A PRELIMINARY ANALYSIS OF CABLE TELEVISION ITS IMPACT ON MICHIGAN WITH ALTERNATIVES FOR LEGISLATION

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ABSTRACT

A PRELIMINARY ANALYSIS OF CABLE TELEVISION,
ITS IMPACT ON MICHIGAN
WITH ALTERNATIVES FOR LEGISLATION

By

Lawrence D. Thompson

Cable television began some 20 years ago with the simple purpose of providing broadcast signals, but today's cable system has evolved into a highly complex entity. The new unit, the modern cable and broadband communication system, can carry thirty to fifty television channels, fifty audio signals and hundreds of digital data channels for computers, teletypes, or alarm signals. It is apparent that the enormous two-way and interactive capacity of the cable communication system is just beginning exploration.

Cable can thusly become an increasingly significant factor in our lives. It will significantly affect the social, economic, cultural, educational and recreational aspects of our environment. But there are great risks in cable development--of technological obsolescence, financial insolvency, consumer disinterest.

A general background of cable television in Chapter I and the current state of cable in Michigan in Chapter II provides a basis for the remainder of the report.

Chapter III attempts to convey a sense of the tremendous possibilities of the medium. Chapter IV discusses the very great financial and political uncertainties and problems for cable's future in Michigan. Chapter V outlines governmental framework for cable systems in the states and discusses a number of alternatives toward cable.

The report concentrates particularly on cable television systems in Michigan--the pioneer comprehensive report on cable communications for the state. It specifically treats the following items:

(1) Cable system operation in the state as regards ownership, location, penetration, number of subscribers, rates, advertising, franchises and their duration, community fees, number of channels and public access and origination.

(2) Issues and problems concerning cable communications and cable television systems in the state.

(3) Cable services presently provided in Michigan and those potential services under consideration for the future.

(4) Growth potential for cable systems in Michigan.

(5) Currently existing and probably future problems arising in relations between federal, state and local governments.

In January through March, 1974, a survey was conducted by the Joint Legislative Cable Television Study Committee[1]

(JLCTSC) of all operating cable television systems in the state of Michigan. The survey consisted of two separate parts.

Part I consisted of a questionnaire sent to each municipality and township in the state where a cable system was operating and to those municipalities and townships that were considering the cable question. There were 223 responses.

Part II consisted of a similar questionnaire sent to the operators of cable systems in the state. Where questionnaires were not returned, telephone interviews were utilized, rendering a completed questionnaire for all 68 current systems in the state.

These questionnaires provide the basic information contained in this report. A major point to consider is that the information has been provided by the municipalities, townships and cable system operators and cannot be verified as accurate. It is an estimate then--a very good estimate--of the cable television situation in Michigan as it exists in March, 1974.

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[1] "Senate Concurrent Resolution #108 of 1973" originally set up Committee. "Senate Concurrent Resolution #272 of 1974 renewed it.

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A THESIS

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Accepted by the faculty of the Department of Television and Radio, College of Communication Arts, Michigan State University, in partial fulfillment of the requirements for the Master of Arts degree.

Director of Thesis

To my mother and father who gave me the desire for education and to Linda who saw me through the completion of this project.

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CHAPTER I

ORIGIN AND GROWTH OF CABLE TELEVISION

Cable TV--Its Function

Although today's cable systems make the early systems seem primitive by comparison, the basic function remains. A cable system places special antennas on a tower in or near the community to be served. If signals are too weak to be picked up off-the-air, the cable system may have these weak signals transmitted to his tower and antenna via microwave relay.

The antenna collects signals, then sends them to the "headend". The headend contains equipment designed to eliminate interference and convert some broadcast TV signals to unused or open channels on the customer's television receiver. For example, this headend equipment will convert a UHF channel so that it can be received on an unused VHF channel on a viewer's TV set.

The next basic element of a CATV system is the coaxial cable or trunk line, which carries all the signals received and processed in the headend to the various distribution lines which serve individual neighborhoods and blocks.

The trunk line consists of the coaxial cable and amplifiers, which maintain the strength of the signals in the cable. Feeder lines carry the TV signals from the trunk line to the customer connections, called drops. A drop line carries the signals from the feeder lines to the customer's television set.

Having a cable connection installed is no more involved than having a telephone installed, even though the thin, insulated coaxial cable has 1,000 times the capacity of a simple telephone wire.[1]

United States Development

Cable television developed almost simultaneously in rural and hilly regions of Oregon and Pennsylvania where reception of signals from distant major market broadcast television was not readily accomplished by normal antenna systems.

These Community Antenna Television systems (CATV's) merely improved reception of existing broadcast television signals by reception with a carefully aimed antenna located on high ground and amplified and distributed the signal throughout the community (generally by coaxial cable).

The first cable systems were usually owned by local businessmen, who encountered minimal control of their activities. The Federal Communications Agency (FCC) chose

to exercise no authority over cable, and most local and state governments became involved during cable's first decade largely because cable operators needed permission to use public property and rights-of-way to lay their cables. The television broadcast industry likewise paid little attention to cable systems aside from vaguely endorsing them as a means of extending and increasing the size of their viewing audience.[2]

Despite the limited number of channels and services that could be provided, cable television spread rapidly throughout many small towns in the country. In 1952, there were some 70 operating cable systems with over 14,000 subscribers.[3] At the time there were approximately 100 TV stations operating in the United States serving only 3.4 million households.[4]

CATV grew rapidly through the 1950's. Householders otherwise unable to receive television signals directly over the air rapidly subscribed.

As the industry developed and technology expanded, headend antennas were located farther and farther from the communities they served. This necessitated the development of better coaxial cable and eventually the utilization of microwave transmission as a means of relaying signals to local cable systems. Through microwave relay transmission it became possible to import signals from markets located great distances from the community antenna.

Until the mid-1960's, cable systems primarily served rural communities in the United States, when further development through distant signal importation began to focus upon the urban population centers that constitute the major markets for broadcast television. This proved most significant in cable system development.

Among theories commonly advanced for the explosive growth of Cable TV, however, the following four tend to predominate:

(1) Cable improves quality of broadcast signals.

(2) Cable brings TV to smaller communities that would not have any TV due either to failure to support a TV station or lack of reception due to terrain.

(3) Cable systems provide, other than regular broadcast station signals, special nonbroadcast services such as--stock market reports, weather scans, local community calendars, news wires, pay cable, etc.

(4) The importation of distant signals augment signals already available in the community.

Questions of regulation of these new communication systems arose almost as soon as the first signals were received.

In 1948 the FCC curtailed (froze) the grant of further broadcast TV station licenses. This resulted from interference problems and need for revision of frequency

allocations stemming from initial misallocation of television frequencies by the FCC.

The license "freeze" lasted four years during which time the FCC avoided asserting jurisdiction over Cable TV. The FCC did not perceive cable television as a threat to broadcast television, and obversely, with the broadcasting industry, seemed to regard cable as a temporary supplemental service that would wither with development of UHF television. But over the years UHF failed to develop as anticipated and further, cable made inroads toward major market broadcast television.

The FCC strongly supported UHF to increase TV channels throughout the country. It maintained that UHF would provide each community with at least minimum service. UHF principally failed because:

(1) The UHF stations signals were relatively weaker than those of VHF.

(2) UHF stations had little access to national programming due to the absence of a fourth network.

(3) The difference between continuous tuners for UHF and clock-stop VHF tuning.

The FCC nonetheless maintained protection of UHF stations asserting it the best means to foster localism in television.

By 1955, both the Common Carrier and Broadcast Bureau of the FCC began to examine cable more seriously and considered treating it as a common carrier. The full Commission denied the common carrier designation, thereby rejecting jurisdiction and regarding cable television to be a minor issue. They maintained this policy until 1960.

In 1956, the FCC did attempt a weak regulatory measure by regulating radiation (interference from cable system's wires that could cause problems with telephone communications) thus acknowledging the existence of cable systems for the first time.

At that time there were 441 TV stations transmitting signals to nearly 40 million TV sets. Cable TV systems had grown to 500 with 350,000 subscribers. Most of the systems were centered in the Western half of the United States.[5]

During this period some states began to demonstrate interest in Cable TV involvement. California, in 1956, attempted to treat cable as a common carrier and place it under the jurisdiction of its Public Utility Commission, but such designation was denied by the California courts.

The Frontier Case[6] in 1958 brought the first formal rejection by the FCC of jurisdiction over Cable TV. Soon after this case, Congress began consideration and set hearings for a bill that would establish federal statutory jurisdiction over cable systems.[7] The legislative purpose

for the bill was perceived as an economic threat to major national markets for broadcast television.

Cognizant that Congress was in some manner about to act, the FCC established a study on cable television that disclosed it was not a serious economic threat to broadcast television stations.[8] By 1960 the Senate bill was defeated and the FCC still had no jurisdiction.

In this time span cable systems operators intensified their interest in major markets and urban communities. The practice of importing broadcast TV signals from distant markets to local communities was becoming popular and Cable TV began penetration of major population centers.

This resulted in the official recognition of Cable TV by the FCC in 1962. Following nearly 18 years of inaction, the FCC decided it had to take some action regarding cable and issued its first rules regulating Cable TV. The initial rules provided that microwave companies transmitting signals to cable companies were required to secure permission from the FCC for additional signals to be carried.

This rule, based on the decision in the Carter Mountain Case,[9] provided grounds for FCC control over Cable TV by regulating the microwave system that served the cable system. This administrative law remained in effect for nearly three years.

A number of hearings and studies of cable were conducted during this period regarding its effects on both UHF and VHF TV stations. The National Association of Broadcasters (NAB) commissioned a report that demonstrated Cable TV had a detrimental effect on UHF TV stations.

Two other events occurred in this period which affected the FCC's attitude toward cable television.

(1) In 1963, Connecticut enacted the first state CATV regulations.[10]

(2) The Supreme Court, in 1964, rejected the right of broadcasters to restrict CATV carriage on basis of exclusive contract.[11]

On the basis of its own reports and testimony from a series of hearings, the FCC established control of cable TV in 1965, issuing its First Report and Order, in which it asserted jurisdiction over microwave linked cable systems.[12]

Thus, virtually all systems importing distant signals came under the gambit of FCC control. The report contained three principle provisions:

(1) Cable systems using microwave relay had to carry all local stations.

(2) A 30-day non-duplication requirement was established. It provided a 15-day before and 15-day after "safety" period in which no cable system could present a program that had been previously presented on a local station, and

(3) Imposed a freeze upon microwave importation into top 100 markets.[13]

These three provisions served to retard cable system growth and can be understood as the beginning of the freeze on cable system signal importation the full force of which was manifest by further FCC action in 1968.

In 1966, only one year after its First Report and Order, the FCC rendered its Second Report and Order which broadened its jurisdiction to include all cable systems, despite microwave-link usage.[14] The FCC's jurisdictional ground was affirmed in Southwestern v. United States (392 US 157) which held the FCC's authority to regulate broadcasting extended reasonably to cable television because it was dependent on broadcasting for the television signals it carried.

From their beginning, cable systems denied copyright liability and refused to pay royalties to copyright owners. In the Fortnightly[15] litigation in late 1968, the Supreme Court supported this notion by ruling that cable television merely relayed a broadcast signal and did not constitute a "performance". The position was recently affirmed by the Supreme Court in CBS v. TelePrompTer.[16]

The FCC inaugurated a massive inquiry in 1968[17] to determine general policy for cable television which resulted in the "freeze" on cable development lasting nearly five years and terminating with the FCC's Third Report and Order.[18]

A principle concern of the FCC was its interest in the effects that cable might have on broadcasting. This suggests a mutual FCC-Broadcasting concern that providing a community with an abundance of new channels would cause a loss of viewers to all TV stations and would completely destroy UHF stations. This fear was never established and has been shown to be without validity.[19] However, the FCC cable rules, nonetheless, evolved as a series of compromises designed on one hand to protect the broadcast industry and on the other to give the cable industry a modest chance to achieve its potential.[20]

During the freeze years, the FCC issued two separate notices for proposed rule-making and held many different hearings on Cable TV.[21] The result of all this research was a policy formed by the FCC with regard to cable television which allowed a limited scope of Cable TV with protection of broadcasters.

In 1972, the Commission issued its current rules, the Third Report and Order,[22] together with comprehensive rules and regulations governing cable television. Although the rules permitted expansion of cable systems into major markets, they also contain restraints designed to limit the competitive threat to the existing broadcast industry and to stimulate the use of cable for non-broadcast services.

The rules remain plagued with jurisdictional problems similar to those initially apparent. Remaining unanswered questions include: the effect of multiple ownership in the media, development of new copyright legislation and restructions on distant signals.

Despite the solution of these problems it is certain that cable TV will have a profound effect on the broadcasting industry.

Cable enthusiasts estimate that by 1980, 30 million households (nearly 42% of all households) will subscribe to cable systems.

Systems currently in operation reach about 7.25 million homes, perhaps 225 million people--10.1% of the United States television-homes. There are a total of 3,650 systems serving 5,650 different communities. As of March 1, 1974, there were 1,765 systems franchised but not yet operating with 2,865 applications pending.[23]

The largest system in the United States (San Diego) has 74,199 subscribers and the smallest has less than 100. Pennsylvania has the greatest number of systems (280) and California the most subscribers (1,120,000).[24]

Michigan Development

Growth

Michigan currently ranks 8th in the United States in both number of subscribers and communities served.

Cable has grown to a sizeable industry in Michigan with operating Cable TV systems serving 186 Michigan Communities.[26]

The first systems in the state were built in Petoskey and Norway during 1954. Both systems are currently still in operation although they have been remodeled to keep up with the state of the art.

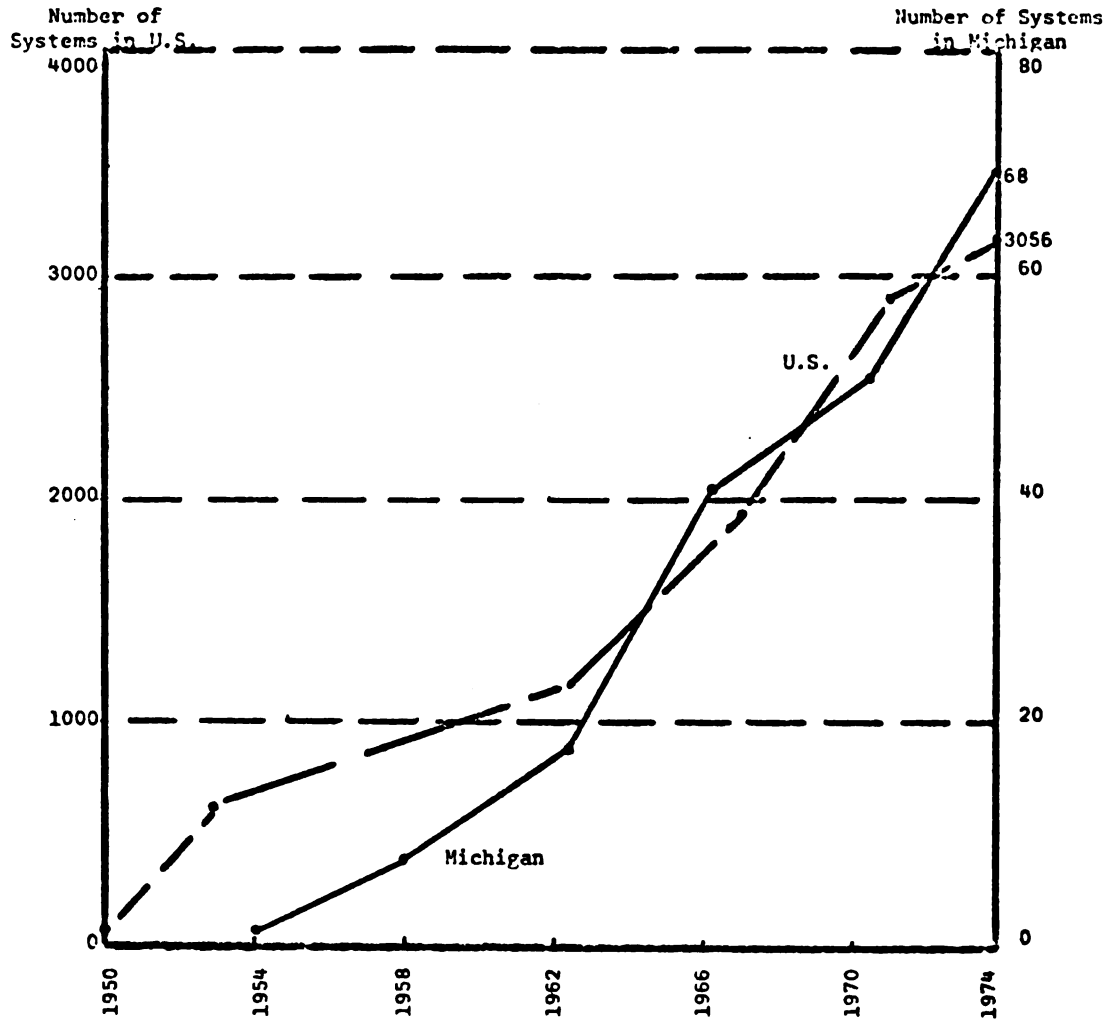
There is little doubt that cable systems will grow. From all indications, this pattern will continue and play an important part in Michigan's industrial and cultural expansion.

Michigan's pattern of growth is strikingly similar to that of the entire country (see Figure 1).

