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# Common carrier CATV: Technological, regulatory, and economic aspects

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COMMON CARRIER CATV: TECHNOLOGICAL,  
REGULATORY, AND ECONOMIC ASPECTS

A Thesis

Presented to the  
Department of Speech and Drama  
and the  
Faculty of the Graduate College  
University of Nebraska at Omaha

In Partial Fulfillment  
of the Requirements for the Degree  
Master of Arts

by

Pauline E. Henderson

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## PREFACE

Electronic communication remained captive of wire for more than a half century before a technique could be found to set it free. A major breakthrough in electronic communication occurred in 1873 when James Clerk-Maxwell published A Treatise on Electricity & Magnetism in which he established the theory of electromagnetic energy, supported by mathematical proofs and based on observation of visible light.<sup>1</sup> Within a decade experiments conducted by Heinrich Hertz which confirmed Maxwell's concepts served as the scientific basis for the first radio transmissions. Radio telephone instruments were perfected by the inventor Guglielmo Marconi which stimulated experiments in similar areas of wireless transmission. By 1907 Lee de Forest had patented the vacuum-tube which set the stage for television broadcasting. Within two decades an entertainment/information industry began to form around this new technology. Now, a half century later, radio and television stations have access to nearly every American family. Yet, in this time of spiraling scientific advances the broadcast industry faces a new challenge, not from a more complex mode of electronic signal dissemination, but from a system which has returned to wire to deliver its message. This is but one paradox in the maze or contradictions known as community antenna television (CATV).

Cable television began in 1949 when television repairmen in the mountainous areas of Pennsylvania and Oregon, attempting to gain clearer

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<sup>1</sup>Sydney W. Head, Broadcasting in America, 2nd ed. (New York: Houghton Mifflin Co., 1972), p. 117.

TV reception, fed distant television signals into rural areas normally out of the signal's range. A master antenna apparatus was erected to receive television signals which were amplified and distributed to subscribers through a network of coaxial cables--wires capable of transmitting high frequency signals.

The Federal Communications Commission began efforts to determine proper legal categories for various cable television operations in 1952, continuing these attempts on an intermittent basis until 1959 without notable success. The failure of the FCC to settle upon a single succinct statement either categorizing CATV within an existing legal term or to create a new category with clearly defined legal attributes left a jurisprudential vacuum the courts were forced to fill. Cable television is simple to explain in terms of basic function but very difficult to define in terms of economic implications, especially as its activities intermesh with the broadcasting industry. Essentially, it is an audience or subscriber-financed method of enhancing and expanding reception of existing television programming. This single factor of public support rather than advertiser support has stimulated the major controversies about present cable operations and has generated both the highest hopes and greatest fears about its ultimate potential.

CATV has been described as a parasite industry sapping program creativity, and a broadcast ally enhancing program diversity; an alien concept threatening our free system of communication, and a salutary force allowing minority opinions public access.<sup>2</sup>

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<sup>2</sup>Don Le Duc, Community Antenna Television as a Challenger of Broadcast Regulatory Policy (unpublished Ph.D. dissertation, University of Wisconsin, 1970), p. 2.

The author became interested in cable television over two years ago while working as local program origination assistant at a major cable company in northern California. Several ideas were discussed as to what types of local programming should be offered to adequately serve a town comprised of various population groups. This sparked personal interest in the common carrier/public access issue.

Through broadcasting history regulatory problems have been crucial. This study will examine one facet of the Federal Communication Commission's efforts to classify the numerous legal aspects of <sup>TV and</sup> CATV in relation to the economic and technological transitions inherent in the industry, specifically the issue of regulating cable television systems as common carriers. Presently, CATV is suffering from an identity complex. Does a cable operation fit into the category of a broadcast station as we now know it, is it a common carrier or is a new classification warranted?

This study will begin with a historical examination of the difficulty of pinpointing a definition of common carrier. CATV common carrier operations will be discussed in relation to technological feasibility, economic factors and possible programming conflicts. Although it may be impossible to discover a concise answer or formula, an attempt will be made to provide a basis for policy decisions and future projections. It is unquestionably a difficult task to define and classify essential legal elements of an organization in process of both economic and technological transition but ambiguity at this basic level can only increase the difficulty of making intelligent decisions at a more complex stage of regulatory deliberation.

The author wishes to acknowledge the time and assistance of committee members, Dr. Dennis Fus and Dr. Orville Menard. Special gratitude goes to Dr. Mary Williamson, thesis advisor, for her counsel and encouragement throughout graduate study.

There are three persons whose influence and contributions to this effort cannot be adequately expressed within the formal style of an acknowledgment.

The first is Bill White whose enthusiasm and support encouraged this author to pursue graduate study.

The other two are the author's parents, Mr. and Mrs. William Henderson, whose faith and understanding have made attainment of this personal goal possible.



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## CHAPTER I

### HISTORICAL PERSPECTIVE OF THE COMMON CARRIER DOCTRINE

The evolution of the Western World's economy into a corporate structure with large-scale finance and production has altered the common carrier concept. In the early days the common carrier was a hoyman or a tailor, but the technological revolution of the nineteenth and twentieth centuries made it possible to construct large ocean vessels, railways and airplanes, thereby raising the question whether the common carrier doctrine also applied to these new industries.<sup>1</sup> The concept of the common carrier in legal application has several facets still frequently used and applied in different connections, but its precise meaning is rarely made clear. The complexity of common carrier doctrine results from a diversity of events that have confronted and influenced each other during a long period of time.

The most frequent definition of this concept designates a common carrier to be one who holds himself out to the public in general to carry for them in return for compensation. One of the regulations is that the common carrier may not pick and choose among his customers but has to serve them all without discrimination. Secondly, a common carrier can only demand a reasonable fee in return for reasonable service.<sup>2</sup>

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<sup>1</sup>Lars Gorton, The Concept of the Common Carrier in Anglo-American Law (Gothenburg, Sweden: Akademiforlaget, 1971), p. 22.

<sup>2</sup>Russell E. Westmeyer, Economics of Transportation (New Jersey: Prentice-Hall, 1952), p. 92.

Perhaps this definition sufficed at a time when no notices or special contracts were used, notices limiting the sphere of the carrier's profession to certain routes, to certain classes of goods and notices limiting the carrier's liability. Now, though, this definition seems less precise and "it becomes difficult to distinguish the prerequisites for being a common carrier from the consequences of being one."<sup>3</sup>

Through the mixture of ideas that join together in the common carrier concept one may reach the definition that "he is a common carrier who is a common carrier," for he who holds himself out to the general public is a common carrier, and he who is a common carrier must hold himself out to carry for anybody who chooses to use him. This circular reasoning is imprecise and unsatisfactory but the mentioned definition still seems to be the accepted one.<sup>4</sup>

The difficulty of pinpointing a definition of common carrier can be understood by tracing the modification of this doctrine and its changing applicability to different industries. The term "common carrier" did not appear until the late 1800's but the concept originated in the Middle Ages with the concept of "common callings." Common callings developed under the guild system in England and related to activities considered essential to community life which were undertaken by those who were given specific authorization to do so. These activities were related to the public interest and those who performed such services were not only subject to special obligations but could also be regulated by the Crown even though a special grant of monopoly privilege had been afforded. Historians disagree

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<sup>3</sup>Gorton, Common Carrier in Anglo-American Law, p. 11.

<sup>4</sup>Ibid.

as to which public occupations fell within the jurisdiction of common callings. Persons regarded as exercising a public employment included carriers, innkeepers, surgeons, smiths, farriers, tailors, ferrymen, sheriffs, taverners, victuallers and gaolers.<sup>5</sup> A few historians have questioned whether smiths were common callers, while other historians have excluded carriers in their discussion.

Liability Issue Obligates Common Carriers  
To Deliver Goods Safely

Although specific guidelines for liability were not established until 1703, early common callers were required to perform their services in good faith and trust, under the law of bailment.\*

The liability arose from the fact of a person holding a definite status to which the liability was annexed by law, and the skill required in different callings together with the corresponding degree of responsibility varied with the different species of employment. Thus the gaoler warranted against a breaking of the gaol, but not against fire; the smith warranted against pricking the horse; the innkeepers against theft but not against other sorts of injury; the carriers against theft on the road but probably not against theft at the inn. It will be observed that in no case did the obligation implied by law amount to an obligation to insure against all events.<sup>6</sup>

In the early law there was no difference between private carriers and common carriers and the liability of all carriers had as a common source the status of bailees. This status created a liability independent of any compensation or contract. Usually common carriers were

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<sup>5</sup> Ibid., p. 25.

