaning for us in the Hudson Valley, etc.

"Now for the program: I hope you enjoy it."

Thus, Dr. Young gets five minute lead time, and often throws in budget problems, squelches rumors, promotes the community school concept and other related items. Sometimes he says, "and we want to share the program with you for your own enjoyment. Today I have with me Mr. John Smith, President of the Board of Education, who will introduce our program, John?

The cablevision company included in their advertising budget promotional spots in local newspapers. This, along with school district publicity releases and announcements on cablevision weather scan made the public aware of the offerings that were available.

The district has now increased to two programs weekly. Each Thursday there is a half hour "Central View," and each Monday evening the cultural program, which was named the "Central Focus." As expertise was gained through the leads and tapes from the cultural programs, the team became more at ease and learned to do a full half hour "Central View" with professional facility. It usually takes two or three hours to video tape two half hour "Central Views" and several leads to the Central Focus can be taped in an hour. Educational shop talk is featured and Dr. Young chairs as the emcee. He has guest teachers, students, administrators, board members and community figures. He can communicate with over thirty thousand people for an investment of about an hour and a half per week. This has come about because of a smart and able businessman, a go-getting media man and the desire of a superintendent to innovate. A lot more is involved now. The team is getting set for closed circuitry in the fourteen schools of the district.

The first school, the Gayhead School, has been engineered for the following capabilities:

a. Off air programming, both commercial and educational, into any or all fifty classrooms simultaneously. This allows selection in individual classrooms of those programs of interest to that particular classroom. Guidelines have been drawn up by the principal and faculty to promote the use of this new service.

b. Live programming broadcast to every room in the school from various points in the school including the cafetorium. This

makes it possible not only for school officials to communicate directly with the students, but also to present special lessons taught by teachers with expertise in specialized areas using specialized equipment not generally available and allows visiting lecturers to be seen by the entire student body.

c. Student productions and participation in the operation of the equipment.

d. The ability to video tape anything presented in the school system for future use in any other school, classroom, or any other facility as well as presentation to the public on cablevision's facilities if the subject matter is deemed acceptable, either as Dr. Young's program or any other program of interest.

e. Seasonal or high demand films to all classrooms at one showing, allowing the film to move to the next school with minimum delay. Although District film techniques are still primitive, the AV Department may be able to obtain a film chain which will allow the presentation of films flawlessly.

In the future the Department hopes to have some means of linking a school district owned and operated production or reproduction facility (possibly the setup which exists at Gayhead) directly into cablevision facilities to provide a link to other schools in the district and/or the public as desired. The cable operator, the AV man and the superintendent are presently exploring the following:

1. Offering an external degree program with the State Education Department via CATV to the residents of the community, including exploration of all avenues of funding toward these goals.

2. The possibility of offering occupational awareness guidance programs to students and non-students alike.

3. With the guidance and cooperation of the Regents Bureau of Mass Communications the team would like to consider offering media curriculum to the high school students. They hope to develop a program of various courses acceptable to the State with the possibility of it being incorporated in the State curriculum. They would hope to have a program funded that would allow them to teach TV production, script writing, photographics, graphics, journalism, recording. As part of this programming one of the courses could allow students, under school auspices, to offer to the community school studio facilities for further reproduction over local cablevision facilities. This would help to fulfill the obligation that the cable company and the local educators feel toward the community and enable the students to gain experience by actually broadcasting in cooperation with a real studio.

Many things that have been accomplished would not have been possible without communication and cooperation between the school district and the cable company, and the willing assistance and expertise of Dr. Cooper. There has been a sincere feeling of trust and warmth between the district and the cable company. The three-man team feels that it is making strides forward and creating something that is unique in the State. They take pride in their relationship and accomplishments. This is perhaps the most important factor in what makes them strive to make things work.

Neither the school nor the cable company has excess monies to spend on what might be considered a frill. They have accomplished everything with donations of energy and materials, coupled with the desire to make things happen and keep expenditures down. A good example of making things happen occurred recently in one of the district's junior high schools. The cable company was willing to give the school a drop, but an underground connection was necessary. Normally, this would have entailed considerable expense which could have prohibited the project. The problem was solved by using the school district's maintenance people to open and close a trench and utilizing cable supplied by the cable company at no charge because it was the end of the roll, too short to be used in normal cable construction. If you can achieve this kind of cooperation with your cablevision company, good things can be made to happen in your school district. Why not give it a try? The Wappingers Central School District has ventured into a new area that has been considered cost prohibitive in the past. Through desire, ingenuity and sincere desire a dream is being realized. Educationally, all the principles in the textbooks have been applied; the school as a community center, the P.T.A. as it should be, the school and the business community as partners; the involvement of students, teachers, administrators in curriculum projects; the use of agencies such as the State Education Department; and modern communication. These forces combine to strengthen the school in its community. Mr. Sherman was right -- the dormant channel was a sleeping giant.