The growth rate of cable systems in the United States during the 1966 period was 19.9% while Michigan systems were expanding at a rate of 73.9% for the same time period. It is noteworthy that seventeen systems began operation in Michigan during 1966 alone (see Appendix D).

Michigan's growth rate has relaxed since 1966, but in the past three years it has been increasing at an average annual rate of 8.7% while increasing its subscribers by an average of 18.1% per year (see Appendices D and I).

This period of marked growth apparently results from the fact that systems are now operating in generally small and medium sized cities in Michigan and have not yet



Source: Data for United States from Cable Television Factbook.
Data for Michigan from Joint Legislative Cable Television Study Committee, March 1974
Also, see Appendix B

Some of the growth rate after 1965 is apparently due to the improved accuracy of reporting.

Figure 1. Growth in number of cable television systems--United States and Michigan.

approached the urban centers of population in the state (see Figure 2).

This trend should change rather drastically over the next two to three years as operation begins in three of the six largest communities in the state (see Figure 3).

This suggests a booming growth in the number of subscribers in the state and will certainly increase the total subscribership to well over 500,000 before 1977.

Cable systems in Michigan have approximately 208,048 subscribers who pay an average fee of $4.97 per month for cable services. This alone provides a yearly revenue of approximately $12.4 million. Combined with revenue from other sources and special services there is an indication of an estimated gross revenue to cable operators of over $15 million per year.

Ownership

An important aspect of cable television in Michigan is the pattern of ownership (see Figure 4). There has been an increase in the number of Multiple System Operators (MSO)--companies which own cable systems in more than one community.

Although national MSO's own only two systems (30.8% of Michigan's 68 systems), they serve 102,048 subscribers--nearly half of Michigan's total subscribers (see Appendix F).

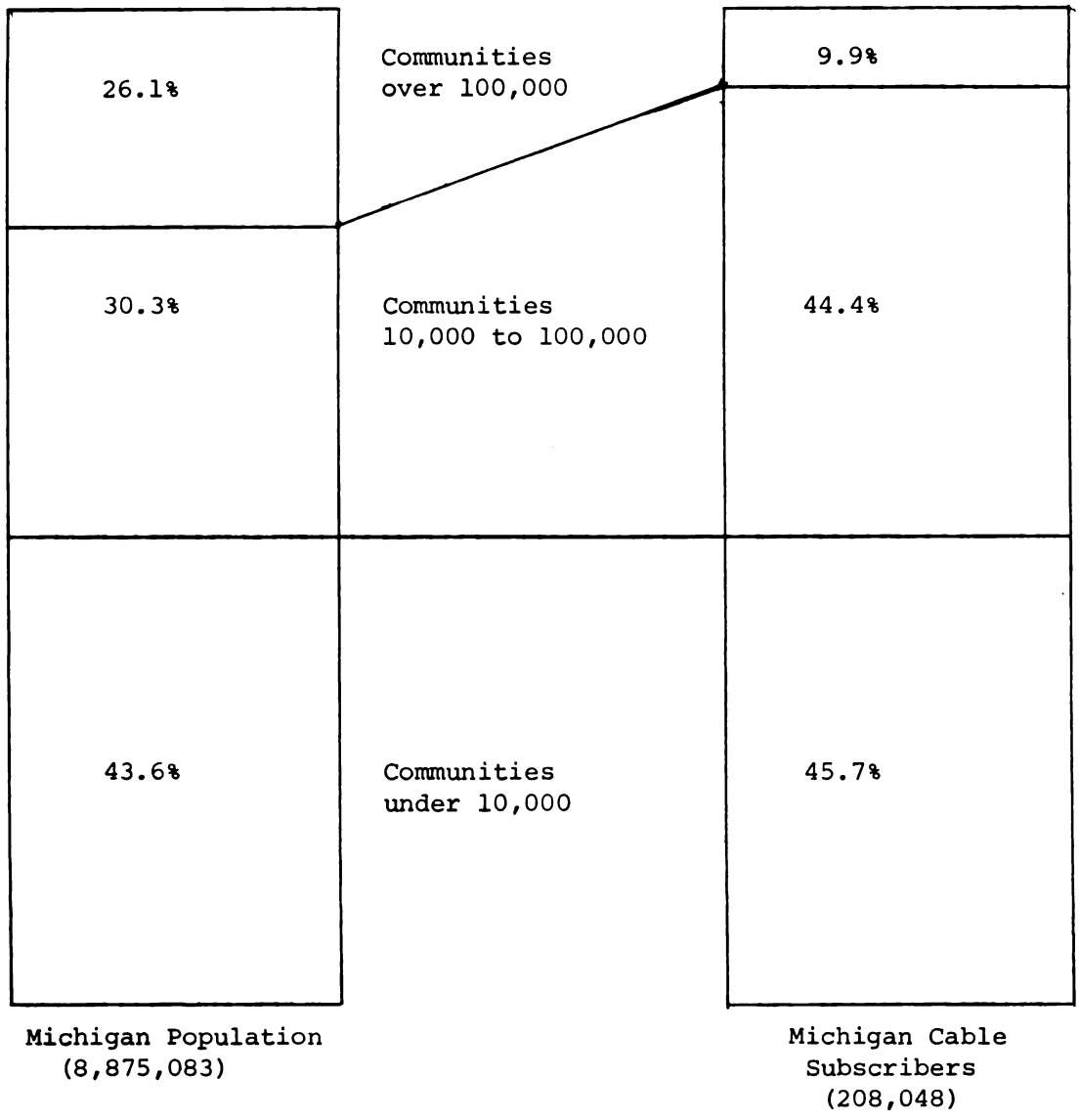
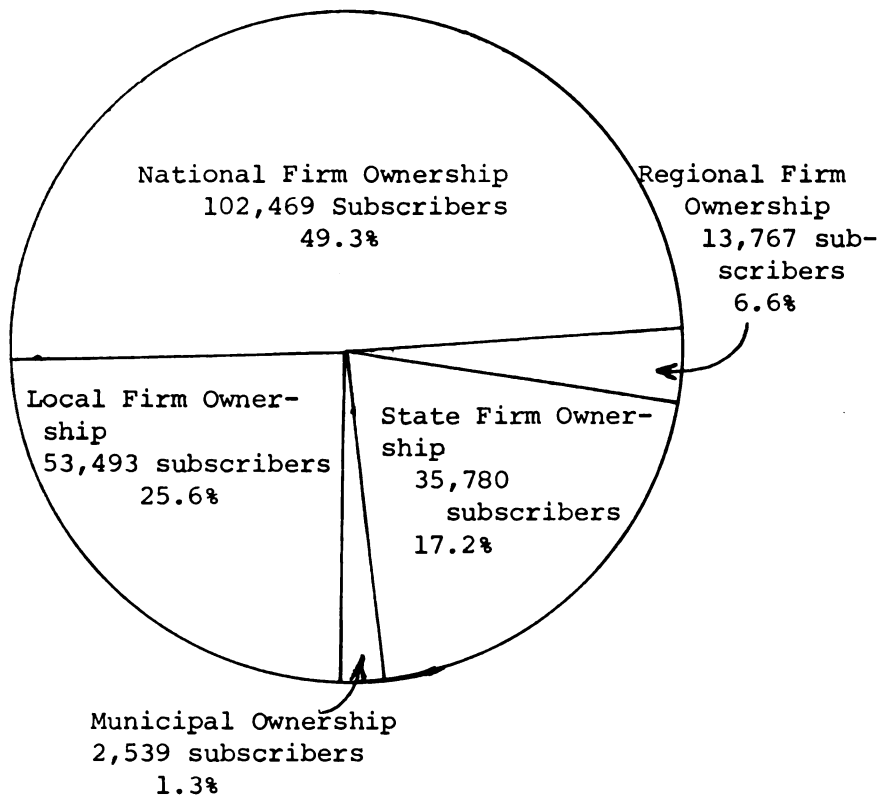


Figure 2. Distribution of cable systems in Michigan.

CITY	POPULATION	STATUS OF CABLE TV IN COMMUNITY
Detroit	1,513,601	Cable question still under investigation, economic feasibility.
Grand Rapids	197,649	Under construction.
Flint	193,317	Currently operating (largest system in Michigan with 21,000 subscribers).
Warren	179,260	Franchised, not under construction.
Lansing	131,546	Franchised, not under construction.
Ann Arbor	100,035	Currently operating (9,500 subscribers).
	2,315,408	

Figure 3. State of cable television in Michigan communities with population greater than 100,000.



Note: Based on 208,048 total subscribers.

Figure 4. Cable television system ownership in Michigan.

This pattern is not limited to Michigan alone. The top 50 MSO's in the United States (see Appendix E) account for 4,980,000 of the 7,250,000 subscribers--almost 68.6%.

Ownership trends in Michigan are beginning to shift. Some communities are seriously considering local and municipal ownership. Currently a bill pending before the Michigan State Legislature would grant the power to local communities to issue general revenue bonds to finance construction of cable systems.[27]

It is significant that Michigan currently leads the United States in number of municipally-owned systems with 3 of the 15 municipally-owned systems in the country.

CHAPTER II

CURRENT CABLE OPERATIONS IN MICHIGAN

Type and Number of Systems

There were 68 operating systems in Michigan as of March 1, 1974, all but eight of which are grandfathered systems (see Appendix C).

In order to achieve a consistency of data, the Joint Legislative Cable Television Study Committee (JLCTSC) considered a cable television system as being all communities served by the same headend. Therefore, a cable system can serve as little as one community or as many as seven or eight. The 68 systems in Michigan serve a total of 186 communities with franchises pending in approximately 20 others. The total number of subscribers, as reported earlier, is 208,048.

Type of Franchise Agreement

There were three major types of action taken by local authorities in granting authority to Cable TV operators. The two most widely used were the franchise (27.5%) and ordinance (31.3%) (see Figure 5). The combination of the

Type	Number	Percent
Franchise (FR)	50	27.5
Ordinance (ORD)	57	31.3
FR/ORD Combination	31	17.1
License (LIC)	6	3.3
Agreement (AG)	6	3.3
Resolution (RES)	4	2.2
Permit (PR)	6	3.3
Contract (CON)	4	2.2
FR/LIC Combination	4	2.2
ORD/LIC Combination	4	2.2
PER/ORD	2	1.1
Lease System with Michigan Bell	4	2.2
Service Agreement	1	0.5
Municipal Systems	3	1.6
	182*	100.0%

*Total affected by data on some systems not being included in questionnaire.

Figure 5. Types of local action taken by communities in Michigan in granting authority to cable television operators.

two (17.1%) proved to be the method used most frequently over the past three years.

Significantly, the two largest systems currently operating in Michigan (Flint and Kalamazoo) are among others operating without any grant of authority from their particular community. Both systems are presently engaged in a lease system with Michigan Bell but have no contract at all with the community.

Franchise Duration

A wide variation between communities concerning franchise duration was clearly evident. The range was from one year to an indefinite period with the average for the state being 12.2 years. (Not included in the average were the nine systems with indefinite franchise durations.) (See Figure 6.)

The most widely utilized franchise length was 10 years. Approximately 80% of the systems in the state utilize a franchise duration at or below 5 years, the figure recommended by the FCC in the Third Report and Order as the maximum that should be given after March 31, 1972.[27]

Subscriber Rates

The range of charges made to individual subscribers in Michigan vary significantly from one system to another.

Number of years in length	Number of systems	Percent
1	3	1.8
5	30	18.2
6	1	0.6
7	1	0.6
10	60	36.4
15	38	23.0
20	7	4.2
30	16	9.7
Indeg.	9	5.5
	165*	100.0%

*Data affected by information not being supplied on questionnaires.

Figure 6. Franchise durations of cable television systems in Michigan.

Subscriber rates usually involve three different charges--a basic installation charge, a monthly charge and a charge for any additional sets.

Installation charges are sometimes very misleading. As is the case in many United States communities, Michigan systems do not always charge an installation fee even though they all have one. Free or reduced hookups are common in Michigan as an inducement to subscribe. Therefore, the rates reflect the fee that could be charged rather than those actually charged.

The average listed installation fee in Michigan is $15.26, compared to a $14.00 United States average (see Appendix L). The range of charges run from a low of $5.50 in the Harbor Springs/Petoskey system to a high of $29.50 in the Alpena system with most falling between $10.00 to $15.00.

A monthly service charge is levied in all 186 communities in Michigan currently being served by Cable TV with a range in rates of $4.50 to $6.25. The Michigan average is $4.97 compared to a United States average of $5.09 (see Appendix L).

The final charge usually levied by a system operator is for additional sets. The maximum in Michigan for such service is $2.00, the low $.50 with an average for the state of $1.09.

These figures do not include the three municipally-owned systems in Michigan (see Appendix H) which have a high hookup fee and a low monthly charge.

Channels Available/Those Utilized

While early systems had the capacity for only 3 to 5 channels, newer systems are carrying 20 or more channels to be used for broadcast signals as well as certain other innovative services. These services have increased the probability that Cable TV systems can cope economically with their over-the-air counterparts.

Michigan system operators are not currently utilizing all the channels available to them. There are only 10 systems that currently have a potential capacity of 20 channels. All of these started operation after March 31, 1972 and are required to carry at least 20 channels by the FCC's Third Report and Order.

Concurrently there are 38 systems carrying 12 channels with the remaining 20 systems carrying less than 12 channels.

The average Michigan system has a maximum capacity of 14 channels although only currently utilizing 9.6 channels, a rise of 1.6 channels over the past year (see Appendix I).

Penetration

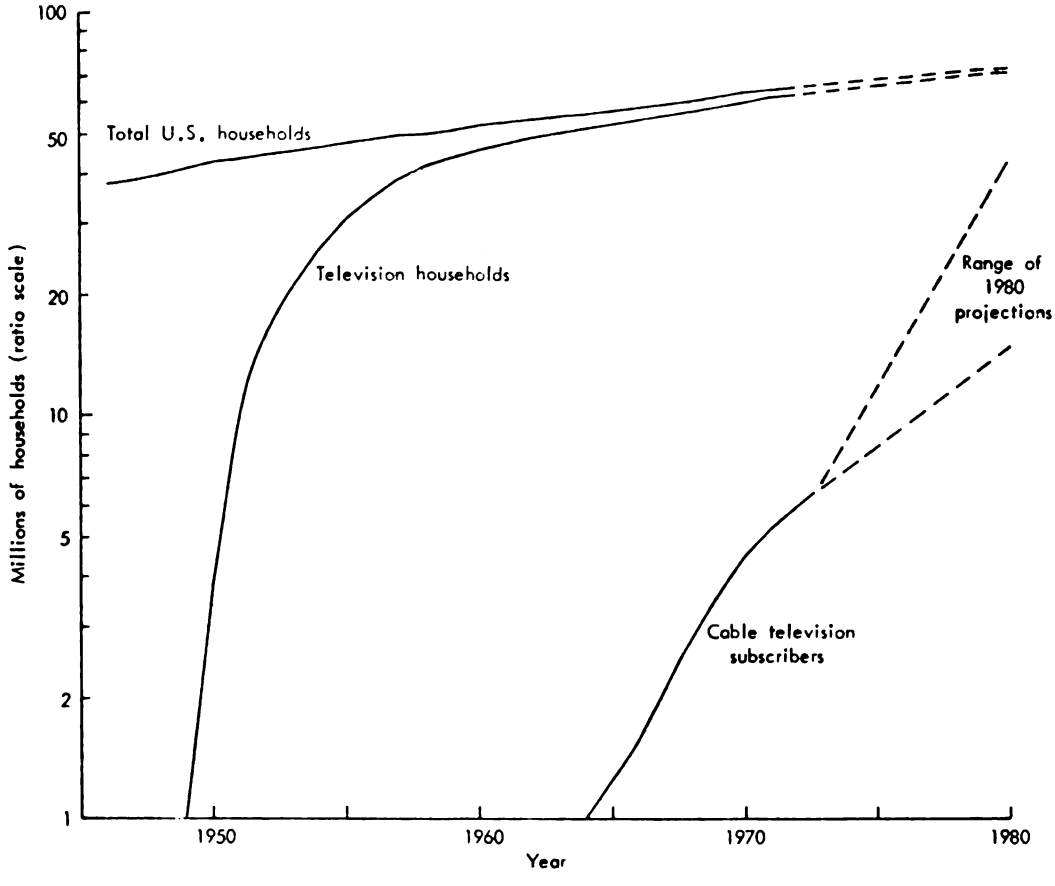
Although still small by United States industry standards, cable television has expanded rapidly. The growth of

cable subscriptions is illustrated in Figure 7.

Projecting the percentage growth of cable subscribers over the past decade to 1980 gives an estimate of 30 million cable subscribers, or 42% of United States television households for that year. The Sloan Commission forecasts that 40 to 60 percent of households will be on the cable by 1980.[28] The National Cable Television Association (NCTA), an industry group, predicts a lower range of 35 to 40 percent. The range of predictions are shown by the dotted line portion of Figure 7.