<sup>6</sup> Ibid., pp. 25-26.

\*A delivery of goods or money by one person to another in trust, for some special purpose, upon a contract, expressed or implied, that the trust shall be faithfully executed.

regarded as those who "held out" to carry for everyone, while private carriers entered into business with particular persons. Under the English common law "a carrier is a person who carries goods or passengers whether for reward or not, by land or by water."<sup>7</sup> Yet this definition did not say whether the carrier is he who undertakes the transport or he who actually performs it.

The 16th and 17th centuries were a period of confusion in legal theory. The development of contracts seemed to clarify the definition of common carrier by specifying that the promise to carry was a prerequisite for being a carrier. But the issue of liability became muddled in conflicting doctrines. A few historians proposed that a carrier was liable only if he demanded a charge. Others claimed that a common carrier may always demand a reasonable charge and he is not obligated to carry under any non-payment arrangements; but if a common carrier does agree to carry without charge, his liability may be less restrictive.<sup>8</sup> Coggs v. Bernard (1705) has been regarded as one of the most important cases in establishing the common carrier liability.<sup>9</sup> The case concerned the defendant Bernard who undertook to carry cases of brandy from one cellar to another. One of the cases broke, according to the plaintiff, through the negligence of the defendant. Regarding the common law liability of carriers, the decision read in part:

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<sup>7</sup> Ibid., p. 53.

<sup>8</sup> Olsen v. Draper, 112 F. Supp., 1953, p. 859.

<sup>9</sup> Orville Holmes, The Common Law, ed. by M. D. Howe (Cambridge, Mass: 1963), p. 155.

. . . a delivery to carry or otherwise manage, for a reward to be paid to the bailee, those cases are of two sorts; either a delivery to one that exercises a public employment, or a delivery to a private person. First if it be to a person of the first sort, and he is to have a reward, he is bound to answer for the goods at all events. And this is the case of the common carrier, common hoyman, master of a ship, etc: . . . The law charges this person thus intrusted to carry goods, against all events but acts of God, and of the enemies of the king . . . . And this a politic establishment, contrived by the policy of the law, for the safety of all persons, the necessity of whose affairs oblige them to trust these sorts of persons, that they may be safe in their ways of dealing.<sup>10</sup>

Two main principles can be derived from this opinion; a) that a person who exercises a public employment is a common carrier and b) that a common carrier carrying goods for charge has a liability for the safety of the goods, with the only exception being an act of God or the king's enemies. This decision differentiated between the liability of a private carrier, now liable as an "ordinary" bailee for negligence only, and the common carrier with his severe and twofold liability.<sup>11</sup> This seemingly simple clarification is nevertheless important in order to understand the later evolution of the common carrier doctrine. The issue of liability has been an important one throughout the history of common carriers. This study will reveal that this issue, although in a different context, is a major point of controversy between cable television operators and common carrier access advocates.

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<sup>10</sup>Gorton, Common Carrier in Anglo-American Law, p. 59.

<sup>11</sup>Ibid., p. 66.



Common carriers were subject to absolute liability for loss of or damage to goods (sometimes termed strict liability), whereas the ordinary bailee was granted the possibility of contracting out of his liability. The theory of contract was probably the most far-reaching aspect of the Coggs v. Bernard case. "Originally the relation between the carrier and his customers was thus not founded on contract but on the law of bailment."<sup>12</sup> In the law of bailment the obligations of the parties were fixed beforehand by law. The use of contracts allowed the parties to agree to their respective obligations and immunities governed only by court rulings that prohibited relieving a carrier from liability for gross negligence.

The subsequent evolution of the common carrier doctrine was by no means unambiguous. It is difficult to clarify and structure the elements to formulate a precise doctrine or definition. The concept has undergone several changes; the common carriers of the Middle Ages were very different from the common carriers of the twentieth century.

It is not always easy to determine to which class a particular carrier belongs for they rarely put their profession formally into writing though sometimes they give public notice that they are not Common Carriers of certain goods and so it generally has to be decided from their past conduct, the types of vehicles they use and the other surrounding circumstances . . . . but as long as a carrier is a Common Carrier he is in two quite different respects under a serious legal liability; one is his obligation to carry and the other is his liability for any loss or injury to the goods while in the course of carriage.<sup>13</sup>

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<sup>12</sup> Ibid., p. 68.

<sup>13</sup> Ibid., p. 69.

Supreme Court Establishes Legal Foundation  
For Carrier Liability in Niagara v. Cordes

It was over a century after the Coggs v. Bernard case that the United States Supreme Court thoroughly considered the common carrier issue and gave an exhaustive description of it in Niagara v. Cordes<sup>14</sup> saying in part:

A common carrier is one who undertakes for hire to transport the goods of those who may choose to employ him from place to place. He is, in general, bound to take the goods of all who offer, unless his complement for the trip is full, or the goods be of such a kind as to be liable to extraordinary danger, or such as he is unaccustomed to convey. In all cases where there is no special agreement to the contrary, he is entitled to demand the price of carriage before he receives the goods; and if not paid, he may refuse to receive them; but if he take charge of them for transportation, the non-payment of the price of carriage in advance will not discharge, affect or lessen his liability as a carrier in the case, and he may afterwards recover the price of the service performed. When he receives the goods, it is his duty to take all possible care of them in their passage, make due transport and safe and right delivery of them at the time agreed upon . . . . Common carriers are usually described as of two kinds, namely carriers by land and carriers by water. At common law, a carrier by land is in the nature of an insurer and is bound to keep and carry the goods entrusted to his care safely, and is liable for all losses, and in all events, unless he can prove that the loss happened from the act of God, or the public enemy, or by the act of the owner of the goods.

This extensive description emphasizes the complexity of the common carrier doctrine. The Court makes it evident that there is no simple definition that can be applied to common carriers. Instead the Court seems to point out its intricate nature. Nevertheless there seem to be two basic principles that characterize a common carrier: a) distinction between the private and the common carrier points out the

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<sup>14</sup>The Propeller Niagara v. Joseph H. Cordes, 62 U.S., 1858, p. 7.

two main liabilities of the latter, one concerning the refusal to carry and the other regarding loss of or damage to goods;<sup>15</sup> b) "holds itself out" to the public as willing to carry all passengers and/or goods for hire indiscriminately.<sup>16</sup>

Willingness of the Shipping Industry to Safely Carry Goods  
For Hire Results in Common Carrier Status

If the task of defining common carrier seemed difficult to the various judicial bodies, the task of determining which carriers were to be regarded as common carriers must have seemed insurmountable. The concept developed under pre-industrial times, but technology brought new vehicles and complex management organizations. Perhaps the first time the "old" common carrier doctrine was applied to a new type of "industry" was in the mid-1800's when shipowners were deemed to be common carriers.<sup>17</sup> One leading case decided in the United States Supreme Court expressed:

By the settled law, in the absence of some valid agreement to the contrary, the owner of a general ship carrying goods for hire, whether employed in internal, in coasting, or in foreign commerce, is a common carrier, with the liability of an insurer against all losses, except from such irresistible causes as the act of God and public enemies.<sup>18</sup>

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<sup>15</sup> Gorton, Common Carrier in Anglo-American Law, p. 95.

<sup>16</sup> Arrow Aviation, Inc., v. Moore, 266 F. 2d., 1959, p. 488; see also: United States v. Smith, 215 F. 2d., 1954, p. 217; Thomas v. National Delivery Association, 24 F. Supp., (DC Pennsylvania), 1937, p. 173.

<sup>17</sup> Gorton, Common Carrier in Anglo-American Law, p. 93.

<sup>18</sup> Liverpool Steam Co. v. Phoenix Insurance Co., 129 U.S., 1888, p. 436.