The third clinic concerned itself with:

New York State Educational Materials for CATV Use.

This clinic was chaired by Gordon M. Ambach, Executive Deputy Commissioner, New York State Education Department. The clinic presented examples of the more than 1400 titles that are available from the Department's video tape materials.

Following the preliminary remarks by the chairman, a sampling of materials was demonstrated, and comments from the conference participants were solicited. The discussants joining the chairman were:

Bernarr Cooper, Chief
Bureau of Mass Communications

William Hetzer, Associate
Bureau of Mass Communications

GORDON M. AMBACH
EXECUTIVE DEPUTY COMMISSIONER:

Ladies and Gentlemen, it is my great pleasure to welcome you to this session -- New York State Educational Materials for CATV Use.

As you can see by the array of television sets, we are prepared to "turn on" in this session. Our focus is educational materials. The best way for you to learn about them is to see them.

At the conclusion of the Rand report by Walter Baer on cable television, which is available at this conference, you will find an interesting quote from Henry David Thoreau. In 1849, Thoreau said, "Our inventions are wont to be pretty toys, which distract our attention from serious things. They are but improved means to an unimproved end, an end which was already too easy to arrive at. We are in great haste to construct a magnetic telegraph from Maine to Texas, but Maine and Texas, it may be, have nothing important to communicate."

The challenge to us is that this magnificant technology, CATV, with its great potential, is not a toy of invention as Thoreau commented in 1849, but a media through which we can communicate what is important.

At this point, our focus on CATV is very often directed at the initial capital investment to establish a system. Of equal importance, however, is the continuing consideration of finding the resource -- the funds, the talent, the ideas -- that are essential to providing the substance of communication. CATV brings channels in multiples of twenty. Ten hours of programming per channel per day means 200 hours of programming per day, or 72,800 hours of programming per year. The task of programming on that magnitude is awesome.

Where is the material to be found or produced? In the State Education Department, for more than ten years, the Bureau of Mass Communications has been creating materials that educators and learners have requested. We would like to share some of these materials with you. We believe that they are worthy of consideration by your community.

The materials you will see are only samples and segments of much more extensive items. All of these materials may be procured through local schools or school systems or local colleges and universities. Educational agencies will arrange for the ordering and community use of the materials through the State Education Department. All that is required is the access channel dedicated to the educational uses and needs of the community served by a CATV system.

(Cassette Shown)

Dr. Cooper, Mr. Hetzer, and I now invite any questions you might have about these materials.

The clinic concluded with a discussion of the materials which were viewed. The conferees were informed that a catalog of materials is available from the Department and may be requested through the Bureau of Mass Communications. All materials may be ordered by a school district or an educational institution for use via cable. Directions for ordering the materials are in the catalog.

Closing Remarks

CHAIRMAN JOSEPH MCGOVERN:

Ladies and gentlemen, welcome to our closing general session of the Regents New York State Cable Television Conference.

We will have a final period for discussion and questions following the remarks of our last speaker.

It is our pleasure now to close this conference with an address by The Honorable H. Rex Lee, Commissioner of the Federal Communications Commission.

For those of you who are anxious about "blue sky theories" issued by remote government offices, I think we can safely say that Commissioner Lee has long had his feet firmly on the ground. Born and educated in Idaho, his early years were spent with the Department of Agriculture as an economist,and with the University of Idaho Extension Service.

During the war years he served as head of the Relocation and Evacuee Property Divisions of the War Relocation Authority.

In 1946, H. Rex Lee became Assistant Director of the U. S. Office of Territories. In this capacity, he had responsibility for the Department of Interior's development work in Alaska, the Caribbean, and the Pacific Islands. He was active in early campaigns for statehood for Alaska and Hawaii and for the transfer of the Pacific Islands to civilian jurisdiction.

He served as a consultant on refugee problems to the United Nations. He was Deputy Commissioner of the Bureau of Indian Affairs. For six years he was Governor of American Samoa and received "The Award of the President of the United States for Distinguished Federal Civilian Service" for his work there. While in Samoa, he was instrumental in the establishment of an innovative educational television system which received worldwide recognition. Because of that work, President Lyndon Johnson appointed him to the Federal Communications Commission in 1968. Mr. Lee serves as the Commission's Educational Commissioner, and is well qualified to foresee "Cable Television Uses and Promises for the Future."

Ladies and Gentlemen, the Honorable H. Rex Lee.

COMMISSIONER H. REX LEE:

Cable Television's Uses -- Promises For The Future

I'm delighted to be with you today. This is an important gathering and one that carries with it many long-term implications. I believe I'm correct in saying that New York is the first state where the State Regents had the foresight to convene such a cable conference.