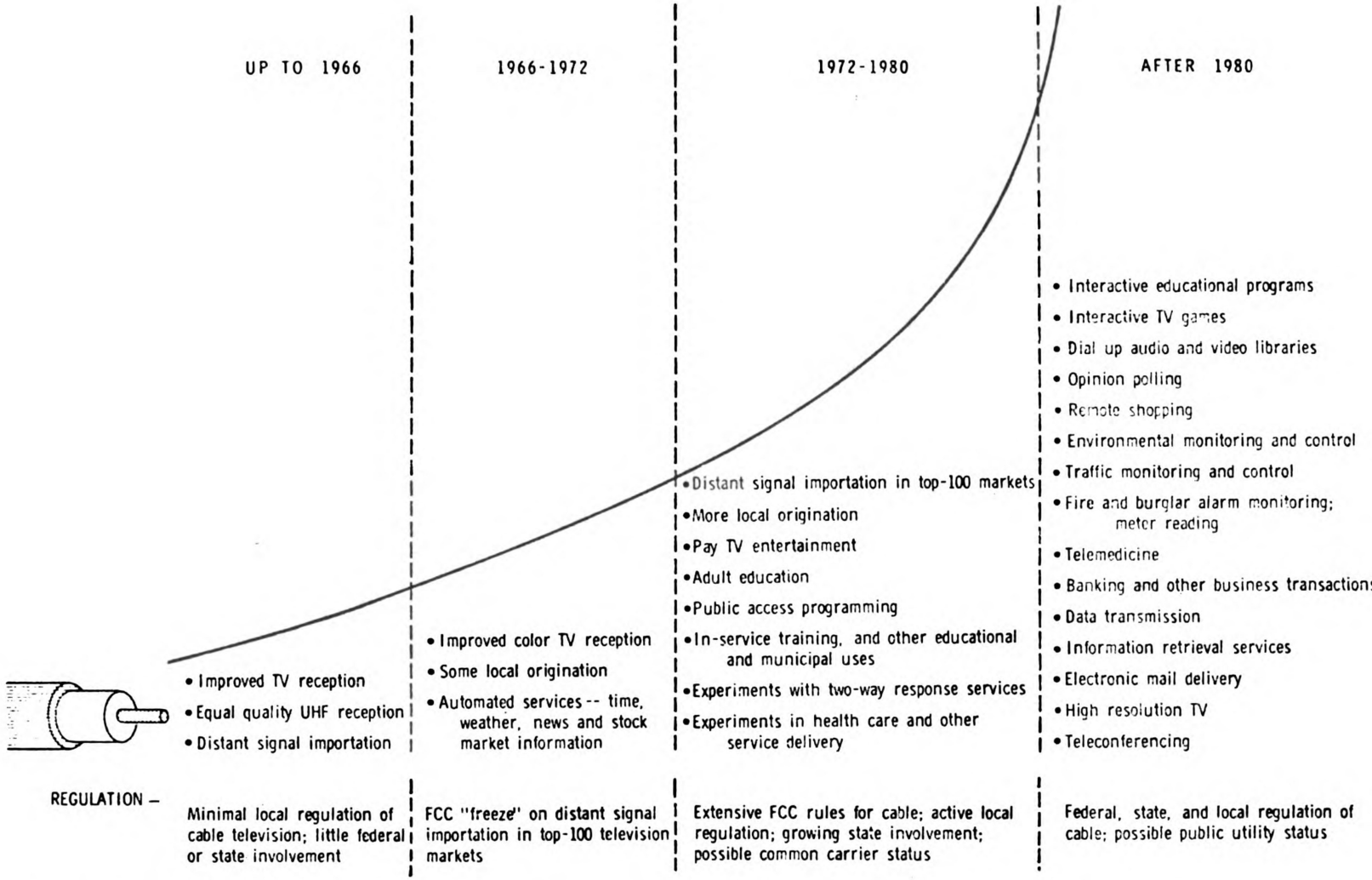
Penetration for all of Michigan is currently 7.3%, based on cable systems serving 208,048 of a potential 2,810,000 TV households in the state. According to 1973-74 American Research Bureau (ARB) statistics, there are 2,660,000 TV households in Michigan which is 94.7% of the total 2,810,000 households in the state. The penetration of systems operating currently is 51.6%. There is a potential of 404,101 television households in the 186 communities served by cable in the state in 1973.

Cable television will grow significantly in Michigan over the next five to six years. Estimates put cable subscribers over the 500,000 mark by 1980 with a penetration of nearly 26% of total TV households.



Source: Data from "Cable Television: A Handbook For Decisionmaking", Walter S. Baer, Rand Corp., 1973.

Figure 7. Growth of cable television subscribers in the United States.



Source: "Cable Television: A Handbook for Decisionmaking", Walter Baer, Rand Corp., 1973.

Figure 8. Potential growth of cable television services.

Community Fees and Revenue

Another consideration of substantial magnitude is that of municipal revenue from Cable TV annual fees or local fees. According to the JLCTSC survey, Michigan communities used as many as eight different types of revenue garnering methods. They are:

(1) Percent of gross subscriber revenues (straight percent)

(2) Percent of gross subscriber revenues (graded percent)

(3) Franchise fee (initial)

(4) Franchise fee (periodic)

(5) Pole rental payment (initial)

(6) Pole rental payment (periodic)

(7) Dollar(s) per subscriber per year

(8) None

Nearly half of all Michigan systems charged an initial franchise fee, although only a few utilize a periodic franchise fee (see Appendix A).

The most popular method is the percent of gross subscriber revenues (both straight and graded) which 44.1 percent of all Michigan systems use (30 to 68 systems). The most commonly used percent is three percent while the favored graded percent method is:

2 percent of first $120,000
3 percent of next $60,000
4 percent over $180,000

According to the FCC's Third Report and Order, a municipality may levey a maximum fee of five percent but can only extend over three percent if a special showing is made.

Advertising

Michigan cable operators are just beginning to tap the vast resources available through advertising on cable television.

As of March 1, 1974, only 15 of the 68 systems (22.1 percent) in the state were advertising on their systems. The gross revenue for advertising in these systems for 1973 was $61,403.87 or an average of $4,093.59 per system (see Appendix A).

The South Haven cable system was the leading advertising revenue producing system with a 1973 income of $15,660 and the Harbor Beach system was the low of the 15, earning just $122.00 from advertising in 1973.

Public Access and Origination

It has only been within the last year that public access and origination in Michigan have demonstrated signs of stabilizing and becoming an effective programming source for cable television systems.

Although, origination is showing more growth potential, cable subscribers are still cautious to exercise the use of

public access channels.

Almost 70% of the 68 systems in Michigan offer some form of public access. Most offer it on a channel shared with their origination programs. Only about 15 systems have a single channel dedicated to public access.

Although few subscribers have availed themselves of the public access channels on Michigan systems, it is not for lack of opportunity.

The systems where public access has been utilized are all offering approximately equal services. They provide a free five-minute time slot to an individual or group to be shown two or three times a day. They have found that many of those who are using public access are those who have been involved in programs for the local origination channel.

Local origination has grown steadily as systems felt their way through early equipment and software problems. The main concern was achieving some sort of public interest in the channel. Early users were almost always church and womens groups. They provided a sounding-board for the new format channel and gave other groups a chance to see what could be done.

Many unique kinds of origination programs are being done on Michigan cable systems. The varied approaches can be seen in Figure 9, lists of typical programs viewed on selected systems in Michigan. This by no means is a

complete list, but does portray some types of programming being done.

The systems were chosen indiscriminately and represent only a sampling of both small and large systems in Michigan.

It is difficult to assign an average number of hours for local origination programs in a week time frame on any cable system. All systems have a nucleus of programs that are regularly scheduled and appear weekly or semi-weekly. These provide as many as 10 to 20 hours of programming a week. The special type programming is what accounts for most of the hours of origination being done.

These special programs are as different as the groups sponsoring them. They range from League of Women Voter shows to a How to Stop Smoking series; from little league baseball to the Miss Battle Creek pageant; and from election coverage to college extension programs.

Many systems are now programming 50 to 80 hours a week. During the summer hours a drop is experienced due mainly to the contributions from many of the schools in Michigan.

In Autumn, 1974, the Flint system will become the first system in Michigan and one of the first in the entire United States to begin 24 hour-a-day origination programming. By the use of an automated computer system with programs on tape and film, they hope to achieve a balance

between programming on a local and national level. As local interest increases and more programs are done, the film and tape coming from outside programming sources will decrease.

Currently, two problems continue to plague Michigan cable system operators--financing programming and arousing public interest in them. These problems must be overcome if Michigan cable operators hope to use origination effectively.

Once again it must be reiterated that Figure 9 shows only a sampling and does not even include all programs from any one system. Number of hours per week are approximate and differ with the time of year.

Figure 9. Programs currently presented on origination channels.

Sault Ste. Marie--Approximately 70 hours a week

Public Access--shared channel

Programs--City Commission meeting every other week
Movies--68 hours a week

Ironwood--Approximately 25 hours a week

Public Access--shared channel

Programs--Extension Office of Michigan State University
High School counselor show
Show explaining government officials points of view
Review of city council agendas
News/weather/sports

Jackson--6 hours a week

Public Access--shared channel

Programs--League of Women Voters
Jackson Outdoor Club
Senior citizen show
Children's show
"Looking Around Jackson"

Kalamazoo--Approximately 10 hours a week

Public Access--not in use at this time

Programs--"Old Country Church"
Catholic church--kids program
U.S. Chamber of Commerce
Western Michigan University programs
Community college programs

Ann Arbor--Approximately 40 hours a week

Public Access--on a separate channel

continued

Figure 9--continued

Programs--City council meetings
School board meetings
Smaller group meetings, i.e., Model Cities, etc.
County Board of Supervisors meetings
1 hour interview a day
Sports
U of M football, hockey, basketball
Little league baseball
Election coverage
Originate all U of M sports for other systems

Battle Creek--Approximately 50 hours a week

Public Access--shared channel

Programs--Local news/weather/sports
Local music program
Local government affairs program
Local variety program
Local woman's show
Special on no fault insurance
Hour special on firefighting
Miss Battle Creek pageant
26 weeks drug abuse series
5 week non-smoking series
March of Dimes Telethon (One of only a few cable systems in U.S. to cover it)
Jerry Lewis MD telethon.
Sports--High school football, basketball, track, baseball, swimming, hockey and wrestling. College volleyball, swimming and basketball. Stock car racing.

Bay City--Approximately 45 hours a week

Public Access--Available on shared channel but not being used

Programs--½ hour show from high school
Church services
"Cablescope"--interviews with various individuals
Preschool story half-hour
Bell ringers program

continued

Figure 9--continued

Midland Center of the Arts programs
½ hour travel show
New/weather/sports
Sports--12 football games and 20 basketball games
Parades
Booth at fair

Flint--Approximately 28 hours a week (to go to 168 or 24 hours-a-day in the Fall)

Public Access--Not being used at this time

Programs--Midland Center for the Arts programming
Cablescope--½ hour program
Sports remotes--high school basketball and football.
Michigan Security employment shows

CHAPTER III

PROPOSED AND FUTURE PROSPECTS FOR CABLE SYSTEMS

Public Access

Public access allows those persons desiring an opportunity to program cable systems to fulfill those aspirations. Cable's ability to provide a multitude of channels at relatively low costs will provide a vehicle that will allow access to communication to a degree never before available. Open access is one of the most important characteristics of any cable system. Expanding access will allow programming to be developed to fulfill the entertainment, social, educational and political needs of a community if the people of that community work with the operator to develop such uses.

Cable television makes it technically and economically possible for many local voices to be heard--and faces seen--on television. That may well be cable's most profound influence on community life. Dedicating a cable channel for community programming or "public access" is not enough. Community groups and individuals interested in presenting their ideas must know that television time is available to them. They must have access and instruction in production

facilities, equipment, and technical assistance. They need funds for programming. And they must attract a local audience if community origination is to be more than a chance to vent its frustrations.[29]

The best way to secure sentiment as to what public access could or should be, is to review development in New York City with public access. New York started public access programming in July, 1971 and by the end of the year over 650 hours of original programming had been produced and shown on the two New York systems. During that first year, over 100 groups, individuals, and organizations produced programs for the access channels.

The programs fell into four main groups, which were:

(1) Entertainment programs

(2) Controversial issues--discussions and talk shows

(3) Education programs

(4) Fine Arts--which could classify in both (1) and (2) above.

The New York experience has pointed up some major conclusions concerning public access. A great number and variety of people will use the public access channels. They will use it as a public forum. Use of the public access channels does depend upon the size of the community.

Audience is a major problem facing public access. Although the channels are now being used, an audience for public access programs is still minuscule.

Building an audience for public access hinges on two factors--promoting programs and audience feedback. A cable subscriber cannot view a program if he does not know when it will be shown and a cable operator cannot change programming without a feel for what the audience wants.

Despite the impressive use of public access in New York and Canada, public access today is largely an untried opportunity. It is certainly an unfunded one. In the early stages public access programming is likely to change the programmers and their organization more than the audience. Video is a powerful tool for seeing oneself, as well as a means of self expression.

The success of public access should not be measured by the number of people, but by relative number of people who respond to programs from audience objectives. The end purpose of access is to further the objectives of individuals and groups who use it by influencing those who watch it. Experience in the next few years will determine whether public access will be a vital force in exchanging ideas and opinions throughout a community, or merely an outlet for a few individuals to vent their feelings on an unwatched channel.[30]

Two-Way Systems

Another main cable innovation that promises to become a significant social importance is two-way communications.

Although it is technically possible to provide two-way communications in some Michigan systems--it is not generally economically feasible to do so, and probably will not be for some years. An exception to this rule is discussed in the section on Cable-Education in Michigan.

There are two types of two-way communications. One is two-way video and/or the other is two-way audio or digital service.

Two-way video would interconnect the major commercial, entertainment and governmental points in the community. Many businesses with branches could benefit from such a two-way video network. Potential users include banks, and supermarket or department store chains which might use the channels for data processing, record-keeping and transfer, managers' meetings and so forth.[31]

There are many services possible for two-way communications in both the near and distant future (see Figure 8). Some are:

(1) Transfer of medical records.

(2) Communication between institutions and members of the community--fire departments, police, schools, libraries, municipal governments, and hospitals.

(3) Banking and credit services.

(4) Meter reading and automatic billings.

(5) Selective control of electrical devices in homes, offices, business establishments, schools, etc.

(6) High speed computer channels.

(7) Facsimile channels.

(8) Ordering a pay-TV movie.

(9) Responding to polls and surveys.

(10) Shopping by cable.

(11) Home education (to include the blind).

(12) Municipal Services.

(13) Delivery of social and health services.

Until recently, little has been done to utilize municipal services on cable systems, and generally they have not developed much beyond the planning stages. In an attempt to evaluate municipal services on cable systems, a research team from Michigan State University is engaged in an ongoing telecommunications policy research project envolving an exploratory project to evaluate the cable-delivery of a foster parent training/licensing program. Prospective foster parents were enrolled for a five-program series carried by cable television. Some enrollees viewed the series in their homes, others in small groups with television stimulated discussion sessions immediately after.

The programs were designed to provide necessary information about foster parenting, the relationships among the courts, social workers, natural parents and foster families as well as general information about parenting. Participants were encouraged to put themselves through a rigorous self-evaluation based on information received. Those who judged themselves capable and willing will be licensed by the state.

Pre- and post-tests were used to measure cognitive and affective learning, attitudes toward the use of television for these purposes, particular elements of the television presentation, perceived convenience and anxiety levels. Costs have been recorded for the television method, live presentation in a lecture-seminar format and individualized instruction by social workers.

A simulation model is being constructed to evaluate costs and methods over a single cable system and different designs for an interactive metropolitan network. The model is intended to inform policy decisions related to government planning, networking and government cable system relationships.

Evaluative data is not yet available, but early indications, suggest favorable participant and social service worker response and cost effectiveness.

Cable/Education: The Michigan View

The advent of cable TV into a community will predicate the involvement, with the system, of many special interest groups. FCC rules and regulations provide that cable systems operating within the top 100 television market areas must supply one channel for public access, government and education, at no cost.

Of the aforementioned, that of education would appear at this point, to possess the greatest potential to achieve

the promises of cable technology.

This promise goes far beyond the services that are usually talked about when references to cable are made, that of an abundance of TV channels, high grade picture resolution and color. Educators not only include those facets within their cable parameters, but are more interested in the auxiliary modes that the cable can accommodate in the narrow band sector. There are other kinds of electronic signals, in addition to TV, which can be carried from one point to another. A single TV picture transmitted on a cable requires one channel. That same channel, when not carrying a TV picture, is capable, with proper technical and electronic modification, of carrying up to 600 AM radio signals, or 30 FM radio signals, or 1500 voice conversations, or 26,000 telemetry signals. Further, all cable signals can be modified so as to be carried two-way, exactly in the same manner a telephone does.

With that technical capability, the following cable scheme now becomes a consideration; when a community is being wired for cable, with that cable being connected to every school building in the community and with the cable having the aforementioned technical capabilities, the educational system in that community should possess a super highway for the two-way transfer of educational information in the video, audio or digital modes.

The extension of that idea merits consideration. In large metropolitan areas, each municipality negotiates its own cable franchise. Enlightened and progressive city councils will cooperate (inter-council) and require compatibility for an interconnection between adjacent cable systems. As these systems merge into a network, it then becomes possible for neighboring school systems to exchange educational programs on a regional basis and consequently extend and share instructional resources.

With the addition of microwave units between such operative municipalities, it is then possible to interconnect separated school communities thereby offering every student and adult in Michigan prescribed instruction no matter his need, location or unique person.

There can be little doubt that such a "cable communications" system can contribute positively to the educational process in a number of ways. It can do so by:

(1) Increasing the physical accessibility of education;
(2) Providing services to education that cannot be readily provided in other ways;
(3) Improving the quality of education;
(4) Decreasing the unit cost of education.