A similar decision was reached in the Willdomino case:

The Willdomino was a general ship engaged in the common carriage of merchandise for hire. A carrier of goods by water like a carrier by land is an insurer, and though no actual blame is imputable to it, is absolutely liable, in the absence of a special contract limiting its liability, for all damages sustained by the goods intrusted to its care unless the damage is occasioned by the act of God, the public enemy, the public authority, the fault of the shipper, or the inherent nature of the thing shipped.<sup>19</sup>

Since the Willdomino case, several acts and laws governing water carriers have been passed. Since the history of the shipping industry is not the purpose of this study these will be examined only briefly. After World War I domestic shipping particularly in the coastal and intercoastal trading areas, was subject to severe competition, declining earnings and a need for some type of regulation. The Shipping Act of 1916 created the U.S. Shipping Board and was granted the authority to promote and regulate deepwater shipping. Common carriers had to publish and file rates, fares and charges with the Board even though it could not fix minimum or actual rates. This action set a precedent, as this study will disclose, as most common carriers are required to file tariffs with their regulatory agencies. In 1933 the Intercoastal Shipping Act was passed requiring common carriers operating in intercoastal trade via the Panama Canal to publish their actual rates. Five years later an amendment gave the regulatory body authority to set minimum rates for domestic deepwater common carriers.<sup>20</sup> The United States Maritime Commission, known today as the Federal Maritime

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<sup>19</sup> Willdomino, The, 300 F., (3rd Cir.), 1924, p. 5; cert den. 270 U.S., 1925, p. 647.

<sup>20</sup> James Guandolo, Transportation Law (Dubuque, Iowa: 1965), p. 316.

Commission, was created through the Merchant Marine Shipping Act of 1936, which transferred to this Commission all the functions, powers and duties formerly contained in all the previous shipping acts.<sup>21</sup>

Water carriers regulated by the FMC were still required to file their tariffs but a certificate or permit to operate as an ocean carrier was not needed.

The question of liability was, of course, an important issue. In 1893 the Harter Act was passed in order to give some uniformity to the carrier's liability in water carriage. The main point of the Act stated that it is the duty of the owner to make the ship seaworthy.<sup>22</sup> The ship owner is also liable for loss or damage of cargo usually based on a maximum liability of \$500 per ton, net or gross, as rated.<sup>23</sup>

Interstate Commerce Act of 1887 Establishes  
Common Carrier Regulation for Railways

The roots of common carrier laws are in road carriers and thus it should come as no surprise that many of the alterations in the doctrine came about during the development of the railroad industry. Railway traffic operated under the principles of the old English common laws which:

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<sup>21</sup>Gorton, Common Carrier in Anglo-American Law, p. 157.

<sup>22</sup>See Southern Pacific S.S. Co. v. New Orleans Coal & Bisso Towboat Co., Inc., 43 F. 2d., (DC Louisiana), 1930, p. 177; Fort Gaines, The, 24 F. 2d., (DC Maryland), 1928, p. 849; Sun Co. v. Healy, 163F., (2nd Cir.), 1908, p. 48.

<sup>23</sup>Gorton, Common Carrier in Anglo-American Law, p. 159.

. . . demanded little more than that they should carry for all persons who applied, in the order to which the goods were delivered at the particular station and that their charges for transportation be reasonable.<sup>24</sup>

The first time the term "common carrier" was used in a formal document, was in the Interstate Commerce Act of 1887. The act was written by a special Senate committee upon the recommendation by President Grant to make a thorough investigation of Federal railway regulation.<sup>25</sup> The Interstate Commerce Act prescribed twenty-four provisions regarding railroad regulation of which six are applicable to common carriers. These six provisions have been touched upon previously, but the wording of the Commerce Act may add clarity.

First of all, a common carrier is one which hauls passengers or goods belonging to others. Second, it offers its services for hire. Third, it must undertake to serve all who may apply for its services. Fourth, it must serve without discrimination all those who are similarly circumstanced. Fifth, it must offer its services at reasonable rates. And sixth, it is expected to use more than ordinary care to assume the safe arrival of passengers and freight at destination.<sup>26</sup>

Although the original Commerce Act was specifically designed to regulate the railway industry, it also applied to foreign and domestic transportation.

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<sup>24</sup> Joseph H. Tedrow, Regulation of Transportation: Practice and Procedure before the Interstate Commerce Commission (Iowa: Wm. C. Brown Co., 1955), p. 9.

<sup>25</sup> Emory R. Johnson, Elements of Transportation, A Discussion of Steam, Railroad, Electric Railway, Ocean and Inland Water Transportation (New York: Kennikat Press, 1970), p. 141.

<sup>26</sup> Westmeyer, Economics of Transportation, p. 94.

In its original wording the Interstate Commerce Act contained no provisions concerning the common carrier's liability for goods beyond its own lines when receiving them for shipment on their own lines. Many times the rail carriers would issue bills of lading containing clauses that relieved them from liability, often even in cases of negligence.<sup>27</sup> This lack of regulation, particularly the carrier's liability, resulted in the enactment of two amendments: namely, the Hepburn Act, 1906 (the Carmack amendment) and the Clayton Act, 1914 (the Cummins amendment). The Hepburn Act extended the Commerce Commission's jurisdiction to include all other facets of railway transportation plus pipelines. A major provision of this 1906 legislation empowered the ICC to set maximum rates and to enforce its own orders.<sup>28</sup> The Carmack amendment required the originating common carrier to issue a receipt for a shipment and made the initial carrier responsible to the holder of the receipt for damages occurring while the goods are in its custody or the custody of any succeeding carrier.<sup>29</sup> Prior to the enactment of the Carmack amendment there had been no clear definition of a carrier's liability; now it was placed on the originating carrier. However, in 1916 this was amended whereby both the initial and connecting carrier were made liable to the holder of the receipt.<sup>30</sup>

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<sup>27</sup> Gorton, Common Carrier in Anglo-American Law, p. 153.

<sup>28</sup> Marvin L. Fair, Ernest W. Williams, Jr., Economics of Transportation (New York: Harper & Brothers, 1950), p. 469.

<sup>29</sup> Interstate Commerce Commission Reports, Vol. 33, 1915, p. 682.

<sup>30</sup> Gorton, Common Carrier in Anglo-American Law, p. 153.

St. Louis Railroad Terminal Case  
Prohibits Unreasonable Rates

During the evolution of the common carrier doctrine principles have emerged as various judicial and legislative agencies have assumed temporary or permanent authority over each industry. The primary responsibility of the early common carriers was to their trade or craft which had to be essential to community life. The concept of responsibility and public service slowly emerged and had become fairly well established by the time the shipping industry became this country's leading industry. If the developing railway industry could be credited with adding one more principle to the common carrier doctrine, that would be "rate regulation." Although the idea of charging reasonable rates did not gain full attention until after the telephone and telegraph companies fell under the authority of the Interstate Commerce Commission, it was conceived during the railroad era. This concept was expressed by the United States Supreme Court in U.S. v. St. Louis Railroad Terminal:

Under the Interstate Commerce Law, and indeed under the common law of the land, tolls must be reasonable, and the government has the power to make them so if they are not . . . . The charge for service in any case can be stated in one word--cost. No money received for the service rendered goes to any other purpose than paying expenses of operation, taxes, fixed charges and proper maintenance.<sup>31</sup>

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<sup>31</sup>U.S. v. Terminal Railroad Association of St. Louis, 224 U.S., 1912, p. 385; see also: Texas and Pacific Railway v. Abilene Cotton Oil Co., 204 U.S., 1906, p. 448.



Rate regulation was a provision of the Interstate Commerce Act, as mentioned above. But unreasonable rates and discrimination, undue preference and combining agreements among railroads continued even after strict regulations had been set forth in various Supreme Court rulings. To understand this is to come to grips with the growing complexity of the common carrier doctrine in corporate America. If common carriage means the ability and willingness to be responsible for all traffic needs, then the rail carriers meet those tests exceptionally well.<sup>32</sup> Not only can they absorb traffic that because of bad weather cannot move over other agencies, but railways also have proved under general war conditions to have the capacity to expand service with a minimum drain on war essential resources. In short, the railroad industry has the capacity to satisfactorily handle great traffic load.

Excess capacity was large, and provided the avenue to lower unit costs and rate levels--even to greater profitability under discriminatory rates subject to regulatory approval. By obtaining relatively large revenue contributions above variable costs from many commodities and hauls, the rails could operate profitably as a whole, bear the social responsibilities of general common carriers, and even promote general economic development by carrying other commodities at a loss or with only slight revenue contributions.<sup>33</sup>

Rate regulation is considered to be warranted in situations where competition is not adequate to protect against excessive rates, undue return from a monopoly franchise, discrimination or other abuse of the power.

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<sup>32</sup>James C. Nelson, Railroad Transportation and Public Policy (Washington, D.C.: Brookings Institute, 1959), p. 18.

<sup>33</sup>Ibid.