I'm sorry a Commission meeting this morning in Washington prevented my attending your earlier sessions. Over the years I've kept a watchful eye on cable TV issues in New York, and I'm impressed by your commitment to and enthusiasm for cable. But commitment and enthusiasm are not enough to insure that cable will play a significant role in the educational and cultural life of your state. To do this you must be prepared on both the state and local levels to make your views known -- and to be able to support those views with facts and solid, purposeful planning. For without a thorough understanding of cable television, you will certainly miss out on the opportunities to utilize this new technology. And that's the only promise I can make you this afternoon.

In saying that, I am reminded of the story of the linquistics teacher who, having shelled out nine hundred dollars for a mynah bird guaranteed to speak five different languages, gave instructions to the pet shop to have the bird delivered to his house that afternoon. When he arrived home, he was eager to discover whether the bird had arrived. Indeed it had. "And where is he?" said the teacher, "In the oven," his wife replied. "You're kidding me, "yelled the professor, "why that bird speaks five different languages." "Well," replied his wife, "why didn't he speak up?"

Before educators get roasted and effectively lose access to cable, it is imperative that you speak up. By that I don't necessarily mean for you to be more vocal. I certainly can't fault you for that. If the educators had not come forward in such numbers at rulemaking time, the cable rules would not have been as liberal as they are.

No, the time has come for the educators to move beyond the rhetoric of cable into the arena of cable planning and implementation. The short history of educational technology is replete with many examples of their failure to do this. Usually a small group of persons will get on the technology bandwagon and trumpet the new heralded devices as the panacea for our educational ills. But reality sets in, and the results, as you know, are not encouraging. The invention of papyrus no more improved education in the Syracuse of old than cable will in Syracuse, New York -- unless one knows what he is going to do with the distribution service. It is pointless to wallow in the pond of idle speculation about future uses of cable, unless one is prepared to work within the economic, regulatory, technical, and social environment of the technology.

Many educators do not appear ready to do this. They would still rather debate the pros and cons of our rules than to buckle down to the awesome task before them. The Commission adopted its cable rules after years of debate, volumes of filings, and more meetings than I care to remember. We heard one cable operator after another deliver his or her sales pitch about the unlimited public service and educational benefits cable could bring if only we would give them distant signals. And the educators were equally adept at delivering good sales pitches about what they could do for our schools and communities if only we would give them enough free channels for instruction. The position of the educators wasn't too surprising, given the promises made by the cable entrepreneurs.

The Commission rightfully recognized there was some merit to both pleadings. Some of us who had a greater belief in the educational potential of cable argued long and hard to have free channels set aside for educational, public, and governmental use.

In the end we arrived at what I feel was a reasonable consensus -- given the diverse views. But that is not to say our belief in the commitment of the cable operator to enthusiastically support these important services, nor our belief in the ability of the educators to utilize these channels has or will be vindicated. Too many educators have sought multiple channels with no programming in mind, and too many cable operators have simply offered channels to school superintendents and then hoped never to hear from the schools again.

I recognize many of our requirements do not satisfy all the educators. Many of you feel our educational provisions do not go far enough. More dedicated channels, most say more free channels, must be set aside for educational use.

Many suppose that if we had reserved more than one free educational channel the school authorities would more likely use the channels. I don't believe the utilization of the educational channels is going to be inhibited by our restrictions on the number of free channels.

First, it must be recognized that the Commission has assured the educational community and the franchising authorities that we will permit the designation of more than one free educational channel <u>if</u>, and only <u>if</u>, you can show during the certificating process that these additionsl channels are necessary and capable of being used according to an existing and viable plan. And that these additional channels will not jeopardize the economic viability of the system.

Last month the Commission considered the first rule waiver request of this kind. We approved several California franchises, granted prior to the effective date of our rules. These certificates of compliance involved communities which decided to designate four channels for local educational purposes on <u>each</u> cable system. The franchising ordinances requiring these extra access channels were developed by the cable company, and a joint committee composed of representatives of the communities and local educational authorities. The Commission in approving these channels said it was reluctant to (quote) "substitute its judgment for

that of all interested parties, and it was desirable to allow a reasonable opportunity to experiment." I think it is clear the Commission will continue to make this kind of reasoned judgment if the communities can make similar appropriate showings that additional educational channels are necessary and feasible.

Of course, the principal reason why our rules will not inhibit you is that any educational authority, school system, or group can lease as many channels as they wish.

Finally, because we have included an "N plus one formula" which requires that the cable operator make additional channels available when all the other channels are being utilized over a specified period of time, there will always be channels available when you need them.

No, the inhibiting factor will not be the number of channels; rather, it will be the educational system itself.