Those hypotheses have been proven. Operative in Michigan schools at this time are functional programs using cable that bear out the credibility of those statements. However, such programs are few and isolated and are not being extended to other school districts because of the limitations

of telephone line interconnection costs. Educational cable accommodations, properly negotiated, will eliminate this reoccurring fiscal problem.

It should be noted that present FCC rules and regulations intend that the required educational access channel will be without charge from the time subscriber service is inaugurated until five years after the completion of the cable systems basic construction. After this initial developmental period the FCC will decide whether to expand, or curtail the free use of this channel. The resolution of that decision rests upon education's use of that channel. If, at that moment of decision, education cannot display valid utilization patterns of that channel it is highly probable that the FCC will rescind that free accommodation. However, to the contrary, if education can show a high and effective profile of utilization, it is reasonable to expect the FCC will extend the educational accommodation.

Implied in that intention of the FCC is a major responsibility for education. At this moment, within that discrete time allocation, education must attend to the task of achieving cable mastery. The educational telecommunications network that can emerge from that task's recognition and acceptance can provide every school building (in Michigan) with an electronic super highway for information transfer of formidable service potential.

This task has been identified as one for resolution by the Michigan Department of Education. For the past several years that State agency has conducted a program directed toward legislators, educators, city councils, and laymen wherein a program of the awareness of cable, its potential and problems, has been developed and promoted.

Included in the Department's program is a project that concerns itself with the problem of cable utilization. Realizing that state schools must develop work loads to successfully program and prove their cable utilization, it had developed in concert with varied educational institutions in Adrian, Michigan, a cable test-bed which shall institute and research possible educational uses of a bi-directional multi-channel cable. To achieve this, a cable system has been constructed that ties together Adrian College, Sienna Heights College, St. Joseph's Academy, the Girls' Training School, the Lenawee County Vocational Technical Center, and from the complex of the Adrian Public Schools, a high school, two middle schools, and three elementary schools. These educational institutions together formed the Adrian Cable Consortium and assumed the task of developing and researching experimental educational cable programs that will identify viable delivery modes for those schools in Michigan's cabled communities. From this endeavor will be extracted a base of knowledge concerning cable utilization that can be extended to other educators

in other communities so that the successes can be replicated and the failures eliminated.

Further the Department envisions, and actively pursues, the development of a statewide educational telecommunications network using cable systems as its backbone wherein the majority of the school systems in Michigan will be interconnected by cable and microwave.

It is conceivable that sub-systems of such a network can be operative within the next three years if legislators, educators, and local units of government cooperate toward this goal.

CHAPTER IV

ISSUES, PROBLEMS AND PUBLIC INTEREST

Cable's Financial Risks

Cable television has been proved to be a capital intensive industry and there remain risks in developing a cable system in a community. First, there are vast sums of money invested in systems--whether by the operator, municipality, or some other source. Second, the system will no doubt operate on a loss for the first three to five years due to construction and marketing of subscribers and low penetration. Third, in order to make a complete financial success in urban areas, cable operators must supplement their subscriber income with revenue from commercial services.

It makes no difference, whether a system is municipally or privately owned, they both take the same risks.

Cable as a Natural Monopoly

One of the most widely recognized reasons for government in some form to involve itself in cable matters is that cable is what economists call a "natural monopoly". That is, a single large system in a particular area is so

much less costly per dwelling served than would be any of a number of small, overlapping systems, that a monopoly tends to emerge through the competitive process whether or not government is involved in the process. Countering the effects of monopoly is the oldest, and still most legitimate rationale for government involvement in the affairs of private firms.

Whether this all suggests that cable is and ought to be treated as a public utility is not clear. A public utility is generally characterized as a firm whose private property has been dedicated to the public and which has a monopoly over the goods and services it furnishes to the public. It has a duty to serve the public, and has a duty to charge reasonable rates. The goods and services which a utility provides are usually considered necessities rather than conveniences or luxuries. Utility regulation is designed, among other things, to curtail cut-throat competition, limit service territories, prescribe quality of service, and control rates, accounting practices, and corporate reorganizations.[32] Thus, the status of cable systems remains unclear in this context.

The Awkward Relationship Between Muncipality and Cable Operator

Whether cable is considered a public utility or not, the relationship between a municipality and a cable operator

is perhaps more delicate than that between government and other forms of mass communications. Franchisor and franchisee are linked in several ways. If even a small portion of the potential uses of cable communications comes to fruition, an imbalance in this relationship would have deleterious effects on the municipality, the operator, and most importantly on the citizenry.[33]

Problems of Particular Michigan Concern

In Michigan, no state laws were found directly governing the regulation of cable television, thus standards and procedures for system operation follow FCC rules and provide local discretion in certain areas. This presents local authorities, especially city attorneys and city councils, with several acute problems.

Unlike most decisions local government will face, cable television presents a multiplicity of problems involving business, technical, communication and sociological considerations, all of which must be given fair consideration if really useful local and state cable systems are to exist. We have discovered that most local units of government do not have the expertise to pursue all of these questions and only Detroit and the largest municipalities or those who join together to franchise can afford to hire consultants. Despite this fact, much evidence of interest

and commendable, thoughtful deliberation was found among many of the local units of government surveyed.

The research, however, did surface several examples of current and potential problems which directly affect the CATV franchising process in Michigan.

At least two areas in Michigan have encountered some difficulty through the involvement of local officials as supporters of a particular operating company.

> In Canton Township, west of Detroit in Wayne County, a conflict-of-interest question arose because the group awarded the franchise was linked by a land transaction to the township supervisor. In addition, the franchise called for an exclusive 30-year franchise period which was granted without competitive bidding or public advertising. The township officials in charge evidenced ignorance of F.C.C. rules and the franchise fell far short of the provisions negotiated by a nearby city. This is especially critical because of the fact that Canton is considered to have excellent growth potential and it was reported that other CATV operators would have made bids on the franchise had they been aware of Canton Township's interest in CATV.
>
> In 1966 the city of Charlotte (population approximately 8,000) just south of Lansing awarded franchises to two companies, Charlotte Cablevision, Inc. and Clearview TV. According to local officials, neither company made "substantial" moves to build the system and in August of 1973, the city voided its franchise with the two companies when "the council feared its CATV ordinancd was defective." Another vender, Triad CATV which already serves two Michigan cities, sought the franchise with a promise to give Charlotte "CATV within a year." Clearview TV challenged the city council's right to revoke their ordinance and the question of who will cable the city is in doubt. In addition, a local circuit court judge has come under heavy criticism because of his involvement in representing Clearview, although the judge maintains he never used the power of his office or the influence of his name to promote Clearview Television Inc.

A tendency of the Federal Communications Commissions Cable Television Bureau is noted to "discourage" local units of government from asking cable operators for "extras" beyond the minimums set by their March 1972 rules.

> In Warren, Michigan (population 180,000), a city just north of Detroit, extensive discussions were held by the potential operator and local education officials which resulted in the provision of three extra educational channels, along with extensive studio and equipment allocations by the operator for education purposes. These were written into the city CATV ordinance. However, it has been reported to this Committee that after discussions between the operator, the city council, and a lawyer with the F.C.C.'s Cable Television Bureau, it became clear that the F.C.C. would "block the certificate of compliance for years" if the additional educational provisions remained. As a consequence of that conversation, the city council repealed that section of the ordinance.

Further problems have arisen in several cities. In Ann Arbor, the city's Cablecasting Commission has been exploring a graduated rate concept which ideally would allow the monthly rate for services to be based on the subscriber's ability to pay. The operator contends that such a move is unconstitutional discrimination against a segment of the public while some members of the cable commission state that much of the potential of CATV lies in the services it can deliver to lower income groups; yet those groups are the ones who can least afford the service.

The largest cable television systems in the state are in Kalamazoo (11,436 subscribers) and Flint (21,000 subscribers). In both cases, the systems are "leaseback" and

the cities involved have no formal agreement with the operators. In Flint, the city council recently proposed an extensive ordinance which the operator has examined and found unacceptable. The situation is stalemated until negotiations between the operator and city officials can begin.

Patterns of difficulties facing both the industry and municipal officials in dealing with the realities of cable and broadband system operation are ambiguous. Questions concerning the advisability of rate regulation, flexible F.C.C. rules, conflicts of interest, and the municipalities ability to gain access to pertinent operation data have led some cities (notably Pontiac, Michigan) to conclude that cable television at this time is a valuable community asset. As some of these questions are decided and as cooperation between local officials, the cable system industry, local interest groups and hopefully the state becomes more of a reality, there should be fewer problems to content with and greater growth and use of the cable and broadband communication systems.

CHAPTER V

ALTERNATIVE LEGISLATIVE ACTIONS FOR THE STATE OF MICHIGAN

Each state in the United States has, to date, given some consideration to its degree of involvement in cable and broadband communications systems. In many states, bills concerning cable have been introduced and referred to committee where they have died or yet remain. In other states, principal legal officers, such as the Attorney General, have taken an interest in cable system potentials and have identified alternate levels of jurisdiction and interest in cable systems by varied agencies of state government. This has resulted in the rejection of jurisdiction over cable systems by several states. In others, Attorneys General have identified and denied jurisdiction exists in townships and other localized areas because they lack specific statutory authorization. Generally, Attorneys General have agreed statutory and constitutional "home rule" provisions assure cities adequate ground to authorize franchises. Where the state Attorneys General have considered administratively vesting jurisdiction over cable systems in public service or public utility agencies, their legal opinions have turned on terms of definition that establish

public utility agency authority by statute. Where the public utility agency is granted jurisdiction over telephone and telegraph or telephonic communications, utility agency jurisdiction has been denied either by the Attorney General or by the public utility agency on its own motion.

Levels of State Involvement in Cable and Broadband Systems of Communications

In the past legislators conducting extensive reviews of cable communications have consistently recommended state involvement in system developments. Every legislature that has seriously considered cable has recognized its potential. However, where extensive legislative investigation has not been conducted the action of state legislatures has been uneven, and the effect of resulting legislation is uncertain.

Several states conducting minimal legislative investigations have vested jurisdiction over cable communications in municipalities and/or counties. In several instances, jurisdiction was vested only in municipalities thereby leaving unincorporated areas of the state in a jurisdictional limbo. Quite clearly, each instance resulted from the insufficiency of legislative investigation prior to the establishment of legislative policy and adoption of a statute.

Other legislative attempts, omitting adequate investigation, have resulted in bills claiming to vest jurisdiction

in townships, counties, or cities--but without a joinder of these nominally unrelated jurisdictional structures.

Some statutes resulting from considerable investigation have attempted to identify and provide for intrastate regions to establish regional broadband and cable communication systems.

Other states have established preemptive statewide licensing or certification authority in an existing agency of the state government--generally in public utility or public service agencies.

Still other states, after extremely exhaustive investigation and analysis, have concluded that jurisdiction over cable and broadband communications systems should vest jointly or concurrently in state and more localized subdivisions of government. Accordingly, these states have established standards in legislation to be utilized in local franchising, and a process for certification of compliance with such standards by a specially created state agency. Where the specialized agency has been created, additional authority has been established to provide assistance to local communities, the general public, and to cable and broadband communications systems generally; to represent the interests of the state before federal communications and other agencies; to regulate rates, services and other aspects; and other associated duties.

Legislative Choice of Agencies to Administer State Interest in Cable and Broadband Systems

1. Choice of an Existing Agency

When state governments first attempted to determine their interest in cable television or Community Antenna Television Systems (as they were commonly termed in the early 1960's) similarity between the systems and then existing communications modes resulted in public utility designation of the cable phenomenon. This resulted initially in Connecticut and Nevada where CATV was simply treated as a public utility by statutory amendment. In this context, the usual public utility or public service regulatory model was imposed upon cable systems. Accordingly, varieties of regulation; of service; rate of return based upon invested capital; adequacy of service, safety and other elements became associated with state interest in cable systems. Vermont and Alaska adopted similar provisions and their public utilities or service agencies currently assert their state's legal interest on a regulatory basis.

Such assertion involves the issuance of a statewide certification of public necessity and convenience by the agency. The cable system is required to engage in various forms of tariff filings. The state utility agency generally allows slightly more liberalized return of income than is permitted for traditional common carriers such as telephone or telegraph companies.

Where, however, the public utility agency enabling legislation utilizes the term "communication" to describe agency authority, there is perhaps a stronger case for utility agency's assertion of jurisdiction in cable.

In other states, governor's executive offices have conducted staff investigations, created executive commissions, committees--and in some instances, ad hoc citizen and public interest groups have coordinated to provide the state with adequate analysis of its interest in cable and broadband communications systems.

Definitive action on cable television has occurred only in states where there has been careful, specific, deliberate legislative action. In some states, investigations have been charged to either staff or committee. Where such investigations have been completed, legislation has been adopted or introduced with considerable support and eventual adoption. No state legislature that has carefully studied cable has rejectdd legislation establishing an active role for the state in cable and broadband development. The legislation produced in these states has defined levels of state involvement in cable and provided innovative administrative structures to maintain the state's interest.

This section summarizes legislative alternatives adopted in other states that have bearing upon Michigan's concern

for cable and broadband system development. As a result, while a telephone company is generally permitted a rate of return in the area of eight percent, cable companies are permitted to earn as much as 15 percent.

This public utility regulatory model, nonetheless, tacitly assumes cable systems to be full blown, mature common carriers. Exceptions to this position were taken by the State of Rhode Island. In legislation vesting jurisdiction over cable systems in Rhode Island in the public service agency, cable systems were defined as "communication carriers" and regulation of their activities was contemplated as similar to that of common motor freight carriers. The model, it was hoped, would lessen the regulatory burdens of the cable systems to allow more development and growth. One system has been constructed and is operating in Rhode Island and success of this model is currently uncertain.

It should be noted that each of the jurisdictional models described above developed in the early and mid-60's. In later years, states adopting cable regulation have favored the specialized agency models described below.

The state of Hawaii encountered a particularized problem in the case of television. That island state sought to develop remote islands and areas not currently served by broadcast television through cable television systems. In the context of Hawaii then, cable is more readily understood as an industry affected with a public interest thereby more

understandably resulting in a cable public utility designation.

Absent extensive development of cable television systems, it is doubtful that broadcast television will ever be economically feasible to the out islands of Hawaii. Therefore, Hawaii vested jurisdiction in its Director of Regulatory Agencies, who has functioned as a nominal czar to encourage and order cable development, with the option of placing his jurisdiction in the Public Utilities Commission. (It should be noted that the Hawaiian Public Utilities Commission is subsurvient to the Director of Regulatory Agencies.)

Still another variation involving the use of the public utility or public service agency is found in the case of New Jersey, and in legislation that has been pending for several years in the state of Wisconsin. In both states jurisdiction is vested in the public utility or service agency with statewide licensing authority. However, a specialized bureau office has been created to handle cable television affairs in the public utility agencies. The agency is given jurisdiction concurrent or correlative with that of local communities. The local communities are free to select from among applicants whom they franchise or to whom they grant consent for license to under-strict utility agency standards or guidelines.

The experience of the New Jersey Cable Television office of the public utility agency has generally not been successful due to inadequate financing, staffing and a lack of sufficient information feedback. Unfortunately the public, cable television industry, statewide organizations and varieties of citizens interests groups having communication need that can be satisfied through cable developments, have not come forward. This situation exists despite the fact that the New Jersey cable statute authorizes establishment of a statewide citizens advisory board. In contrast, the proposed Wisconsin statute requires that the cable television office rely upon advisory panels of citizens established in each franchise area and at the state level. Such advisory groups should provide information feedback and allow the Wisconsin Public Service Commission better comprehension of its role in relation to cable television systems. It should be noted that both the New Jersey and the proposed Wisconsin statutes require public utility regulations.

2. Creation of a Special Agency for Cable and Broadband Communication

States enacting cable legislation after extensive analysis by legislative and executive cable commissions have, without exception, adopted a concurrent state-local jurisdictional model. In this form, franchises, contracts, or licenses are generated at the local level, guidelines or

standards are established by the state agency. Following selection of the applicant or design for the cable system, state agencies certify the systems conformity with its standards or guidelines. In recent years other populous states adopting cable legislation have followed the specialized agency formulation. This is a result of the dynamic and innovative nature of cable and broadband system technology and usage. It has become fairly apparent that traditional regulatory models are clearly less than ideal for state assertions of jurisdiction over cable television systems. As a result of pragmatic ongoing analysis, the states with the greater jurisdictional experience in cable and broadband systems have discovered that the innovative nature and potential for the systems requires considerable continuing alteration of policy. These states have discovered the need for an extensive plan and comprehensive policy for development of the cable and broadband systems. Thus, state assertion of jurisdiction simply to impose traditional regulatory standards is proving unsatisfactory in dealing with cable and broadband system development. In an attempt to provide more relevant response, several leading states have introduced approaches that correlate policy to technical innovations. New York, Minnesota and Massachusetts have adopted legislation authorizing a specialized agency to continually monitor cable system development, cable and telecommunication advances.

The groups determine and establish communication needs that may exist to assure that all systems and services are proceeding generally to serve the public interest. The planning and research functions of these agencies are unique and of particular interest to Michigan. Although the Minnesota and New York agencies are authorized, either in an enumerated or in plenary fashion, to regulate, such regulation must be conditioned upon extensive and ongoing analysis of public interest. Massachusetts, in contrast, is investigating the potential for rate of return on investment and plant regulation. The Massachusetts agency is also authorized to investigate public interest in communications.