Although the privately-owned railroads were subject to regulatory rates, their profits were substantially high. The common carrier doctrine proposed that carriers' rates should be reasonable so that "anyone" who wanted access to a carrier's facilities could afford such service. This is the premise on which rate regulation was founded. By the very nature of its size and diversity of services, the railroads could, as is shown above, reap substantial profits despite rate regulations.

It was at this point that the common carrier doctrine underwent changes, and the difficulties of such status became apparent. In the St. Louis Railroad Terminal case it was clearly established that the money received for common carrier service was to go for paying expenses of operation, etc. But the railroads were not only just breaking even, they were operating in the black. The dichotomy is obvious; on the one hand the common carrier was to operate at cost, while by the nature of its facilities the railways became a profitable business. As a result a further complexity was added to the common carrier doctrine and as this study will reveal it is a major point of contention in the cable television industry. That is, what constitutes a fair rate of return? This question has yet to be answered due to not only the complexity of the common carrier doctrine but to the complexity of the industries to which it has been applicable.

Bell Telephone Entrepreneurs Promote Economic  
Gain as New Common Carrier Philosophy

High profits of common carriers became more acute when Bell patented the telephone in 1876.<sup>34</sup> Prior to that time Western Union Telegraph

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<sup>34</sup> Harry M. Trebing, "Common Carrier Regulation--The Silent Crisis," Law & Contemporary Problems, Vol. 34, 1969, p. 303.

Company, chartered in 1851, achieved an early dominance in the field of telecommunications and became the first nation wide monopoly.<sup>35</sup> A confrontation seemed evident particularly after Western Union responded to the challenge of the Bell Company by devising an improved telephone. But in 1879 an agreement was reached whereby Western Union agreed to stay out of voice communication and Bell agreed to stay out of the telegraph field.

Perhaps the most important event of this period occurred when Theodore N. Vail became president of the Bell Telephone Company. Vail proceeded to establish a corporate structure which was ultimately to become the dominant pattern for industrial organization for the entire common carrier industry. Vail viewed telecommunications, and particularly the telephone, as a nationwide, interwoven system with the Bell Company as the dominant firm.<sup>36</sup>

Vail's belief in a single telecommunications system and his actions to insure its development could be termed as the primary turning point in the changing common carrier doctrine. Two courses of action were implemented to achieve Vail's objective. The first was the elimination of competition. Between 1894-95 most of the Bell patents had expired which opened the door for the independent telephone companies who began to challenge the Bell system. "The market structure of the common carrier industry had changed drastically. For the first time, direct competition existed on an intra-industry basis."<sup>37</sup> Bell answered the challenge by: a) denying financial resources to the Telephone,

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<sup>35</sup> Ibid.

<sup>36</sup> Ibid.

<sup>37</sup> Ibid., p. 304.

Telegraph & Cable Co. thereby destroying their effort to develop a competitive long-distance system; b) Bell companies refused to interconnect with non-Bell companies; and c) Bell pursued an aggressive program to buy up independent telephone properties.<sup>38</sup>

By 1910, the threat of the independents had largely been overcome, and the stage was set for the universal service which Vail envisioned as the objective of the American common carrier system.<sup>39</sup>

The second course of action was the encouragement of Bell management to cooperate with the state regulatory commissions. Regulation was somewhat permissive during this period. Federal regulation of rates and practices of interstate communication carriers was initiated by the Mann-Elkins Act of 1910.<sup>40</sup> But by this time Bell's domination in the telephone and telegraph fields was extensive. However, Bell succumbed to government pressure and agreed to extend interconnection privileges to independent companies and divested itself of Western Union.\*

It was during this era that the modern philosophy of common carrier regulation was established and the tools and techniques of control were developed. Two events contributed to the birth of this new philosophy. First, the Interstate Commerce Commission continued to exercise

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<sup>38</sup> Ibid.

<sup>39</sup> Ibid., 305.

<sup>40</sup> Truman C. Bigham, Merrill J. Roberts, Transportation (New York: McGraw Hill, 1952), p. 227.

\* Bell System had acquired control of Western Union in 1909 through a stock acquisition.

limited regulation of telegraph and telephone companies, until the passage of the Communications Act of 1934. Their regulation paralleled that of the railroad industry, though.

Telegraph companies, for example, have been deemed to occupy the same relation to commerce as carriers of messages that railroads do as carriers of goods; and the same reasoning may be equally applied to telephone companies and other transmission agencies.<sup>41</sup>

Although several modifications were required in the Interstate Commerce Act to be made applicable to transmission agencies--telephone and telegraph companies--these apparently were only in wording. For example, the filing and posting of rates and charges, then required of transportation common carriers was modified to state that telegraph and telephone companies could establish their own rates, but these rates must be reasonable.<sup>42</sup> The point of this illustration is that regulation became preoccupied with the general level of earnings or revenue requirements rather than over matters affecting market structure.<sup>43</sup> This is perhaps understandable when taking into consideration that the development of the telegraph and telephone industries overlapped that of the railroad industry, from a regulatory standpoint. High profits of the railways changed the "old" common carrier doctrine while the concentrated efforts of Theodore Vail altered the market structure, the two occurring almost simultaneously.

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<sup>41</sup>Western Union Telegraph Co. v. State of Texas, 105 U.S., 1881, p. 461.

<sup>42</sup>Westmeyer, Economics of Transportation, p. 110.

<sup>43</sup>Trebing, "Silent Crisis," p. 306.

What emerged was a philosophy of "natural monopoly" for common carrier communications in which the promotion of the public interest was equated with the maintenance of systematic integrity and the task of planning for national and regional requirements.<sup>43</sup>

Physical Nature of Radio Poses Common  
Carrier Regulatory Problems

The common carrier doctrine of the 19th and 20th centuries has changed as the way of doing business has changed. Its complexity may stem from the idea that the structure of the market, particularly during Vail's era, was changing faster than the common carrier doctrine. But the tables were about to be turned with the advent of wireless communication. Broadcast technology was about to transform common carrier communications from a relatively stable industry "to one in which change was coming at a faster rate than it could be assimilated by existing market structures and institutions."<sup>44</sup>

Many of the principles that were adopted to regulate transportation and transmission agencies were merely modified to fit broadcasting. But the nature of the medium was different and this posed new problems for Congress. Specifically, by whom and how was this new medium to be regulated? One unsuccessful answer was a bill introduced before Congress that would have classified radio broadcasting as a "common carrier." Radio would ~~then~~ be subjected to federal rate regulation and under the obligation to serve all those who sought the use of its facilities.<sup>45</sup>

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<sup>43</sup>Trebing, "Silent Crisis," p. 306.

<sup>44</sup>Ibid., p. 310.

<sup>45</sup>L. Dickson Fricks, Jr., "Radio Broadcasting as a Common Carrier," Virginia Law Review, Vol. 19, 1932, p. 174.

The first real legislative act governing broadcasting was the Wireless Ship Act of 1910 which empowered the Secretary of Commerce and Labor to make regulations applicable to radio. Radio in this early stage was utilized as a life saving device at sea.<sup>46</sup> Two years later the Radio Act of 1912 was passed which made it illegal to operate a radio station without first securing a license from the Secretary of Commerce, but this specification was ruled unconstitutional. The Secretary of Commerce could only prescribe conditions under which licensees would operate with penalties for violation. Chaos ruled the airwaves until the passage of the Radio Act of 1927. The government still had not addressed itself to the issue of common carrier, but the term "wireless" was added to the Interstate Commerce Act. The problem was in deciding whether radio was similar enough to categorize it with the railway system and/or the telegraph and telephone industry.

The crux of the problem regarding radio being regulated as a common carrier pointed to the physical nature of the medium:

In telephonic and telegraphic communication, while nothing visible and tangible is transported, the difficulty of conceiving that as commerce and subject to the power of Congress is aided by the necessity of wires and physical property in order to transmit the ideas and messages. But in radio the problem becomes more difficult because there is no material connection between the states, not even air waves, merely the indefinable ether waves permeating everywhere.<sup>47</sup>

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<sup>46</sup> Frank J. Kahn, ed., Documents in American Broadcasting (New York: Appleton-Century-Crofts, 1968), p. 7.

<sup>47</sup> Carberry F. O'Shea, "Radio--Federal Jurisdiction & Regulatory Power Over Radio Communication," Georgetown Law Journal, Vol. XVII, 1929, p. 340.