Study after study, report after report has stressed this basic fact of life. Last year the Carnegie Commission paper, "The Fourth Revolution," emphasized this dismal picture. It found that the experience thus far with the new technology, in contrast to the hopes of its early supporters, indicated that it is (1) coming along more slowly, (2) costing more money, and (3) adding to rather than replacing or reforming educational methods. The recent report by your state Legislative Commission on Expenditure Review found the use of classroom television in New York (to quote) "is still viewed largely as a fad, luxury, or frill. It has not significantly altered the traditional teacher-textbook instruction techniques." Your state is not alone in receiving gentle criticism of that kind. Forty-nine other states are in the same boat. There are hundreds of school systems which have invested in expensive television equipment. But they have used these facilities simply as an adjunct to existing curricula and teaching methods -- much like a movie or slide projector. Then what happens at the first sign of budget problems is not too surprising -- the television facilities are the first to go.

But New York does have the exciting opportunity of changing from a (to quote) "victim of its own potential," as the Legislative Commission found, to a "recipient of its own potential." The facilities, plans, and personnel for doing so are in your own backyard. The introduction of cable, coupled with your experimental plans on the ATS-F and the CTS satellites, can easily serve as the impetus for far-reaching advances in improving "the joy of learning." Your commitment to a development of the external degree program and the open-university concept puts you in a more advanced stage than almost any other state.

This places the additional burden on you for delivering something to show for your efforts. Thus, you shouldn't waste your time discussing what might be done with cable, or arguing over whether 20% or 30% of the system's channels should be reserved for educational access. Rather, you should now plan for the orderly integration of cable into your educational framework. This will necessitate your fitting cable into the already existing matrix of education TV and radio, ITFS, microwave

services, and, of course, satellites. It will mean sharing your programming and personnel resources, and coordinating planning on the local, state, and Federal levels.

One must also not lose sight of the fact that cable systems are merely pieces of hardware. Unless there is programming available and support for that programming, cable TV will be no more than a wire which runs down your street to your home carrying only broadcast signals.

Although it is most important to insure that well-planned franchises are granted in your communities and that you are able to interface all systems throughout the state, don't forget to look beyond the mere signing of that franchise.

That franchise should be the beginning of your work and certainly not the end. Once the channel (or channels) are set aside for your use, you must be prepared to use them. Neither the Commission nor the cable operators are going to look favorably upon the educational establishment if those dedicated channels lie fallow. For as we stated in our rules, the free use of the educational channels for five years is designed to encourage innovation in the uses of cable TV. After this developmental period the FCC intends to determine in consultation with state and local authorities whether to expand or curtail the free use of channels or to continue the developmental period. I would be less than candid if I didn't tell you that when the cable consensus was arrived at, many people were willing to bet these education channels in many communities would remain unused at the end of the five-year period.

I hope the message is clear to the educators and other public citizens. If the educational community does not effectively use the channels within the next few years, it's going to be difficult for the Commission to retain any free dedicated channels -- let alone expand that number. (It may even be difficult to assure a ready supply of channels.) For breathing hard down your neck will be program suppliers, sports interests, computer and banking services, among others -- all competing for a more prominent role. A role, I might add, which will become increasingly important and necessary for a source of cable revenue during this period of high money rates, inflation, and an uncertain economy. And though the term conjures up all sorts of ugly connotations, it should be recognized that we are basically subsidizing education through our cable scheme. I, personally, find nothing wrong in doing this (as a matter of fact, I would do more) -- especially when you look at other types of Federal subsidy programs -- but subsidies sometimes suffer from quick deaths if their contribution to the public good cannot be clearly established.

I don't mean to say the future of cable public service is solely up to you. It is time for the cable operators to help you. It is my hope the cable operators will make a greater effort to involve the citizens in the planning and development of this technology. In the past they have not done so to any great extent. All too often the various groups in the community are sought out when the operator is bidding for

a franchise, but as soon as the franchise is received, those groups and individuals are not faced with open arms but with closed doors. So if I have one word of advice for the cable operators it would be to encourage the community to get involved with cable operations -- to help the city to utilize the government channel, to encourage individuals to use the public access channel through promoting or organizing and working with advisory councils; and to help the educators to share your vast cable resources and knowledge. In this way members of your community will become your best cable promoters. And you'll become indispensable to the community. There's no better advertising than that.

This is good business practice, plain and simple. New technologies such as lasers, fibre optics, and possibly direct satellite broadcasting will someday be competing with cable television. If cable has not by that time both established its foothold and rendered maximum performance for the community, it can hardly expect continued public and regulatory support.

The growth and development of cable requires the citizens, public and private institutions, franchising authorities, and cable operators to work closely with one another. Cable TV does hold the promise of reforming, improving, and hopefully lending some economy to our educational process. But it will remain only that, a mere promise, until the technology itself is harnessed for humanistic learning purposes. Only then will the vast benefits of the technology be realized, including that long elusive goal of equal educational opportunity.