Comparison of Agency Structures in State Cable Jurisdiction

Legislatures considering cable often have the assumption that rate regulation is absolutely necessary at the state level. This conclusion has frequently been drawn without adequate insight into the dynamic and developing nature of cable and broadband communications. Such regulatory jurisdiction should be imposed only if warranted after experience and study as part of a comprehensive plan or policy which contains mechanisms that continuously monitor development to identify the state's concern and role in communication development. The decision to regulate the rates of developing industry should be considered only if

demanded by a clear vision of the relationships of public and private interests in the context of the particular industry. Thus, states embarking upon cable legislation should consider establishing a general telecommunications policy program within which context cable television and associated systems development can be encouraged. If rate regulation is warranted, it should be imposed within a comprehensive frame and as a result of extensive experience and study as required by the public interest, convenience and necessity. State regulation of rates should not be a foregone conclusion in view of the infant nature of the cable systems in Michigan and its need for development to best benefit the public.

These conclusions support the establishment of a policy development and policy maintaining office function as part of a special state cable agency asserting partial jurisdiction over cable systems.

More traditionalized offices of branches of the agency, dealing with the executive functions would handle the day-to-day operation of the commission. These would involve the review and administration of standards that have been developed by the policy branch and adopted by the full membership of the agency. These would include provision of consultation advise and technical assistance to local communities interested organizations, industries and the

general public; representation of the interest of the state before the FCC and other federal agencies and general oversight of Michigan cable system operation. The Executive Office would generally administer the powers of the commission which include promulgation, issuance, amendment and recessions of orders and rules, requisition of reports and information from cable and broadband systems, administration of subpoena and correlative examination powers, and in certain circumstances the institution of an intervention in legal actions.

In addition, some such state agencies have specialized duties to assist in developing local citizens communications commissions, to establish statewide advisory commissions and councils and a duty to assist in development in the regionalization of intrastate, interstate and metropolitan area cable systems. Further, some agencies are given miscellaneous duties to examine and treat the public ownership of systems; elections and campaigns; corrupt practices in the award of franchises; relationship with other utilities and communications entities; relationships with educational television and instructional television; and development of cable with television translators and relay systems.

The executive offices generally are granted procedural authority in matters having to do with certification and licensing, certification compliance, complaints, appeals, and penalties.

Appendix X lists the specific standards that have been established by various specialized cable legislations throughout the United States.

In either branch of the special agency, it is necessary that trained professional economic communication and legal expertise be present so that public need can be readily ascertained and supported on a continuing basis. This implies necessity for experts with training and experience who can use the full thrust of science to aid in identifying public need for communication, economists who can relate that need to systemic development, engineers and lawyers to carry technology in the form of rational approaches to the state's interest.[34]

FOOTNOTES

1. "Cable Television is Coming ... Coming ... Coming," National Cable Television Association, Inc., Washington, D.C., 1973, p. 4.

2. "Cable Report to the President," by the Cabinet Committee on Cable Communications, January 15, 1974, p. 4, para. 8.

3. Ibid., para. 9.

4. Ibid., para. 10.

5. Cable Sourcebook 1974, Broadcasting Publications Inc., 1973.

6. Frontier Broadcasting Co. v. Collier, 24 FCC 251 (1958).

7. The Bill--"Senate Bill S. 2653," The Hearings--(U.S. Congress, Senate, Committee on Commerce, "Review of Allocation Problems of Television Service to Smaller Communities, "85th Congress, 2nd sess., 1958.

8. "Report on Docket 12443," 18 RR 1573.

9. Carter Mountain Transmission v. FCC, 321 F2d 359 (D.C. Cir.), 1962.

10. General Statutes of Connecticut, chap. 289, sec. 16-330.

11. Cable Vision v. KUTZ, 335 F2d 348 (9th Cir.); cert. den. 379 US 989.

12. "First Report and Order on Dockets 14895, 15233, and 15971," 4 RR 2d 1677.

13. 1 FCC 2d 463.

14. "Second Report and Order on Docket 18397," 19 RR 2d 1775.

15. Fortnightly Corp. v. United Artists, 392 US 390.

16. CBS v. TelePrompTer, 173 U.S.P.Q. 778.

17. "Notice of Inquiry and Notice of Proposed Rulemaking in Docket 18397," 15 FCC 2d 417.

18. "Third Report and Order on Docket 18397," 24 RR 2d 1501, pp. 1529-32.

19. "Potential Impact of Cable Growth on Television Broadcasting," Rolla Park, R-587-FF, Oct. 1970, Ford Foundation.

20. See footnote 18, supra., Part II, Section 2, para. 61.

21. See footnote 17, supra. Also--"Second Further Notice of Proposed Rulemaking in Docket 18397-A," 24 FCC 2d 580.

22. See footnote 18.

23. See footnote 5, supra., page 4. Also--CATV Systems Directory, Map Service and Handbook, Communications Publishing Corp., 1973.

24. Ibid.

25. Survey by Joint Legislative Cable Television Study Committee, conducted January through March, 1974.

26. "Addition to Section 3 of Revenue Bond Act of 1933 by adding words 'cable television' to provision allowing construction of certain facilities using bonding powers of municipalities."

27. See footnote 18, supra., para. 182.

28. Sloan Commission on Cable Communications, "On the Cable: The Television of Abundance," New York: McGraw-Hill, 1971.

29. "Cable Television: A Handbook for Decisionmaking," Walter S. Baer, Rand Corporation, R-1133-NSF, Feb. 1973, pg. 134.

30. See footnote 29, supra., pp. 150-151.

31. "Report of the Advisory Committee on Cable Communications to the Metropolitan Council" of the Twin Cities (Mineapolis/St. Paul), November 30, 1972, p. 12.

32. See footnote 31, supra., p. 17.

33. See footnote 31, supra., p. 19.

34. "Alternative Legislative Actions for the State of Michigan", Thomas A. Muth and Lawrence D. Thompson, 1974.

APPENDICES

APPENDIX A

OPERATING SYSTEMS

APPENDIX A

OPERATING SYSTEMS

The following charts and graphs detail the information obtained from the Joint Legislative Cable Television Study Committee's survey conducted during January through March, 1974.

Where blanks occur in the chart, no information was provided by the cable operator. The data is only an approximation since cable systems change from day-to-day as far as subscriber numbers and other data are concerned.

The charts are not meant to be a complete analysis of each system but rather an attempt to provide data for each system on which to build a basis for evaluating cable communications in the state of Michigan.

A (*) indicates the headend of a system which serves all communities listed below it. If it appears between two communities, the headend is geographically located between them.

System Operator (Owner)--Alden CATV Inc.
30215 Southfield Rd.
Southfield, Michigan 48076
313-642-1492
(Alden Care Enterprises)

Three Rivers*
Date started operation--3/1/73
Total subscribers as of 3/1/74--800
Franchise Type--Ordinance
Length--10 years
Hookup rate--$15.00
Monthly fee--$5.00
Maximum number of channels--11
Channels utilized--11
Advertising--No
Fee paid to the community--5%
Does system provide free services--yes

Hudson*
Total subscribers as of 3/1/74--250
Franchise type--FR/ORD combination
Length--10 years
Hookup fee--$15.00
Monthly fee--$5.00
Additional set fee--$1.00
Maximum number of channels--11
Channels utilized--11
Extra services provided --2 Educ., 4FM, 1 Time/W.
Advertising--No
Fee paid to the community--5%
Does system provide free services--yes

Dowagiac*
Under construction

Plymouth
Franchised

System Operator (Owner)--Alpena Cablevision
123 Water St.
Alpena, Michigan 49707
517-354-8048
(Cable Information Systems Inc.)

Alpena*
Date started operation--7/58
Total subsdribers as of 3/1/74--6687
Estimate of subscribers in 1977--7100

Penetration--90
Potential number of homes in market--7150
Franchise Type--franchise
Length--indefinite
Total miles of cable--117
Percent completion--100
Hookup rate--$29.50
Monthly fee--$4.50
Additional set fee--$1.00
Maximum number of channels--20
Channels utilized--20
Extra SErvices Provided--10 FM, 1 Gov., 1 Educ.,
24 hour weather.
Advertising--no
Fee paid to the community--per subscriber
Total fee paid in 1973--$6,918.36
Schools in community--those wired at present--23.22
Does system provide free services--Yes

Alpena Twp.
Length--20 years

Sanborn Twp.
Length--20 years

Maple Ridge Twp.
Length--20 years

Wilson Twp.
Length--20 years

System Operator (Owner)--American Cablevision Co.,
115 E. McLeod Ave.,
Ironwood, Michigan 49938
906-932-1831
(TelePrompTer)

Ironwood*
Date started operation--7/1/58
Total subscribers as of 3/1/74--5886
Estimate of subscribers in 1977--6500
Penetration--87.8
Potential number of homes in market--6705
Franchise type--License
Length--6 1/2 to 10 years
Total miles of cable--110
Percent completion--90
Hookup rate--$10.00
Monthly fee--$6.00
Additional set fee--$1.50

Maximum number of channels--12
Channels utilized--12
Extra services provided--AP News, 1 Pub. Access, 2 ETU's, 1 Ind.
Advertising--yes
Income from advertising in 1973--$11,708
Fee paid to the community--$3.50 per year for each pole
Total fee paid in 1973--$22,025.45
Schools in community--those wired at present--18
Does system provide free services--yes

Bessemer

Wakefield

Ironwood Twp.

Erwin Twp.

Bessemer Twp.

System Operator (Owner)--American Cablevision
722 River Ave.,
Iron Mountain, Michigan
906-774-2404
(TelePrompTer)

Iron Mountain*
Date started operation--1955
Total subscribers as of 3/1/74--1630
Franchise type--PER/ORD. Combination
Length--10 years
Total miles of cable--62.5
Hookup rate--$9.50
Monthly fee--$5.00

Kingsford
Date started operation--12/56
Total subscribers as of 3/1/74--1110

Breitung
Date started operation--1955
Total subscribers as of 3/1/74--324

Quinnesec

E. Kingsford

System Operator (Owner)--American Cablevision Co.
304 Ashman St.
Sault Ste. Marie, Michigan
906-632-8541
(TelePrompTer)

Sault Ste. Marie*
Date started operation--4/61
Total subscribers as of 3/1/74--3870
Estimate of subscribers in 1977--4200
Penetration--82.7
Potential number of homes in market--4680
Franchise type--Agreement
Length--15 years
Total miles of cable--85.4
Percent completion--95
Hookup rate--$9.95
Monthly fee--$4.95
Additional set fee--$1.50
Maximum number of channels--12
Channels utilized--10
Extra services provided--City Council, Hockey games, specials
Advertising--Yes
Income from advertising in 1973--$3,200
Schools in community--those wired at present--9-6
Does system provide free services--yes

Soo Twp.
Total subscribers as of 3/1/74--200
Estimate of subscribers in 1977--360
Penetration--40.0
Potential number of homes in market--500
School in community--those wired at present--4-0

Kincheloe AFB*
Date started operation--10/72
Total subscribers as of 3/1/74--1400
Penetration--61.5
Potential number of homes in market--1950
Franchise type--contract with service
Length--5 years
Percent completion--100
Schools in community--those wired at present--2-2

System Operator (Owner)--American Cablevision Co.
612 Ludington St.
Escanaba, Michigan
906-786-2244
(TelePrompTer)

Escanaba*
Date started operation--1960
Total subscribers as of 3/1/74--5500
Penetration--78.6
Potential number of homes in market--7000
Franchise type--agreement
Total miles of cable--120
Hookup rate--$9.95
Monthly fee--$4.75

Gladstone

Ford River

Ford River Twp.

Escanaba Twp.

Bramton Twp.

Kipling

Wells

System Operator (Owner)--American Cablevision Co.
316 Sixth St.
Calumet, Michigan
906-337-0511
(TelePrompTer)

Calumet*
Date started operation--9/62
Total subscribers as of 3/1/74--697
Franchise type--resolution and license
Length--10 years
Total miles of cable--16
Hookup rate--$19.50
Monthly fee--$4.50

Laurium
Total subscribers as of 3/1/74--1196
Total mil-s of cable--20

Lake Linden
Total subscribers--600
Total miles of cable--12

Hubel
Total subscribers as of 3/1/74--293
Total miles of cable--5

Tammerack Mills
Total subscribers as of 3/1/74--59

System Operator (Owner)--Booth American Co.
2460 Buhl Building
Detroit, Michigan
313-965-3113

Cadillac*
Date started operation--10/66
Total subscribers as of 3/1/74--2450
Estimate of subscribers in 1977--3100
Penetration--73.2
Potential number of homes in market--3349
Franchise type--license
Length--Indef.
Total miles of cable--215
Percent completion--100
Hookup rate--$20.00
Monthly fee--$5.50
Additional set fee--$1.00
Maximum number of channels--12
Channels utilized--10
Extra services provided--Weather, 1 Ind, 1 ETV
Fee paid to the community--3%
Schools in community--those wired at present--9-6
Does system provide free services--Yes

Summit*
Date started operation--12/66
Total subscribers as of 3/1/74--4690
Estimate of subscribers in 1977--6200
Penetration--47
Potential number of homes in market--9975
Franchise type--franchise
Length--30 years
Percent completion--95
Channels utilized--12
Extra services provided--3 ETV, 3 IND.
Schools in community--those wired at present--17-13

Leoni*

System Operator (Owner)--Cablevision Inc.
P. O. Box 158
Ludington, Michigan
616-843-4850

Ludington*
Date started operation--7/67
Total subscribers as of 3/1/74--2400
Estimate of subscribers in 1977--3000
Penetration--48.8
Potential number of homes in market--8400

Franchise type--Ord.
Length--20 years
Total miles of cable--60
Percent completion--100
Hookup rate--$15.00
Monthly fee--$5.00
Additional set fee--50¢
Maximum number of channels--12
Channels utilized--12
Extra services provided--1 ETV, 1 EDUC, Time/weather
Advertising--yes
Income from Advertising in 1973--$400.00
Fee paid to the community--3%
Total fee paid in 1973--$3,000.
Schools in community--those wired at present--8-6
Does system provide free services--no

Mt. Pleasant*
Date started operation--1969
Total subscribers as of 3/1/74--1700
Estimate of subscribers in 1977--3200
Franchise type-- Ord.
Length--1 year
Total miles of cable--54
Percent completion--100
Hookup rate--$15.00
Monthly fee--$6.00
Additional set fee--50¢
Maximum number of channels--12
Channels utilized--12
Extra services provided--Time/Weather
Advertising--yes
Income from advertising in 1973--$333.87
Fee paid to the community--3%
Total fee paid in 1973--$2,000.
Schools in community--those wired at present-2-2
Does system provide free services--no

Shepherd
Under construction, Mt. Pleasant system

Scottville
Under construction, Ludington system

Hart
Under construction, Ludington system

System Operator (Owner)--Capitol Cablevision
2820 E. Saginaw
Lansing, Michigan
517-371-2450
(Gross Telecasting)

Lansing Twp.*
Date started operation--10/70
Total subscribers as of 3/1/74--225
Estimate of subscribers in 1977--1000
Penetration--18.8
Potential number of homes in market--1200
Franchise type--ORD/License
Length--1 year
Total miles of cable--8
Hookup rate--$15.00
Monthly fee--$5.00
Maximum number of channels--12
Channels utilized--10
Fee paid to the community--$1,000 per year

System Operator (Owner)--Caspian Community
TV Corp.
Caspian, Michigan 49915
906-265-3600

Caspian*
Date started operation--6/55
Total subscribers as of 3/1/74--350
Estimate of subscribers in 1977--375
Penetration--87.5
Potential number of homes in market--400
Franchise type--Franchise
Length--10 years
Total miles of cable--15
Percent completion--100
Hookup fee--$150.00 or $2.00 a month
Maximum number of channels--12
Channels utilized--5
Extra services provided--1 EDUC.
Does system provide free services--yes

System Operator (Owner)--Cass Community
Antenna TV Inc.
Whitehall, Michigan
616-893-4695

Whitehall*
Date started operation--12/1/71
Total subscribers as of 3/1/74--904
Estimate of subscribers in 1977--1400

Penetration--45.2
Potential number of homes in market--2000
Franchise type--FR/ORD Combination
Length--15 years
Total miles of cable--32
Percent completion--100
Hookup rate--$10.00
Monthly fee--$5.00
Additional set fee--$1.00
Maximum number of channels--21
Channels utilized--12
Extra services provided--24 hr. Music, weather
Fee paid to the community--3%
Total fee paid in 1973--$358.89
Schools in community--those wired at present--5-5
Does system provide free services--yes

Montague
Extra services provided--1 EDUC.
Total fee paid in 1973--$203.41

System Operator (Owner)--Coldwater Cablevision Inc.
364 Marshall St.
Coldwater, Michigan
517-278-8731

Coldwater*
Date started operation--7/66
Total subscribers as of 3/1/74--2210
Estimated subscribers in 1977--2400
Penetration--88.4
Potential number of homes in market--2500
Franchise type--Permit
Length--10 years
Total miles of cable--35
Hookup rate--$19.95
Monthly fee--$4.95
Additional set fee--90¢
Maximum number of channels--12
Channels utilized--12
Extra services provided--Weather
Advertising--yes
Income from advertising in 1973--$420.00
Fee paid to the community--3%
Total fee paid in 1973--$4115.37
Schools in community--those wired at present--8-7
Does system provide free services--Yes