It was well established that the communication of intelligence between countries or states was the subject of governmental regulation under the Commerce Clause.<sup>48</sup> Furthermore sending messages across state lines was considered interstate commerce. It seemed inevitable that radio would be included within this framework since its application to communication by telephone and telegraph had already been determined.<sup>49</sup> Scholars debated the issue and two sides formed; those who felt radio broadcasting should be a common carrier and those who felt it should not. Advocates of the former position felt that "by taking control of radio communication Congress has power to fix rates for individual messages and for broadcasting. It can provide for censorship, and probably complete supervision of programs."<sup>50</sup> Proponents of the latter view agreed that there were points of similarity between radio and the universally established common carrier, a railway;\* however, the similarity between the broadcasting station and the railway company ceases at a certain point.

The railroad, and carriers of a similar nature, can best serve the public interest by lending their facilities to all who wish to employ them. Legislation forcing upon broadcasting stations any such duty, however, would seem most unwise and undesirable. The first duty of a broad-

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<sup>48</sup>Pensacola Telegraph Co. v. Western Union Telegraph Co., 96 U.S., 1878, p. 9.

<sup>49</sup>Western Union Telegraph Co. v. William Pendleton, 122 U.S., 1886, p. 347.

<sup>50</sup>O'Shea, "Federal Jurisdiction and Regulatory Powers," p. 345.

\*Both render their service for hire with the consumer or listener ultimately paying the cost, and as agencies of commerce are public employees and servants.



casting station should be the furnishing of programs which will serve the interest, convenience, and necessity of the listening public, not the broadcaster.<sup>51</sup>

AT&T Experiments With Common Carrier  
Radio Operations

Even though there was no legislative action passed in regards to the applicability of the common carrier doctrine to radio broadcasting, common carrier operations, under the name "toll broadcasting," were conducted for a time in the early 1920's by a New York radio station owned by American Telephone and Telegraph.<sup>52</sup> AT&T was hesitant about the new radio medium for obvious economic reasons. Two factions developed between those who wanted the company to venture into radio and those who saw the company's economic future best fulfilled by disseminating entertainment through telephone wires. Two events seemed to trigger AT&T's "public radiotelephone broadcasting" as they first termed it (later to call it "toll broadcasting"). First came the debut of KDKA which obliterated the concept of sending information/entertainment over telephone wires. The second "event" was AT&T's continued hesitancy to become involved in the radio industry because of its lack of receivers to sell. As a result, it seems, the company combined the ideas of both factions, when on January 12, 1922, it disclosed its concept of "toll broadcasting":

We, the telephone company, were to provide no programs.  
The public was to come in. Anyone who had a message

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<sup>51</sup>Fricks, "Radio Broadcasting as a Common Carrier," p. 175.

<sup>52</sup>Erick Barnouw, A Tower in Babel (New York: Oxford University Press, 1966), p. 106.

for the world or wished to entertain was to come in and pay their money as they would upon coming into a telephone booth, address the world, and go out.<sup>53</sup>

Although "toll broadcasting" carried with it none of the terms usually associated with the common carrier doctrine, the basic concept of "holding oneself out for hire" was present. Furthermore, AT&T envisioned a network of thirty-eight stations that would operate on a "toll" basis. The plan was made public and contained tones of common carrier concept:

The American Telephone and Telegraph Company will provide no program of its own, but provide the channels through which anyone with whom it makes a contract can send out their own programs.<sup>54</sup>

The dream became a reality on July 25, 1922 as WBAY, the first radio telephone toll station, broadcast its first program.<sup>55</sup> Unfortunately, the tall buildings in New York City were absorbing the station's signal and as a result, the station could barely be heard. Not all was lost as a transmitter placed in a different part of the city was able to broadcast a strong signal. This transmitter was given the call letters WEAJ and became the pioneer toll broadcasting station. AT&T had claimed there were many requests for its public broadcast service, but in spite of these it was over a month before toll broadcasting found a single customer! An economic battle was being waged

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<sup>53</sup> Ibid.

<sup>54</sup> William P. Banning, Commercial Broadcasting Pioneer: The WEAJ Experiment 1922-26 (Cambridge: Harvard University Press, 1946), p. 68.

<sup>55</sup> Barnouw, A Tower in Babel, p. 108.

during WEAf's debut between those who thought the only way to support radio broadcasting was by advertising and by others who viewed any form of commercialism as distasteful. Due to the lack of interest in AT&T's "toll broadcasting" and their need for revenues to support their programming,\* radio broadcasting as a common carrier was short-lived.

The FCC Does Not Recognize Radio  
to be a Common Carrier

It was not until the passage of the Communications Act of 1934 that the newly-established Federal Communications Commission addressed itself to the issue of common carrier as it applied to radio broadcasting. They stated in that document:

Any person engaged as a common carrier for hire, in interstate or foreign communication by wire or radio or in interstate or foreign radio transmission of energy, except where reference is made to common carriers not subject to this Act; but a person engaged in radio broadcasting shall not, insofar as such person is so engaged, be deemed a common carrier.<sup>56</sup>

The reasoning behind the FCC's ruling not to consider radio broadcasting as a common carrier was that due to the physical limitations of the radio spectrum, not every person or group could make use of its facilities. One of the tenets of the common carrier doctrine is that a carrier must undertake to serve all who apply for its services. In the case of radio this would be physically impossible.

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\*AT&T had at first been determined not to produce programs. It wanted no more responsibility over content than it had in the case of phone calls. (Barnouw, p. 109). Lack of control over content has, since the development of CATV, become a basic principle of the common carrier doctrine.

<sup>59</sup>Title I, Section 3 (h) of the Communications Act of 1934 as amended.

From a regulatory standpoint the advent of television in the late 1940's and early 1950's posed no new problems concerning the common carrier doctrine. The channel scarcity argument was directly applicable to television and hence it too was deemed not to be a common carrier when the Communications Act of 1934 was amended to include television broadcasting.

Broadcasting altered the common carrier doctrine by raising the channel scarcity issue. It had been a main point of the common carrier doctrine that a carrier should serve all those who undertake its services. But the question had not been raised, what happens if there is a limited supply? Road and water carriers handled excess demand by increasing their load capacity. The telephone companies developed larger trunk lines to prevent circuit overloads. But the electromagnetic spectrum is limited; only a certain number of channels are available. Prior to this time the common carrier doctrine had undergone changes of an economic nature (liability, rate regulation); broadcasting brought changes in the doctrine of a physical or technological nature. As the following chapters will reveal, cable television poses further questions regarding liability, rate regulation and technology.

## CHAPTER II

### CABLE TECHNOLOGY

Broadcast technology restricts a television station to only one channel, but broadband technology allows a cable company to have a still undetermined maximum number of channels. Few existing systems actually operate more than 12 channels but forty or fifty channel systems are technologically feasible.<sup>1</sup> Cable television makes it possible to shift communications from an economy of "scarcity" to one of abundance. The advocates of public access to CATV point to the unlimited availability of cable channels. But from a technological standpoint there are some problems inherent in multi-channel cable systems. Some of these problems may be such that only expensive electronic equipment (much of it not yet developed) can correct the situation. Cable service is usually purchased to improve reception, but television picture quality is limited intrinsically by the channel bandwidth and by the poor reception characteristics of most television sets.<sup>2</sup>

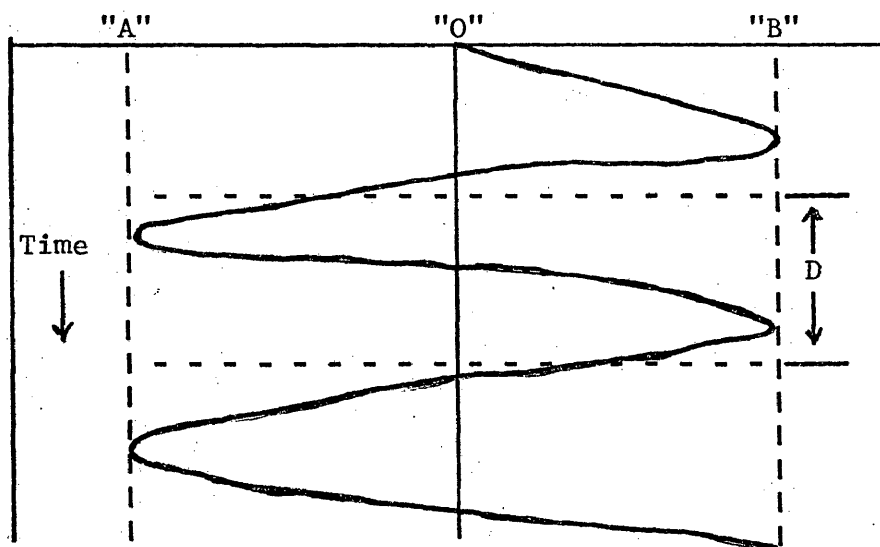
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<sup>1</sup>Michael Botein, "Access to Cable Television," Cornell Law Review, Vol. 57, 1972, p. 424.

<sup>2</sup>Walter S. Baer, Cable Television: A Handbook for Decision-making (Rand Corp. Memo. R-1133-NSF), p. 38.

The Physical Limitations of the Electromagnetic Spectrum

The single most significant characteristic of over-the-air television broadcasting is that it makes use of the electromagnetic or radio spectrum. (See Table II) Electromagnetic waves, produced by the acceleration or oscillation of an electric charge, radiate outwards from the source at the speed of light, 300 million meters per second. These waves have a frequency, expressed in cycles per second (or Hertz), and a wavelength, generally expressed in units of the metric system.<sup>3</sup> The following diagram will illustrate this:<sup>4</sup>



"A" complete cycle and includes a movement from "O" to "B", back past "O" to "A" and back again to "O."

Frequency depicts numbers of cycles of movement completed in a specific time period.

Wavelength is illustrated by "D."

<sup>3</sup>Jones, Regulation of Cable Television by the State of New York, p. 7.

<sup>4</sup>Sydney W. Head, Broadcasting in America (New York: Houghton Mifflin Co., 1972), p. 27.

The electromagnetic spectrum can be made analogous to a super highway, over which the produce of communication is carried to and from a market. AM radio, television broadcasting, mobile radio, microwave and even visible light, are electromagnetic waves that can exist simultaneously and distinctively in the space around us. The distinction is that they occupy different portions of the electromagnetic spectrum. Each signal rides on a different lane of the highway, identified by its frequency (the number of oscillations per second of its carrier wave).<sup>5</sup>

The radiation of waves through space is referred to as propagation. Physical laws govern the characteristics of propagation. A simple analogy could be illustrated by dropping a pebble into a lake. The waves radiate from the source equally in all directions, forming a circular pattern. As the waves become distributed over a larger and larger area of water, the ripples become smaller and smaller. A similar effect occurs with radio energy, which radiates from a transmitter into space equally in all directions, also forming a circular pattern. As the energy becomes widely distributed, it in turn becomes thinly dispersed. That is, after a certain distance, the signal becomes so weak it is undistinguishable. This effect is known as "attenuation" and as this study will reveal is a serious problem in cable communications.<sup>6</sup> Other physical properties affect radio energy such as

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<sup>5</sup>Hubert J. Schlafly, "The Real World of Technological Evolution in Broadband Communications," (A Report prepared for the Sloan Commission), 1972, p. 2.

<sup>6</sup>Head, Broadcasting in America, p. 35.

atmospheric conditions, physical obstacles (such as tall buildings) or ionized areas. Also if two signals occupy the same frequency at the same geographical location there will be "interference" between these two signals. These restrictions limit the number of frequencies that can be assigned to a particular service in a particular location. The chief problem of spectrum allocation is using each frequency range to its best advantage by capitalizing on its strong points and avoiding degradation of service because of its weak points.<sup>7</sup>

There is a means, however, of using the same frequency simultaneously in the same location. Do not allow the signal to radiate. Keep it confined so that it reaches the receiver terminals over a shielded and a controlled path. Protect the signal from interference with or by radiated signals which saturate the air.<sup>8</sup>

#### Coaxial Cable Provides Unlimited Signal Carrying Capacity

The use of physical wires affords the opportunity of protecting a broadcast signal. The "magic" of cable technology is the coaxial cable, a wire suitable to high frequency transmissions. Such cables are used to transmit electrical signals from zero frequency (direct current) all the way up to several thousand million cycles per second.

The tremendous signal carrying capacity of the coaxial cable was vividly portrayed by FCC Commissioner Nicholas Johnson when he stated that comparing the cable to the telephone wire was like comparing "Niagara Falls to a garden hose."<sup>9</sup>

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<sup>7</sup> Ibid., p. 38.

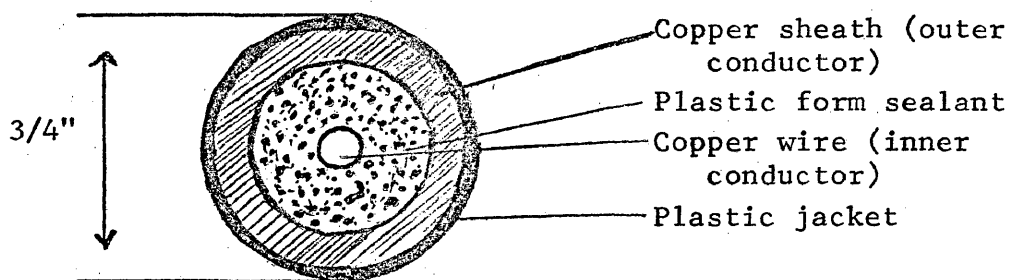
<sup>8</sup> Schlafly, "Broadband Communication," p. 2.

<sup>9</sup> Robert L. Steiner, Visions of Cable-Vision (A Report of the Stephen H. Wilder Foundation), 1972, p. 19.



The coaxial cable is a wire with a small diameter inner conductor positioned at the center of a larger diameter outer conductor. Most cables have a tough outer jacket of polyethylene for environmental protection. The four sizes of coaxial cable generally used are 3/4-inch, 1/2-inch, 27/64-inch and approximately 1/4-inch diameter.<sup>10</sup>

The following picture will illustrate this:



Headend Processes Television Signals for Distribution  
Over Trunk Lines to CATV Subscribers

A conventional cable system distributes signals from a headend to many subscribers. The illustration in Table III will illustrate this. The major components of a cable system are the antennas and headend facilities, the cable distribution system and the subscriber equipment.

A cable system places its receiving antennas on the highest usable ground whereby it picks up signals directly off-the-air from television stations from a maximum distance of 100 miles. Those at a greater distance are received through a network of microwave links. Microwave

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<sup>10</sup>Schlafly, "Broadband Communications," p. 11.

links can be repeated if necessary depending on the terrain and the distance. The final receiver, at a cable headend, must demodulate the video and sound and then modulate these program signals in the form suitable for a conventional home television receiver. It is at this point that most of the degradation of cable signals occur due to the repeated modulation/demodulation processes. Such problems will continue until better techniques or equipments are engineered.<sup>11</sup>

A separate antenna is generally used for each broadcast station, so it can be tuned to the station's frequency and mechanically aligned to receive the strongest and clearest signal. Coaxial cables deliver these signals to the headend, usually located in a small building near the antenna site. The headend processes the television signals for distribution on the cable system. This process includes:<sup>12</sup>

- a) amplifying each signal to sufficient strength for distribution.
- b) filtering out unwanted signals.
- c) "translating" or changing the frequency of some channels so they can be sent over the cable.
- d) "demodulating" or extracting the TV information from signals imported by microwave to the community.
- e) "modulating" these imported signals and any video signals that originate with the cable system; that is, providing them with a carrier frequency to match a standard VHF channel. This must be done for all local cablecasting, access programming, automated services and any other locally generated signals.
- f) mixing all the signals into one composite signal for distribution over the cable.

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<sup>11</sup>Ibid., p. 7.

<sup>12</sup>Baer, Handbook for Decisionmaking, p. 15.

Attenuation and Amplifier Limitations Pose  
Serious CATV Reception Problems

Television signals lose strength, similar to radio energy, as they travel through the cable, an effect known as "line loss" (attenuation). All electrical signals suffer some line loss. This loss is greater for higher frequencies. For instance, a 300 MHz signal will undergo the same percentage of loss in a 200-foot cable that a 50 MHz signal undergoes in 500 feet. The 50 MHz signal can proceed through 2.5 times as much cable length as the 300 MHz signal before requiring amplification.<sup>13</sup> Line loss in a system at Channel 13 is more than double the loss at Channel 2. Attenuation also increases with rising temperatures. Seasonal changes generally require manual system rebalancing by an operators maintenance crew, even though special compensating circuits have been installed. Several devices are used to decrease attenuation. For instance, larger cables have less line loss. Consequently, 1/2-inch or 3/4-inch cables are used for trunk lines, the backbone of the distribution system. Trunk lines, strung on utility poles or in underground ducts, distribute television signals from the headend throughout the geographic area served.<sup>14</sup> A great deal of line loss could occur but another compensating device is used--amplifiers. Particular care goes into designing trunk amplifiers because the delivered picture quality depends heavily on them, perhaps more than

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<sup>13</sup>Steiner, Visions of Cable-Vision, p. 20.