Coldwater Twp.
Total subscribers as of 3/1/74--348
Estimated subscribers in 1977--700

Penetration--43.5
Potential number of homes in market--800
Total miles of cable--7.5
Extra services provided--2 ETU's

Quincy
Date started operation--10/71
Total subscribers as of 3/1/74--317
Estimate of subscribers in 1977--450
Penetration--63.4
Potential number of homes in market--500
Total miles of cable--7.05
Maximum number of channels--12
Channels utilized--10
Extra services provided--1 Ind.
Schools in community--those wired at present--2-1

Quincy Twp.
Total subscribers as of 3/1/74--57
Estimate of subscribers in 1977--500
Penetration--19.0
Potential number of homes in market--300
Total miles of cable--2.71
Extra services provided--1 Public Access

System Operator (Owner)--Continental Cablevision of Michigan
2000 Cooper St.
Jackson, Michigan 49202
(Continental Cablevision)

Jackson*
Date started operation--2/66
Total subscribers as of 3/1/74--10,819
Estimate of subscribers in 1977--14,000
Penetration--59.2
Potential number of homes in market--15,000
Franchise type--Franchise
Length--30 years
Total miles of cable--158
Percent completion--97
Hookup rate--$10.00
Monthly fee--$4.95
Additional set fee--$1.00
Maximum number of channels--12
Channels utilized--12
Extra services provided--Public Access, Music
Advertising--yes
Income from advertising in 1973--$450.00
Fee paid to the community--2%-120,000, 3% next 60,000
4% over 180,000
Schools in community--those wired at present--21-16
Does system provide free services--yes

Blackman Twp.
Penetration--31.3
Potential number of homes in market--2240
Percent completion--70
Extra services provided--1 Educ, 2 Ind, 1 Govt
Fee paid to community--3%

Holland
Under construction

System Operator (Owner)--Covenant Cable TV Inc.
Box 151
Port Huron, Michigan
517-982-0147

Port Huron*
Date started operation--12/65
Total subscribers as of 3/1/74--10,400
Penetration--57.8
Potential number of homes in market--18,000
Franchise type--ORD/FR Combination
Length--30 years
Total miles of cable--172
Hookup rate--$10.00
Monthly fee--$5.95
Fee paid to the community--5.01%-500,000, 6% next 250,000, 7% over 750,000
Total fee paid in 1973--$20,355.70
Schools in community--those wired at present--21-16
Does system provide free services--yes

Marysville
Franchise type--ORD/FR Combination

Ft. Gratiot Twp.
Feanchise type--ORD/FR Combination
Total fee paid in 1973--$2,301.17

Pt. Huron Twp.
Franchise type--Agreement
Total fee paid in 1973--$1,564.93

Butchville Twp.
Franchise type--ORD/FR Combination
Total fee paid in 1973--$413.39

St. Clair--Franchised

System Operator (Owner)--Crystal Falls CATV
401 Superior
Crystal Falls, Michigan
906-875-6650

Crystal Falls*
Date started operation--4/60
Total subscribers as of 3/1/74--380
Franchise type--City-Owned
Total miles of cable--11
Hookup rate--$30.00
Monthly fee--$2.00

System Operator (Owner)--Fetzer Cablevision
590 W. Maple St.
Kalamazoo, Michigan
517-344-0141

Kalamazoo*
Date started operation--11/66
Total subscribers as of 3/1/74--6,725
Franchise type--Lease system with Michigan Bell
Total miles of cable--205
Hookup rate--$15.00
Monthly fee--$5.00
Additional set fee--$1.00
Maximum number of channels--12
Channels utilized--12

Kalamazoo Twp.
Date started operation--12/66
Total subscribers as of 3/1/74--1,666
Total miles of cable--44.96

Portage
Date started operation--9/67
Total subscribers as of 3/1/74--2,677
Total miles of cable--91

Parchment
Date started operation--1/67
Total subscribers as of 3/1/74--233
Total miles of cable--7.9

Comstock Twp.
Date started operation--4/68
Total subscribers as of 3/1/74--123
Total miles of cable--.93

Cooper Twp.
Date started operation--1/67

Oshtemo Twp.
Date started operation--12/66
Total subscribers as of 3/1/74--12
Total miles of cable--2.26

System Operator (Owner)--Flint CATV Inc.
3600 South Port Highway
Flint, Michigan
313-742-9222
Wonderland Ventures

Flint*
Date started operation--7/66
Total subscribers as of 3/1/74--21,000
Penetration--42
Potential numbers of homes in market--50,000
Franchise type--Lease system with Michigan Bell
Total miles of cable--383
Hookup rate--$15.00
Monthly fee--$5.00
Maximum number of channels--12
Channels utilized--12
Extra services provided--40-50 hrs. origination per week

Grand Blanc, Grand Blanc Twp., Burton--Franchised

System Operator (Owner)--General Television of Michigan
319 S. State
Oscoda
517-739-9077
(American Television and Communications Corp.)

Oscoda*
Date started operation--12/63
Total subscribers as of 3/1/74--1520
Franchise type--Franchise
Length--5-15 years
Total miles of cable--30
Hookup rate--$19.00
Monthly fee--$4.50
Maximum number of channels--12
Channels utilized--5

Wurtsmith AFB
Date started operation--12/64
Total subscribers as of 3/1/74--1300
Total miles of cable--20

Ausible Twp.
Date started operation--12/63
Total subscribers as of 3/1/74--659
Total miles of cable--20

Greenbush Twp.
Date started operation--1968
Total subscribers as of 3/1/74--240
Total miles of cable--12

Tawas City*
Date started operation--5/65
Total subscribers as of 3/1/74--436
Total miles of cable--10
Maximum number of channels--12
Channels utilized--6

Tawas Twp.
Date started operation--5/65
Total subscribers as of 3/1/74--40
Total miles of cable--8

East Tawas
Date started operation--5/69
Total subscribers as of 3/1/74--519
Total miles of cable--10

System Operator (Owner)--Gerity Cablevision
121 W. Maumee St.
Essexville, Michigan 49221
517-893-9535

Bay City*
Date started operation--11/71
Total subscribers as of 3/1/74--5894
Eatimate of subscribers in 1977--27,000
Penetration--35.5
Potential number of homes in market--16,022
Franchise type--Ordinance
Length--5 years
Total miles of cable--131
Percent completion--100
Hookup rate--$14.95
Monthly fee--$5.00
Maximum number of channels--21
Channels utilized--12
Extra services provided--1 Public Access, weather/music
Advertising--Yes
Income from advertising in 1973--$3,000.
Fee paid to the community--5%
Total fee paid in 1973--$32,472.00
Schools in community-those wired at present--55.50
Does system provide free services--yes

Essexville
Date started operation--8/71
Total subscribers as of 3/1/74--771
Penetration--52.1
Potential number of homes in market--1480
Total miles of cable--17
Percent completion--100
Extra services provided--Public service/music, 2-way audio, video, data

Bangor Twp.
Date started operation--4/72
Total subscribers as of 3/1/74--2007
Penetration--49.3
Potential number of homes in market--4075
Total miles of cable--45
Percent completion--80
Extra services provided--Local origination, 15 hrs week, financial, news, music

Hampton Twp.
Date started operation--12/72
Total subscribers as of 3/1/74--508
Penetration--43.1
Potential number of homes in market--1180
Total miles of cable--25
Percent completion--40

Portsmouth Twp.
Date started operation--12/72
Total subscribers as of 3/1/74--223
Penetration--37.2
Potential number of homes in market--600
Total miles of cable--17
Percent completion--10

Monitor Twp.
Date started operation--12/72
Total subscribers as of 3/1/74--632
Penetration--38.3
Potential number of homes in market--1650
Total miles of cable--25
Percent completion--40

Frankenlust Twp.
Date started operation--12/72
Total subscribers as of 3/1/74--94
Penetration--69.6
Potential number of homes in market--135
Total miles of cable--8
Percent completion--20

Midland
Date started operation--3/72
Total subscribers as of 3/1/74--4609
Penetration--41.5
Potential number of homes in market--11,114
Percent completion--100

Midland Twp.

Williamston, Auburn, and Kawkawia--franchised
Potential number of homes in market--1,289

System Operator (Owner)--Glen Lake Cable Co.
215 W. 16th St.
Traverse City, Michigan
947-9302

Empire*
Date started operation--1971
Total subscribers as of 3/1/74--400
Franchise type--ORD/FR combo
Length--30 years

Glen Arbor--Franchised

System Operator (Owner)--Great Lakes Cable Television Inc.
413 Wauhazoo Ave.
Petoskey, Michigan
616-347-4352

Harbor Springs*
Date started operation--1964
Total subscribers as of 3/1/74--2500
Penetration--62.5
Potential number of homes in market--4000
Franchise type--Franchise
Length--5 years
Total miles of cable--50
Hookup rate--$15.00
Monthly fee--$5.00
Maximum number of channels--12
Channels utilized--5
Total fee paid in 1973--$3.00 per pole per year
$2,640.00

Petoskey
Date started operation--1954
Total fee paid in 1973--$2,199.00

System Operator (Owner)--Huron CATV Inc.
119 State Street
Harbor Beach, Michigan 48841
517-479-6160

Harbor Beach*
Date started operation--4/68
Total subscribers as of 3/1/74--725
Estimate of subscribers in 1977--825
Penetration--72.5
Potential number of homes in market--1000
Franchise type--permit
Length--10 years
Total miles of cable--18.5
Percent completion--100
Hookup rate--$15.00
Monthly fee--$5.95
Maximum number of channels--12
Channels utilized--8
Extra services provided--Time/Weather, 23 hr. local Orig.
Advertising--yes
Income from advertising in 1973--$122.00
Fee paid to the community--none
Schools in community--those wired at present--4-2
Does system provide free services--no

Sand Beach

System Operator (Owner)--Iron Range Cable TV
124 N. Third St.
Marquette, Michigan 49855
906-225-1151
(Cox Cable Comm.)

Ishpeming*
Date started operation--10/60
Total subscribers as of 3/1/74--2035
Penetration--76.0
Potential number of homes in market--2676
Franchise type--Ordinance
Length--15 years
Total miles of cable--30
Hookup rate--$19.95
Monthly fee--$516.00
Additional set fee--$2.00
Maximum number of channels--12
Channels utilized--8
Extra services provided--1 Gov/1 Educ
Fee paid to community--3%
Total fee paid in 1973--$15,024.
Schools in community--those wired at present--3-2
Does system provide free services--yes

Ishpeming Twp.
Date started operation--1/65
Total subscribers as of 3/1/74--434
Penetration--94.3
Potential number of homes in market--460
Total miles of cable--10

Palmer
Date started operation--1/65
Total subscribers as of 3/1/74--88
Penetration--75.9
Potential number of homes in market--116

Harvey
Date started operation--10/65
Total subscribers as of 3/1/74--361
Total miles of cable--3.5

National Mine
Date started operation--10/69
Total subscribers as of 3/1/74--41
Penetration--18.2
Potential number of homes in market--225
Total miles of cable--9.5

Negaunee
Date started operation--12/60
Total subscribers as of 3/1/74--1103
Penetration--70
Potential number of homes in market--1575
Total miles of cable--24

Ely Twp.
Date started operation--12/69
Total subscribers as of 3/1/74--44
Penetration--51.8
Potential number of homes in market--85
Total miles of cable--2.0

Greenwood

Marquette*
Date started operation--2/61
Total subscribers as of 3/1/74--4161
Penetration--88
Potential number of homes in market--5200
Total miles of cable--79

Marquette Twp.

Chocolay Twp.

Munising*
Date started operation--11/61
Total subscribers as of 3/1/74--734
Penetration--86.3
Potential number of homes in market--850
Total miles of cable--13

System Operator (Owner)--Iron River Community TV Antenna Corp.
429 3rd St.
Iron River, Michigan
906-265-3810

Iron River*
Date started operation--5/57
Total subscribers as of 3/1/74--1099
Franchise type--City owned
Hookup rate--$125 to $150 or $9.00 quarter
Maximum number of channels--12
Channels utilized--6

System Operator (Owner)--Lake Charlevoix Cable TV Inc.
202 State St., Box 408
Charlevois, Michigan
616-547-9426

Charlevoix*
Date started operation--12/66
Total subscribers as of 3/1/74--1103
Estimate of subscribers in 1977--3000
Penetration--78.8
Potential number of homes in market--1400
Franchise type--Ordinance
Length--10 years
Total miles of cable--83
Percent completion--99
Hookup rate--$20.00
Monthly fee--$5.00
Additional set fee--50¢
Maximum number of channels--12
Channels utilized--6
Extra services provided--1 Ind., Time/Weather, Music
Total fee paid in 1973--$3549.96
Schools in community--those wired at present--14-12
Does system provide free services--Yes

Charlevoix Twp.

Boyne City*
Date started operation--11/67
Total subscribers as of 3/1/74--1500
Penetration--83.3
Potential number of homes in market--1000

East Jordan
Date started operation--2/68

Wilson Twp.
Date started operation--11/67

Evangeline Twp.
Date started operation--11/67

Eveline Twp.
Date started operation--11/67

South Avin Twp.
Date started operation--2/68

Gaylord*
Date started operation--3/68
Total subscribers as of 3/1/74--809
Penetration--73.5
Potential number of homes in market--1100

Livingston Twp.

Hayes Twp.

Bagley Twp.

Elmire Twp.

System Operator (Owner)--Liberty TV Cable Inc.
118 N. Winter St.
Adrian, Michigan 49221
313-263-4663
(Liberty Comm.)

South Haven*
Date started operation--1966
Total subscribers as of 3/1/74--1209
Estimate of subscribers in 1977--1500
Penetration--47.6
Potential number of homes in market--2540
Franchise type--FR/Ord. Combination
Length--15 years
Total miles of cable--35
Percent completion--90
Hookup rate--$10.00
Monthly fee--$5.00
Additional set fee--$1.00
Maximum number of channels--12
Channels utilized--12

Extra services procived--Time/Weather, 2 Ind.
Advertising--yes
Income from Advertising in 1973--$15,660.
Fee paid to the community--3%
Schools in community--those wired at present--12-12
Does system provide free services--yes

Adrian*
Date started operation--1966
Total subscribers as of 3/1/74--4567
Estimate of subscribers in 1977--6000
Penetration--44.8
Potential number of homes in market--10,200
Length--10 years
Total miles of cable--79
Extra services provided--Public Access--1 hr per wk.
2-way Educ. System

Tecumseh

Adrian Twp.

Tecumseh Twp.

System Operator (Owner)--Manistee TV Cable Inc.
342 Main St., Box 236
Milford, Michigan
313-685-2178

Manistee*
Date started operation--5/67
Total subscribers as of 3/1/74--1800
Estimate of subscribers in 1977--2100
Penetration--60.0
Potential number of homes in market--3000
Franchise type--franchise
Length--5 years
Total miles of cable--23
Monthly fee--$5.50
Maximum number of channels--12
Channels utilized--11
Extra services provided--1 Educ., 1 cablecasting, 1/2 hr per wk., 1 music, 1 Ind.
Fee paid to the community--3%
Total fee paid in 1973--$3,193.05
Schools in community--those wired at present--6-6
Does system provide free services--no

Manistee Twp.
Total miles of cable--5

Filer Twp.
Total miles of cable--9

System Operator (Owner)--Manistique TV Cable Co.
207 S. Cedar
Manistique, Michigan
906-341-5457

Manistique*
Date started operation--1963
Total subscribers as of 3/1/74--1300
Penetration--77.4
Potential number of homes in market--1680
Total miles of cable--21.5
Hookup rate--$19.95
Monthly fee--$6.00
Additional set fee--50¢
Maximum number of channels--12
Channels utilized--12
Extra services provided--2-Way capability

System Operator (Owner)-- Michigan CATV Co.
120 1/2 W. Chicago Rd.
Sturgis, Michigan 49091
651-6280

Sturgis*
Date started operation--9/66
Total subscribers as of 3/1/74--2200
Estimate of subscribers in 1977--2600
Penetration--18.6
Potential number of homes in market--2800
Franchise type--Franchise
Length--15 years
Total miles of cable--27.2
Percent completion--98
Hookup rate--$15.00
Monthly fee--$5.00
Additional set fee--$1.50
Maximum number of channels--12
Channels utilized--12
Extra services provided--Local origination--2 hr per week
Advertising--yes
Fee paid to the community--$1,000 per year
Total fee paid in 1973--$1,000.
School in community--those wired at present--6-6
Does system provide free services--Yes

System Operator (Owner)--Michigan Cable TV
416 W. Huron St., Box 998
Ann Arbor, Michigan 48106
313-769-4707

Ann Arbor*
Date started operation--5/72
Total subscribers as of 3/1/74--9500
Penetration--28.8
Potential number of homes in market--33,000
Franchise type--Franchise
Length--15 years
Total miles of cable--195.6
Percent completion--90
Hookup rate--$15.00
Monthly fee--$5.00
Additional set fee--$1.50
Maximum number of channels--22
Channels utilized--20
Extra services provided--AP channel, FM, Time/Weather
Govt (35-40 per wk) Educ,
Pub access, News (local live)
Fee paid to the community--5%
Schools in community--those wired at present--5-5
Does system provide free services--Yes

Washtenaw Co.