<sup>14</sup>Carl Pilnick, Cable Television: Technical Considerations in Franchising Major Market Systems (Rand Corp. Memo. R-1137-NSF), April 1973, p. 23.

any other single component.<sup>15</sup> The problem of limiting attenuation is critically important especially in light of CATV's proposed multi-channel capacities. These amplifiers, installed along the trunk line, serve to boost the signal strength back to usable levels. Using larger-diameter cables reduces attenuation losses, so that amplifiers can be spaced farther apart. The cable cost increases, therefore, while the amplifier cost per mile decreases. Conversely, a smaller cable means lower cable cost but higher amplifier cost.<sup>16</sup>

The primary importance of amplifiers, though, is that CATV's systems' channel capacity is principally set by cable amplifiers. This channel capacity is technically limited!<sup>17</sup> This becomes critically important in light of cable's proposed multi-channel capacities. The advocates of common carrier access base many of their arguments on the abundant availability of cable television channels. Current amplifiers are limited to a usable bandwidth of about 300 MHz. While this theoretically is equivalent to 50 television channels, interference among channels gives a practical limit of about 25 to 35 channels for each cable.<sup>18</sup> The 25 to 35 channel range represents an upper limit.

Engineers find it hard to agree on a precise channel limit, since it depends on the signal quality one is willing to accept, the particular amplifier and cable system design,

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<sup>15</sup> Ibid.

<sup>16</sup> Ibid.

<sup>17</sup> Baer, Handbook for Decisionmaking, p. 19.

<sup>18</sup> Ibid.

and environmental factors such as the temperature changes the amplifier is subject to.<sup>19</sup>

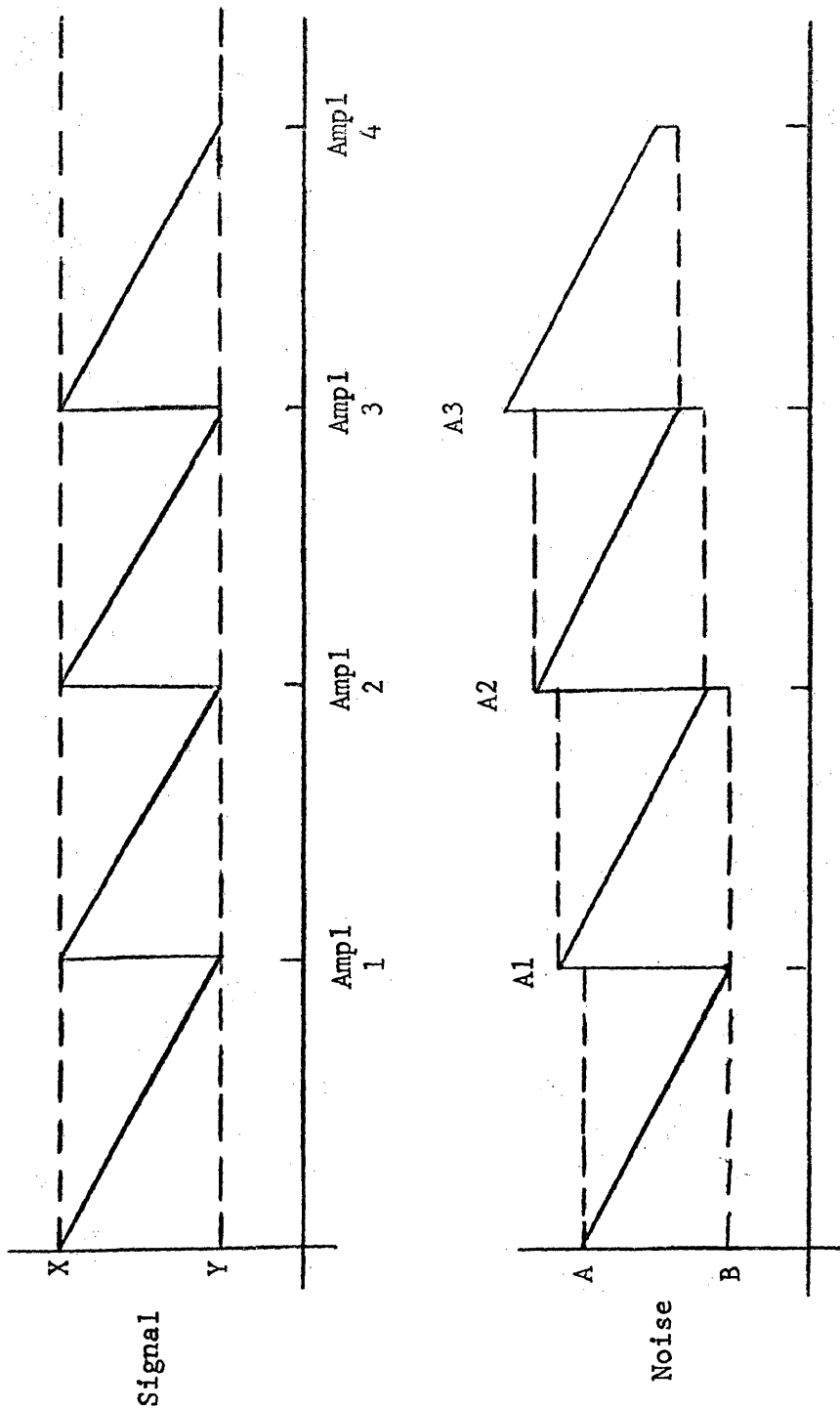
Interference is a major disadvantage of cable amplifiers. This is due to the cascading effect of noise and distortion produced by a string of amplifiers. The following diagram will clarify this:<sup>20</sup>

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<sup>19</sup> Ibid., ftnt. 2.

<sup>20</sup> Pilnick, Technical Considerations in Franchising, p. 24.

Table I  
Signal and noise amplification



The portion of noise to signal increases with each amplifier in a given "string." The desired signal starts through the cable with a magnitude of X, which reduces to Y at some point down the line because of attenuation. The first amplifier boosts the signal back up to X again and the process is repeated with each successive amplifier. The same thing happens with noise content that starts at level A and falls to B. At each amplifier location, however, the amplifier not only brings the noise level back up again, but also generates additional noise and adds it to the previous level. Thus, the noise at A-1 is a higher percentage of the signal level X than it was at A. This cumulative process finally results in a noise level that can visibly degrade the picture, usually in the form of "snow." Thus, the number of trunk amplifiers that can be cascaded in one continuous cable run is limited.

The specific limit on the number of amplifiers that can be cascaded will depend on amplifier characteristics, cable size, expected temperature variations and other factors. Typical limits, however, range from 20 to 30 cascaded amplifiers with spacing between amplifiers of 1500 to 3000 feet. This means there is a practical limit to the length of a single trunk cable, which can range perhaps from 5 to 10 miles for conventional trunk cable.<sup>21</sup>

Broadcast Equipment Now Available May Not  
Alleviate CATV Reception Problems

Most of the undesired effects that occur in a cable system can be attributed to the limitations and noise distortions of amplifiers. But other cable hardware can cause poor picture quality. These include:

a) bridging amplifiers, which isolate trunk line from subscribers

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<sup>21</sup>Ibid., p. 23.

connections; b) feeder cable, cable used to distribute signals from the trunk line to the point where each subscriber's individual drop-line connection is tapped-off; c) taps, connecting wires used to couple drop cables and feeder cables; and d) drop cable, small length of cable used to bring the TV signal directly into subscribers' homes.<sup>22</sup> The main disadvantage of this line equipment is that manufacturers did not intend the effective range of operation of these devices to go beyond the limits of their intended use.<sup>23</sup> Many of these devices installed to date have poor performance records. In light of the minimum channel capacity requirements set forth in the February, 1972, Cable Television Report and Order, many of these items will have to be replaced when CATV operators expand and up-grade their service. Although the cost of these items is modest the quantity is large and the installation labor input is substantial. Contrary to FCC intentions,<sup>24</sup> this may pose an economic burden to some systems.

The design problem for today's CATV system is complex, confusing and subject to circumstances beyond the control of many cable operators.