Ypsilanti and Saline--Under construction

System Operator (Owner)--Midwestern Cablevision Corp.
308 E. Front St.
Traverse City, Michigan 49684
616-947-5220
(Midwestern Broadcasting Co.)

Traverse City*
Date started operation--7/65
Total subscribers as of 3/1/74--3200
Franchise type--Contract
Length--15 years
Total miles of cable--115
Fee paid to the community--2% to 1500; 3% over 1500
Total fee paid in 1973--$6904.50

Blair
Date started operation--1/66
Total subscribers as of 3/1/74--2417
Total miles of cable--160
Fee paid to the community--2.50/pole

Long Lake
Fee paid to the community--2.50/sub.

System Operator (Owner)--Monroe Cablevision
Box 808
Monroe, Michigan
313-241-2225

Monroe*
Date started operation--3/71
Total subscribers as of 3/1/74--2794
Estimate of subscribers in 1977--5500
Penetration--40.5
Potential number of homes in market--6900
Franchise type--Fr/Ord. Combination
Length--15 years
Total miles of cable--90
Percent completion--95
Hookup rate--$15.00
Monthly fee--$5.00
Maximum number of channels--20
Channels utilized--12
Extra services provided--Local origination - 15 hrs. wk., 1 split (Govt. & Educ)
Fee paid to the community--3% 250,000; 5% excess
Total fee paid in 1973--$4375.00
Schools in community--those wired at present--21-5
Does system provide free services--No.

Monroe Twp.
Total subscribers as of 3/1/74--240
Percent completion--70

System Operator (Owner)--Muskegon Cable TV Co.
Box 978, 700 W. Broadway
Muskegon, Michigan 49940

Muskegon*
Date started operation--1966
Total subscribers as of 3/1/74--769
Estimate of subscribers in 1977--10,000
Penetration--68.5
Potential number of homes in market--14,590
Franchise type--FR/Lic Combination
Length--15 years
Total miles of cable--68
Percent completion--40
Hookup rate--$10.00
Monthly fee--$5.00
Additional set fee--50¢
Maximum number of channels--30
Channels utilized--6
Extra services provided--Time/Weather
Fee paid to the community--3%

Total fee paid in 1973--$2550.00
Schools in community--those wired at present--8-1
Does system provide free services--Yes

N. Muskegon
Total subscribers as of 3/1/74--349
Length--25 years
Percent completion--75

Muskegon Heights, Norton Shores, Muskegon Twp. and Roosevelt Park--under construction to join Muskegon system.

System Operator (Owner)--National Cable Co.
East Lansing
P. O. Box 918
517-351-8080
(LVO Cable)

East Lansing*
Date started operation--1969
Total subscribers as of 3/1/74--1500
Estimated subscribers in 1977--10,000
Franchise type--FR/Ord. Combination
Length--7 years
Total miles of cable--12
Monthly fee--$5.00
Maximum number of channels--36
Channels utilized--12
Extra services provided--Local origination-8 hrs wk.
Fee paid to the community--5%
Total fee paid in 1973--$1,000.00
Schools in community--those wired at present--6-6
Does system provide free services--Yes

System Operator (Owner)--Northern Video Inc.
306 Houghton St.
Ontonagon, Michigan 49953
884-4640

Ontonagon*
Date started operation--6/61
Total subscribers as of 3/1/74--735
Franchise type--Fr/Ord. Combination
Length--1 year
Total miles of cable 10
Fee paid to the community--$10.00 year

L'Anse*
Date started operation--1960
Total subscribers as of 3/1/74

Length--30 years
Total miles of cable--11
Fee paid to the community--$1.00 per connection

Baraga*
Date started operation--6/73
Franchise type--Fr/Ord. Combination

White Pine--Under construction, separate head end

System Operator (Owner)--Northern Cable Co., Inc.
2066 Shore Rd.
Rogers City, Michigan
517-734-4214
(Cable Services Co.)

Rogers City*
Date started operation--5/72
Total subscribers as of 3/1/74--870
Estimate of subscribers in 1977--1,000
Penetration--58
Potential number of homes in market--1500
Franchise type--Franchise
Length--10 years
Total miles of cable--25
Percent completion--65
Hookup rate--$15.00
Monthly fee--$5.00
Additional set fee--$1.00
Maximum number of channels--12
Channels utilized--5
Schools in community--those wired at present--3-0
Does system provide free services--yes

Rogers City Twp.

Noltke Twp.

System Operator (Owner)--City of Norway Community TV
Norway, Michigan
906-563-8015

Norway*
Date started operation--3/54
Total subscribers as of 3/1/74--1060
Estimate of subscribers in 1977--1,110
Penetration--88.3
Potential number of homes in market--1200
Franchise type--City owned
Total miles of cable--23
Percent completion--60

Hookup rate--$60.00
Monthly fee--$1.75
Maximum number of channels--12
Channels utilized--7
Extra services provided--1 Educ.
Schools in community--those wired at present--2-2
Does system provide free services--yes

Norway Twp.
Percent completion--51
Hookup rate--$75.00
Monthly fee--$2.50

System Operator (Owner)--Rapid Cablevision
13754 Northland Dr.
Big Rapids, Michigan
616-786-3566

Big Rapids*
Date started operation--10/73
Total subscribers as of 3/1/74--750
Estimate of subscribers in 1977--1,800
Penetration--30
Potential number of homes in market--2500
Franchise type--Ordinance
Length--15 years
Total miles of cable--30.9
Percent completion--100
Hookup rate--$15.00
Monthly fee--$5.00
Additional set fee--50¢
Maximum number of Channels--30
Channels utilized--12
Fee paid to community--$4.00/pole
Schools in community--those wired at present--6-6
Does system provide free service--yes

Big Rapids Twp.

Green Twp.

System Operator (Owner)--Saginaw Cable Television Co.
720 N. Bates
Saginaw, Michigan
517-799-8030
(Century Cable Communications Inc.)

Saginaw*
Date started operation--5/25/73
Total subscribers as of 3/1/74--6525
Estimate of subscribers in 1977--20,000

Penetration--21.8
Potential number of homes in market--30,000
Franchise type--Franchise
Length--15 years
Total miles of cable--190.5
Percent completion--65
Hookup rate--$14.95
Monthly fee--$5.95
Additional set fee--$1.45
Maximum number of channels--21
Channels utilized--10
Extra services provided--2 AP Channels, Time/Weather Message Wheel
Fee paid to the community--3%

Saginaw Twp.

Carrollton Twp.

Zilwaukee Twp.

Spaulding Twp.

Buena Vista Twp.

System Operator (Owner)--Satellite System Corp.
Box 615
Marquette, Michigan 49855

KI Sawyer AFB*
Date started operation--12/71
Total subscribers as of 3/1/74--1812
Estimate of subscribers in 1977--3000
Penetration--60.4
Potential number of homes in market--3000
Franchise type--Service Agreement
Length--Indef.
Total miles of Cable--24
Percent completion--100
Hookup rate--$6.90
Monthly fee--$4.75
Additional set fee--$1.20
Maximum number of channels--21
Channels utilized--10
Extra services provided--Weather, local origination
Advertising--yes
Income from advertising in 1973--$1200.
Does system provide free services--yes

Forsyth Twp.
Date started operation--4/74

System Operator (Owner)--Stanbaugh Cable Co.
121 4th St.
Caspian, Michigan 49915
906-265-3551

Stanbaugh*

Gaastra

System Operator (Owner)--Tequamenon Cablevision Inc.
703 S. 15th St.
Escanaba, Michigan
616-627-2741

Pentland Twp.*
Date started operation--4/66
Total subscribers as of 3/1/74--911
Penetration--64.3
Potential number of homes in market--5000
Franchise type--Ord, License
Length--15 years
Hookup rate--$9.00
Monthly fee--$6.00
Maximum number of channels--12
Channels utilized--8
Extra services provided--Weather
Fee paid to the community--2%

Newberry

St. Ignace*
Date started operation--6/67
Total subscribers as of 3/1/74--829
Fee paid to the community--$25.00 yr.
Total fee paid in 1973--$25.00

Cheboygan
Date started operation--1966
Total subscribers as of 3/1/74--1144
Fee paid to the community--2%

Mackinaw City*
Date started operation--4/68
Total subscribers as of 3/1/74--329

System Operator (Owner)--Thumb TV Cable Co.
Box 907
Pt. Huron, Michigan 48050

Bad Axe*
Date started operation--12/68
Total subscribers as of 3/1/74--453
Franchise type--Contract
Length--30 years
Total miles of cable--16
Hookup rate--$10.00
Monthly fee--$5.95
Additional set fee--$1.00
Maximum number of channels--12
Channels utilized--12
Extra services provided--local weather
Fee paid to the community--5.01%
Total fee paid in 1973--$170.00

Colfax Twp.
Date started operation--5/69
Total subscribers as of 3/1/74--66
Total miles of cable--6
Fee paid to the community--7%

System Operator (Owner)--Thumb Video
Mt. Pleasant, Michigan

Caro*

Almer Twp.

Indianfields Twp.

Vasser and Cass City--franchised

System Operator (Owner)--Triad Cablevision Inc.
411 W. Michigan
Marshall, Michigan 49068
(Triad Stations Inc.)
616-781-5101

Marshall*
Date started operation--12/66
Total subscribers as of 3/1/74--1045
Franchise type--Franchise
Length--10 years
Total miles of cable--26
Fee paid to the community--2% for 200,000, 3% next 60,000, 4% over 180,000

Albion
Date started operation--12/67
Total subscribers as of 3/1/74--885
Total miles of cable--40

Albion Twp.
Date started operation--12/67
Total subscribers as of 3/1/74--16
Total miles of cable--1

Sheridan Twp.
Date started operation--12/67
Total subscribers as of 3/1/74--21
Total miles of cable--1

Marshall Twp.
Date started operation--9/67
Total subscribers as of 3/1/74--41
Total miles of cable--2

Marengo Twp.
Date started operation--9/67
Total subscribers as of 3/1/74--24
Total miles of cable--14

System Operator (Owner)--Tri-City Cable TV
114 1/2 N. Locust St.
Allegan, Michigan 49010
616-673-3812

Allegan*
Date started operation--8/67
Hookup rate--$20.00
Monthly fee--$5.00
Maximum number of channels--12
Channels utilized--9
Fee paid to the community--4%
Total fee paid in 1973--$1694.71

Otsego--Under construction
Length--20 years

Plainwell--Franchised
Total miles of cable--25.6

System Operator (Owner)--Twin Valley CATV Inc.
63 N. Howell
Hillsdale, Michigan
517-437-2656
(Lamb Communications)

Jonesville*
Date started operation--6/66
Total subscribers as of 3/1/74--2600 for both systems
Franchise type--Lease agreement with Michigan Bell
Total miles of cable--46

Hillsdale
Date started operation--1/1/66

System Operator (Owner)--Warner Cable Corp.
Menominee, Michigan
906-863-2656
(Warner Cable Corp.)

Menominee*
Date started operation--3/1/70
Total subscribers as of 3/1/74--3,000
Franchise type--Contract
Length--Indef.
Total miles of cable--75
Hookup rate--$18.75
Monthly fee--$5.00
Fee paid to the community--$500.00 per yr. plus $1/yr plus subs.
Total fee paid in 1973--$1,809.50

System Operator (Owner)--WGN Electronic System Co.
610 Sheridan Ave.
Houghton, Michigan
906-482-2080
(WGN Electronic Systems Co.)

Hancock*
Date started operation--1/11/55
Total subscribers as of 3/1/74--1303
Estimate of subscribers in 1977--1433
Penetration--85
Potential number of homes in market--1685
Franchise type--Ord./Agreement
Length--5
Total miles of cable--48.4
Percent completion--72
Hookup rate--$25.00
Monthly fee--$5.00
Additional set fee--$1.50
Maximum number of channels--12
Channels utilized--7
Extra services provided--Time/Weather
Schools in community--those wired at present--8-8
Does system provide free services--yes

Houghton
Date started operation--1953
Total subscribers as of 3/1/74--1064
Estimate of subscribers in 1977--1170
Penetration--90

Potential number of homes in market--1300
Length--10

Adams Twp.
Date started operation--10/5/70
Total subscribers as of 3/1/74--235
Penetration--84.8
Potential number of homes in market--277
Length--10

Osceola Twp.
Date started operation--1/28/68
Total subscribers as of 3/1/74--270
Estimate of subscribers in 1977--270
Penetration--84.6
Potential number of homes in market--319
Length--Indef.

Franklin Twp.
Date started operation--1/9/56
Total subscribers as of 3/1/74--103
Estimate of subscribers in 1977--103
Penetration--84.4
Potential number of homes in market--122
Length--Indef.

Portage Twp.
Date started operation--8/26/68
Total subscribers as of 3/1/74--237
Estimate of subscribers in 1977--260
Penetration--92.9
Potential number of homes in market--280
Length--Indef.

Chassel Twp.
Date started operation--12/7/66
Total subscribers as of 3/1/74--149
Estimate of subscribers in 1977--164
Penetration--91.1
Potential number of homes in market--180
Length--10

Quincy Twp.
Date started operation--1/23/56
Total subscribers as of 3/1/74--23
Estimate of subscribers in 1977--25
Penetration--67.6
Potential number of homes in market--37
Length--Indef.

System Operator (Owner)--Wolverine Cablevision Inc.
357 W. Columbia Ave.
Battle Creek, Michigan 49015
616-962-6216
(50% Fetzer Broadcasting, 50% American Television and Comm.)

Battle Creek*
Date started operation--1/66
Total subscribers as of 3/1/74--6305
Estimate of subscribers in 1977--10,850
Penetration--54.3
Potential number of homes in market--20,000
Franchise type--Franchise and Letter of Permission
Length--10 years
Total miles of cable--250
Percent completion--80
Hookup rate--$18.50
Monthly fee--$4.90
Additional set fee--$1.50
Maximum number of Channels--12
Channels utilized--10
Extra services provided--2 Local news casts per day, church, local origination (30-40 hrs. per week)
Advertising--yes
Income from advertising in 1973--$24,655.
Total fee paid in 1973--$22,615.00
Schools in community--those wired at present--34-13
Does system provide free services--yes

Battle Creek Twp.
Total subscribers as of 3/1/74--3141

Springfield
Total subscribers as of 3/1/74--308

Redford Twp.

Pennfield Twp.
Total subscribers as of 3/1/74--456

Emmett Twp.
Total subscribers as of 3/1/74--99

Albion*
Date started operation--11/66
Total subscribers as of 3/1/74--619
Estimate of subscribers in 1977--700
Penetration--83.6

Potential number of homes in market--800
Maximum number of channels--12
Channels utilized--8

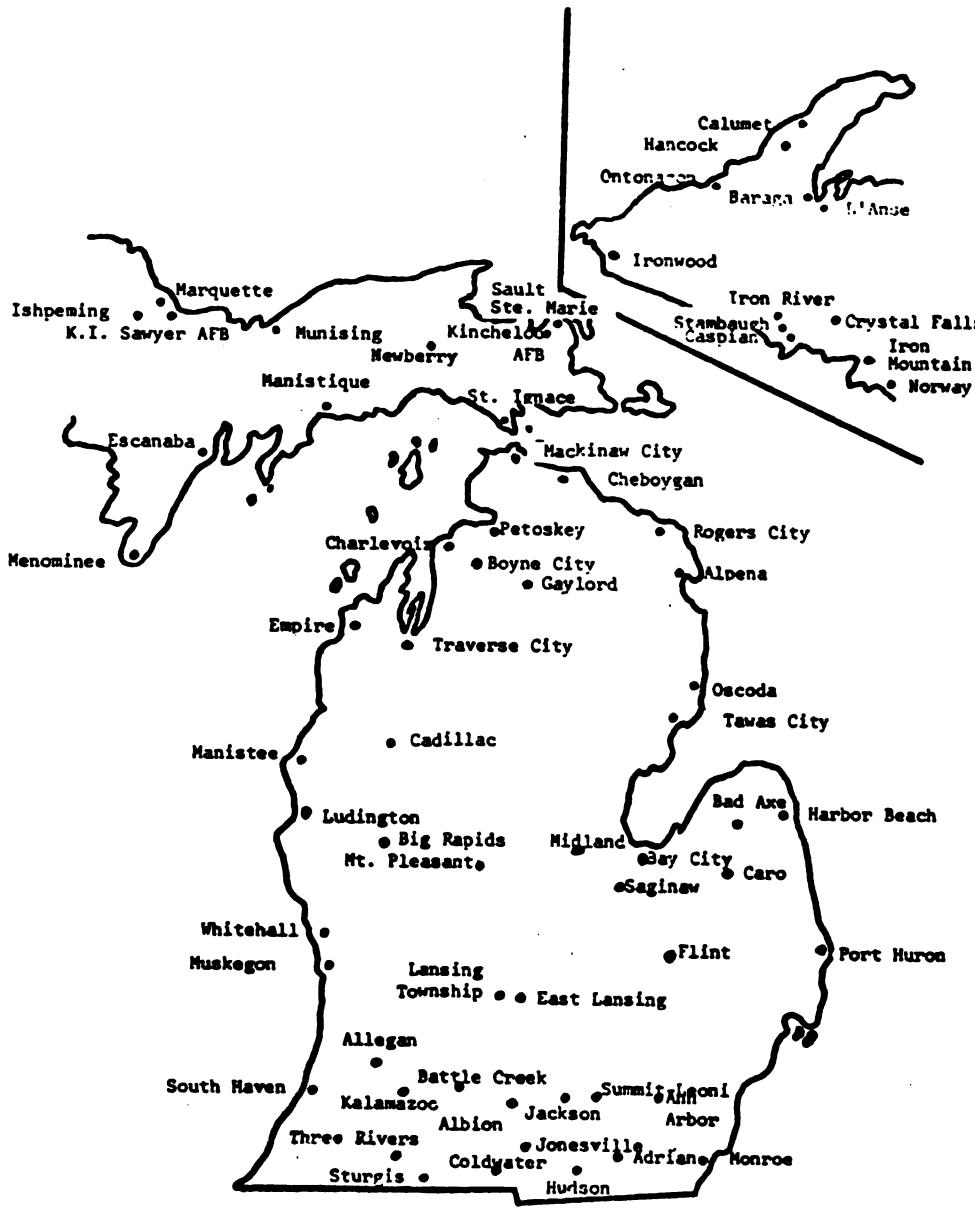
Sherican Twp.
Total subscribers as of 3/1/74--36

APPENDIX B

MAP OF OPERATING CATV SYSTEMS IN MICHIGAN

APPENDIX B

MAP OF OPERATING CATV SYSTEMS IN MICHIGAN



APPENDIX C

GLOSSARY OF TERMS

The following terms are among those most commonly employed to describe cable operation or its regulation. Those definitions marked with an (*) relate specifically to cable rules now in effect.

ACCESS CHANNELS* (also PUBLIC ACCESS). Those channels of a cable system made available to members of the public without charge on a nondiscriminatory, first-come, first-served basis and over which the cable operator can exercise no power of censorship.

BRANCH. A relay device retransmitting broadcast signals at increased power on the same frequencies as those originally received. (SEE ALSO TRANSLATOR.)

BROADBAND COMMUNICATION. Any electronic delivery system having the capacity to carry a wide range of electromagnetic frequencies.

BROADCAST BAND. Generally, the medium wave radio broadcast frequency allocation (535 kHz-1,605 kHz). Can also apply to any other segment of such frequencies allocated for a particular broadcast service.

BROADCASTING. The dissemination of radio communications intended for reception by the public directly or through relay stations.

CABLECASTING. Term used synonymously for any nonbroadcast signals carried by a cable system, but more accurately employed to describe only that programming produced and distributed by the cable operator on the channel authorized for such service. See also LOCAL ORIGINATION.

CABLE SYSTEM. By FCC definition, a facility serving a single community or a distinct governmental entity.

CARRIAGE. The conveyance or retransmission of a broadcast signal.

CARS (COMMUNITY ANTENNA RELAY SYSTEM or CABLE RELAY SYSTEM). A microwave service owned by a cable TV system for the purpose of importing television signals for use over the system.

COMMUNICATIONS COMMON CARRIER. An entitly offering wire or microwave point-to-point message delivery to lessees at a specified, or "tariffed", rate.

CONTOUR. A line defining a broadcast station's coverage patterns. A grade. A contour encompasses the area in which a good picture is normally available at least 90 percent of the time in the most favorable 50 percent of all receiver locations.

CONVERTER. Any device changing the frequency of a signal. A converter in the "headend" of a cable system normally changes all UHF frequencies to facilitate delivery to the more effective VHF tuning band (channels 2-13) of the average television receiver.

DEDICATED CHANNEL*. A cable channel devoted to one of three uses specified by the FCC: local government, education, or noncommercial public access.

DISTANT SIGNAL. A signal carried beyond the predicted grade B contour of the station transmitting it.

DOWNSTREAM. A signal flow from the "headend" of the system to the subscriber terminal.

DROP. The final linkage of a cable system, connecting each subscriber home to the service.

DUPLICATION. Cable carriage of a "distant signal" providing the same programming as that transmitted by a "local station". Also see NONDUPLICATION.

EXCLUSIVITY.* The contractual right to be the sole exhibitor of a program in a particular area for a specified period of time.

FRAGMENTATION. The concept that cable's multiple-program offerings divide the viewing attention of a local station's audience among a greater number of channels, thus reducing the percentage of those watching the local station.

FRANCHISE . An agreement between a cable operator and a governmental body defining the rights and obligations of each with respect to communication service to be provided the community involved.

GRANDFATHERING. A tactic commonly employed by the FCC, when it is enacting new rules, of exempting existing stations or systems from their effects, either for a specified period of time or indefinitely, to allow changes to be made without undue injury to either the operators of the audiences dependent upon their services.

HEADEND. The eldctronic control center of a cable system, usually located near the antenna or microwave relay facilities, where incoming television signals are amplified, filtered, and converted if necessary before being delivered to the subscriber home.

INTERACTIVE MODE. A cable system that allows two-way communication, including contact between subscriber and operator, or contacts among groups of subscribers.

LEAPFROGGING. Importation by a cable system of a broadcast signal from a distant market while bypassing the signals of a station closer to the system.

LOCAL ORIGINATION. Programming produced by the system which delivers it, ranging from automated displays of time and weather to live and videotaped features produced by the operator or members of the public.

LOCAL STATION. Any television station placing a signal of grade B contour or better over any portion of the area in which a cable system is operating. Can also refer to a television station located within thirty-five miles of any portion of a cable system.*

MAJOR MARKET. The specified zone of a commercial television station licensed to a top-100 community, as designated by the American Research Bureau (ARB), a private organization that conducts audience analyses.

MICROWAVE. High frequency transmission facility used to relay messages, including television signals from point-to-point, by common carrier.

NONDUPLICATION. Restraint imposed upon cable carriage of "distant signals" offering the same programming as that transmitted by a "local station". At various times, the FCC has prohibited such "duplication" for thirty days from time of transmission, for fifteen days prior to and subsequent to time of transmission, and for one day from time of transmission.

PAY-TV (also SUBSCRIPTION TV: STV: TOLL TV). An independently programmed communications system charging subscribers for each program viewed. Distribution can be by encoded broadcast signal, wire, or cable channel, but the pay-TV operator cannot augment his offerings with programming from television broadcasts.

PENETRATION. The percentage of households in an area where cable service is available who have subscribed to this service.

SIPHONING. Charge of broadcasters that audience support of cable and pay-TV systems will allow them to outbid broadcasters for prime entertainment and sporting events, and therefore to deprive "free TV" audiences of this premium programming.

SMALLER TELEVISION MARKETS.* All television markets not designated as "major markets" or top-11 markets.

TERMINAL. The equipment at the subscriber end of the cable linkage. This term includes everything from a simple plate to which wires from the antenna outlet on the receiver are attached to sophisticated devices which might include keyboards, videotape recorders, and mini-computers.

TRANSLATOR. A low powered relay device, licensed by the FCC, which receives a television signal on one channel and converts it to another channel, generally UHF, for retransmission without significantly altering its original characteristics.

TRUNK. The main line of a cable system, usually including amplifiers as well as the coaxial linkages.

UHF (ULTRA HIGH FREQUENCY). A band of frequencies extending from 300 MHz to 3,000 MHz. Television stations assigned to channels 14-70 are known as UHF stations and operate on frequencies ranging from approximately 470 MHz to 800 MHz.

UPSTREAM. A message flow from the subscriber terminal to the "headend" of a system.

Terms are from "Cable Television and the FCC--A Crisis in Media Control, by Don R. LeDuc, Temple University Press, p. 233, 1973. For additional terms, see CATV (Special Edition), 17 February 1972, pp. 32-33; or Dictionary of CATV Terminology, Jones International Ltd., c/o National Cable Television Association, Inc., 918 Sixteenth St., N.W., Washington, D.C. 20006.

APPENDIX D

GROWTH OF CATV INDUSTRY-- UNITED STATES/MICHIGAN

YEAR	NEW SYSTEMS		TOTAL SYSTEMS		PERCENT INCREASE	
	U.S.	MICH.	U.S.	MICH.	U.S.	MICH.
1950	---	---	21	---	---	---
1951	41	---	62	---	195.2	---
1952	93	---	155	---	150.0	---
1953	119	---	274	---	76.8	---
1954	125	2	399	2	45.6	---
1955	102	3	501	5	25.6	150.0
1956	78	0	579	5	15.6	---
1957	69	1	648	6	11.9	20.0
1958	78	2	726	8	12.0	33.3
1959	76	1	802	9	10.5	12.5
1960	73	4	875	13	b.1	44.4
1961	89	4	964	17	10.2	30.8
1962	117	1	1081	18	12.1	5.8
1963	128	2	1209	20	11.8	11.1
1964	180	0	1389	20	14.9	---
1965	237	3	1626	23	17.1	15.0
1966	323	17	1949	40	19.9	73.9
1967	271	5	2220	45	13.9	12.5
1968	269	4	2489	49	12.1	8.8
1969	122	2	2611	51	4.9	4.1
1970	147	2	2758	53	5.6	3.9
1971	159	5	2917	58	5.8	9.4
1972	162	4	3079	62	5.6	6.9
1973	271*	6	3650	68**	8.8	9.7

* Through July 31, 1973; 1973-74 CATV Systems Directory

** Through March 1, 1974

(Figures represent operating systems at end of year.)

APPENDIX E

50 LARGEST MSO's
UNITED STATES ONLY

RANK	MULTIPLE SYSTEM OWNERS	SUBSCRIBER TOTAL*
1	Teleprompter	1,000,000
2	Warner Cable Corp.	455,000
3	Telecommunications Inc.	400,000
4	American Tel. and Comm.	375,000
5	Sammons Communications	240,000
6	Cox Cablevision Corp.	235,000
7	Viacom	235,000
8	Cablecom General	194,000
9	Communications Properties	190,000
10	UA-Columbia Cablevision	150,000
11	LVO Cable	121,000
12	Service Electric	115,000
13	Storer Broadcasting	100,000
14	Vikoa	90,000
15	Liberty Communications	82,000
16	Telecable Corp.	80,000
17	Continental Cablevision	78,000
18	Midwest Video	75,000
19	GE Cablevision	70,000
20	Western Communications	60,000
21	Athena Communications	53,000
22	New Channels Corp.	46,000
23	TM Communications	43,000
24	American Finance Management	43,000
25	Telesis Corp.	40,000
26	Westinghouse	39,000
27	Texas Community Antennas	38,000
28	Cable Information Systems	38,000
29	Cablevision Properties	37,300
30	Communications Services	37,000
31	Colony Communications	37,000
32	Comcast Corp.	35,000
33	Central California Comm.	35,000
34	King Videocable	30,000
35	Carl Williams	30,000
36	Davis Communications	28,000
37	California-Oregon Bdstg.	28,000
38	Triangle Publications	28,000
39	American Cable TV	28,000
40	Palmer Broadcasting	27,000
41	Vision Cable Comm.	25,000
42	Covenant Cable	24,000
43	General Television	23,000
44	Potomac Valley TV Co.	22,000
45	Orco	19,000

continued

RANK	MULTIPLE SYSTEM OWNERS	SUBSCRIBER TOTAL
46	Pencer Services	19,000
47	Multi-Channel TV Cable Co.	19,000
48	Lamb Communications	18,500
49	TV Transmission Co.	15,900
50	Pioneer Cablevision Corp.	14,500

*As of June 1973 from data in Cable Sourcebook--1974 Broadcasting Publications.

APPENDIX F

10 LARGEST MSO's OPERATING IN MICHIGAN

MSO	SUBSCRIBERS	NUMBER OF SYSTEMS	RANK IN MICHIGAN	RANK IN UNITED STATES
Lamb Communications[1]	28,835	3	1	48
TelePrompTer	22,555	6	2	1
Covenant Cable TV[2]	10,400	1	3	42
Continental Cablevision[3]	10,000	1	4	17
COX Cablevision Corp.	9,001	3	5	6
Cable Information Systems Inc.	6,687	1	6	28
Liberty Communications	5,776	2	7	15
American Television & Comm. Corp.	4,715	2	8	4
Warner Cable Corp.	3,000	1	9	2
LVO[4]	1,500	1	10	11
	102,469	21		

[1]Grand Blanc, Grand Blanc Township, and Burton not operational yet.

[2]St. Clair not operational yet.

[3]Holland not operational yet.

[4]East Lansing only partially operational.

APPENDIX G

TOP 15 SYSTEMS IN MICHIGAN WITH MOST SUBSCRIBERS

SYSTEM AND OWNER	MSO OWNER	SUBSCRIBERS	RANK
Wonderland Ventures Flint System	Lamb Communications	21,000	1
Fetzer Cablevision Kalamazoo System		11,436	2
Wolverine Cablevision Battle Creek System	Fetzer/Time-Life	10,950	3
Continental Cablevision Jackson-Blackman Twp.		10,819	4
Covenant Cable TV Port Huron System	Covenant Cable TV	10,400	5
Gerity Cablevision Bay City System	Gerity Broadcasting Co.	10,129	6
Michigan Cable TV Ann Arbor System		9,500	7
Alpena Cablevision Alpena System	Cable Info. Sys. Inc.	6,687	8
Saginaw Cable Television Co. Saginaw System	Century Cable Comm. Inc.	6,525	9
Midwestern Cablevision Traverse City System	Midwestern Broadcasting	5,617	10
American Cablevision Co. Escanaba System	TelePrompTer	5,500	11
Booth American Co. Summitt-Leoni System		4,690	12
Gerity Cablevision Midland System	Gerity Broadcasting Co.	4,609	13
Liberty TV Cable Inc. Adrian-Tecumseh System	Liberty Communications	4,567	14
Iron Range Cable TV Marquette System	Cox Cable Communications	4,106	15

APPENDIX H

MUNICIPAL OWNED CATV SYSTEMS WITH MORE THAN 1,000 SUBSCRIBERS

CITY	SUBSCRIBERS	SATURATION	SUBSCRIBER RATES ($) INSTALLATION	MONTHLY
Frankfort, Ky.	5,700	71	5.00	2.50
San Bruno, Calif.	2,750	42	15.00	4.75
Norway, Mich.	1,060	80	60.00	1.75
Iron River, Mich.	1,099	80	125.00-150.00	3.00
Opp, Ala.	1,049	81	Free	4.75
OTHER SYSTEMS IN MICHIGAN				
Crystal Falls, Mich.	380	50	30.00	2.00
OTHER SYSTEMS IN UNITED STATES				
Pitcairn, Pa.				
Jackson, Minnesota				
Newburg, Missouri				
Sumas, Washington				
Muscoda, Wisconsin				

APPENDIX I

A COMPARISON OF MICHIGAN CATV SYSTEMS 1972 THROUGH 1974

CHARACTERISTIC		1972	1973	1974
Total Number of Systems		62	68	68
Total Number of Subscribers		150,273	162,716	208,048
Total Number of Communities Served		124	157	186
Total Miles of Cable in Michigan		3,802.1	3,922.1	4,829.3
Total Number of Homes Passed		333,543	409,169	500,000*
Total Number of Systems Origin ating		10	26	28
Total Number of Systems Selling Advertising		3	10	15
Average System Miles of Cable		-	76.9	79.2
Average Channels Video	Maximum	-	-	14
	Used	-	8	9.6
Average Installation Charge			$20.12	$15.26
Average Monthly Charge		$4.67	$4.75	$4.97
Average Additional Set Charge		-	-	$1.09

APPENDIX J

CATV STATISTICS FOR ENTIRE UNITED STATES

Current Number of Operating Systems.....3,650

Total number of subscribers served.....7,250,000

Annual revenue from subscribers (exclusive of installation fees and extra outlet charges).....$428,218,869.96

Number of systems currently originating programs (exclusive of automatic program services).....875

Number of systems selling advertising time.....352

Systems providing automated program services (i.e., time/weather, news wire, stock ticker)....1,462

Number of existing systems planning expansion.....883

Miles of Plant planned in expansions.....33,918

Number of systems using microwave signal feeds.....687

Average number of microwave-fed signals per system...3.9

Number of systems carrying FM radio signals.....2,020

Number of systems with (some) underground plant.....692

Percentage of systems which are lowband.....12%

Percentage of systems with 12 channel capacity.....69%

Percentage of systems with more than 12 channel capacity.....18%

APPENDIX K

STATUS OF SERVICES IN MICHIGAN

SERVICE CATEGORY	TYPE OF COMMUNICATION	AVAILABILITY
Distribution of broadcast television program	One-way, headend to all subscribers	Operational on all cable TV systems in Michigan
Local Cablecasting	One-way, headend to all subscribers	Operational on about 40% of all Michigan systems.
Public access, educational and government channels	One-way headend to all subscribers	Operational on about 20% of Mich. systems; required of all new major market systems.
Pay TV or private channel programming	One-way, headend to certain subscribers (two-way useful but not required)	Two-way operation is available only on Bay City, Flint and Adrian systems.
Subscriber response services	Two-way, data response from subscribers to headend.	Not available in Mich. at this time.
Information retrieval, document delivery, and other "new services"	Two-way data, voice, and video between subscribers and headend, and possibly among subscribers.	Not available in Mich. at this time.

APPENDIX L

COMPARISON OF AVERAGE UNITED STATES AND MICHIGAN SYSTEM

CATEGORY	AVERAGE UNITED STATES SYSTEM	AVERAGE MICHIGAN SYSTEM
Subscribers	2,829	3,060
Miles of cable	64.93	79.16
Subscribers per mile	22	43
Channels of video carried	12.3	9.6
Subscriber monthly rate	$5.09	$4.97
Installation charge	$14.00	$15.26

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