Good broadcast reception of a large number of channels requires skill and luck. Even with the best equipment, tower location and propagation paths, so-called studio quality is an impossible dream. There are many variables over which the cable operator has no control--the program content; the technical excellence of the program source (AT&T long lines, film, tape or the broadcast studio camera); the performance of the transmitter; the transmitter power; the propagation distance; weather; and some multi-patch situations.

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<sup>22</sup> Ibid., p. 25.

<sup>23</sup> Schlafly, "Broadband Communications," p. 15.

<sup>24</sup> Cable Television Report and Order, 37 Fed. Reg., 1972, p. 3269.



Surprisingly often the cable operator receives the blame for those factors.<sup>25</sup>

Headend processing equipment and selection performance and maintenance is the total responsibility of the CATV operator. Yet these functions are directed by what is available on the market, how well equipment meets its performance specifications and perhaps, most important, the economics of the CATV system.

These problems will not be alleviated when cable systems expand to meet the 1972 FCC requirements. The number of channels being carried in a broad-band system is a determining factor in the magnitude of distortion. New amplifier designs are being tested but many are too costly to market. "The fact that so little demonstratable results can be shown is due more to the inherently slow and painful way in which professionals make progress in controversial and strange technical areas."<sup>26</sup>

#### On-Channel Interference Limits Channel Capacity in Major Markets

Before examining the different methods that have been proposed for cable systems offering a capacity of more than twelve channels, one problem should be noted that afflicts cable systems with both less and more than 12 channels.

The 12 channel VHF dial has become the standard channel-selection device for all cable system transmissions compatible with broadcast TV

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<sup>25</sup>Schlafly, "Broadband Communications," p. 21.

<sup>26</sup>Ibid., p. 24.

standards.\* In the early days of cable, systems were usually built in rural areas and the cable operator transmitted the television signal to each subscriber on the same channel (carrier frequency) as it was broadcast. For example, if the cable company picked up Channel 5 off-the-air, it was delivered as Channel 5. But as cable expanded into more densely populated metropolitan areas, the radiated signal strength from local television stations was strong. Suppose a cable system picks up Channel 5 off-the-air and delivers it to each subscriber, now, however, each subscriber's receiver can also pick up some of Channel 5's signal from the radiated broadcast. The subscriber's receiver is carrying two television signals, one delivered through the cable and one pick-up off-the-air. Unfortunately, these arrive at slightly different times since the propagation velocity through the coaxial cable is less than in air.\*\* As a result, the signal delay causes a "ghost image" which can be very distracting.<sup>27</sup> This effect is particularly acute in New York City due to the tall skyscrapers. "Ghosting" becomes particularly troublesome to the subscriber in the case of color television.<sup>28</sup> Better methods of

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\*Television receivers since 1964 also include UHF tuners for Channels 14 to 84. But UHF frequencies (470 to 890 MHz) are too high for present U.S. cable systems to carry directly.

\*\*This is true even with the receiver antenna disconnected, since a few inches of unshielded wire will pick up the signal in sufficient strength to allow it to proceed through the receiver.

<sup>27</sup>Pilnick, Technical Considerations in Franchising, p. 12.

<sup>28</sup>Jones, Regulation of Cable Television by the State of New York, p. 172.

shielding the TV receiver could reduce some of this off-the-air pickup, but it does not represent an effective solution since it would add a new element of cost to receivers. This plan has been rejected by set manufacturers.

The magnitude of the problem becomes critical for the major market areas. In Los Angeles, for example, there are seven assigned VHF stations: Channels 2, 4, 5, 7, 9, 11 and 13. A cable system in the Los Angeles region might well encounter on-channel interference for all seven, which would mean, in effect, that they could not be cabled directly to subscribers at their broadcast frequencies. The FCC requires, however, that all local TV broadcasts be provided to cable subscribers.<sup>29</sup>

A common solution to this problem has been to translate the carrier frequency of each channel that is subject to direct interference to a frequency unused in that local area. For instance, local Channel 3 would be translated to Channel 4 because if Channel 3 were an assigned channel in the local area, Channel 4 would not be. Although this solution works in some cases, it is impossible in large cities such as Los Angeles, since the channel of the strong signal is left unoccupied on the cable. If this were done for all seven channels in Los Angeles there would only be five unused positions left on the television tuner dial.<sup>30</sup> Thus, CATV systems that do not utilize converters at the subscriber's location are limited to less than the available twelve channels by the direct pickup interference problem. In large metropolitan areas, a 12-channel system can easily reduce itself to a 5-7 channel system.

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<sup>29</sup> Pilnick, Technical Considerations in Franchising, p. 13.

<sup>30</sup> Ibid.

Three Proposals to Increase CATV Systems  
to 24-Channel Capacity

The critical point of this technical discussion is that this situation would be even further aggravated by the FCC's requirement for CATV's expansion to include cablecasting, government, education and access channels which could not directly use the seven positions where strong off-the-air pickup existed. It should be obvious, then, that a cable operator in the top 100 markets in order to comply with the FCC's 20-channel minimum must design a new cable system. There are three principal choices:

1. Multiple (or Dual Cable Systems: an existing 12-channel system could be enlarged to a 24-channel system by installing a completely duplicate plant which carries the same 12 channels but with different program material. The only requirement in addition to present equipment would be a cable selector switch at the subscriber's set so that he could choose channels on cable A or cable B.<sup>31</sup>

Simplicity is the principal advantage to this approach. It eliminates converters and other problem electronic components, and thus makes the system more reliable. It also offers attractive advantages for two-way transmission. A disadvantage is cost. Dual cable systems are obviously more expensive than single cable systems--not twice as much, since the added installation costs are small, but about 50 percent more. A serious disadvantage is that a dual system does not eliminate the problem of on-channel interference. For example, a community with four strong over-the air broadcast stations will only have sixteen usable channels which does not satisfy the FCC requirements.

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<sup>31</sup>Schlafly, "Broadband Communications," p. 26.

2. Converters: a converter changes a nonstandard frequency channel to a VHF channel that can be tuned directly on the subscriber's TV set. In short, the converter replaces the standard TV set tuner and provides more channel positions. The extra channels in a converter system are carried on the cable at frequencies between Channel 6 and Channel 7 (known as the mid-band) and above Channel 13 (known as the super-band). See Table 1. The industry today designates nine mid-band channels and thirteen super-band channels below 300 MHz. The converter changes the frequency of a selected channel to a standard VHF channel frequency that is unused for broadcasting in the community. The TV set tuner is set permanently to that channel, and all selection is performed at the converter. The converter thus completely eliminates on-channel interference, since its output will never be at the same frequency as a strong local station.<sup>32</sup>

The main advantage of this system, of course, is the elimination of on-channel interference. But, converters introduce other interference and picture degradation difficulties. Many converters respond inadequately to variations in signal strength and are overloaded by strong input signals. This causes picture distortion. The converter oscillator, a component necessary for frequency conversion, can drift with temperature and time. Channel selectivity--the ability to distinguish sharply between adjacent channels--is sometimes poor. And because more frequencies are carried on the cable, more interference problems among channels arise. These problems are due more to an emphasis on low cost in converter design than to technical limitations. Converters range in price from \$35 to \$50 in small quantities to \$25 to \$30 in lots of 1000. Since a converter is needed for each TV set, a \$25 unit cost may represent 15 to 20 percent of total system capital investment. Consequently, the

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<sup>32</sup>Ibid.

pressures for low-cost converter design are great. Initial cost savings may be outweighed in a few years by added service calls and subscribers' complaints. Another disadvantage might be the limitations of mid-band and super-band channels. There is doubt whether all channels can be used due to unfavorable beat and harmonic combinations.<sup>33</sup>

3. Switched Systems: all of the several varieties of switched systems bring signals from the headend to a switching center that serves from twenty to several hundred subscribers. Two separate wires or cables run from the switching center to each subscriber receiver. One wire carries subscriber requests to the switching center, and the other returns the selected television signal.<sup>34</sup>

Switched systems are simple in concept and may have advantages for certain applications, but they demand complex wiring and numerous switching centers. In crowded urban areas, the cost of switching centers may be high and the cost of laying the necessary wiring underground may be prohibitive.

There is not a "best solution" to the channel expansion problem. Systems with multiple cables eliminate converters, but do not prevent direct interference. Converters solve the direct interference problem completely, but introduce new possibilities for interference and picture degradation. Switched systems eliminate both the direct interference and the converter problems, but seem too cumbersome and expensive for major market operations.

The intent of this chapter has not been to unveil all the problems of cable television hardware but rather to point out the areas of

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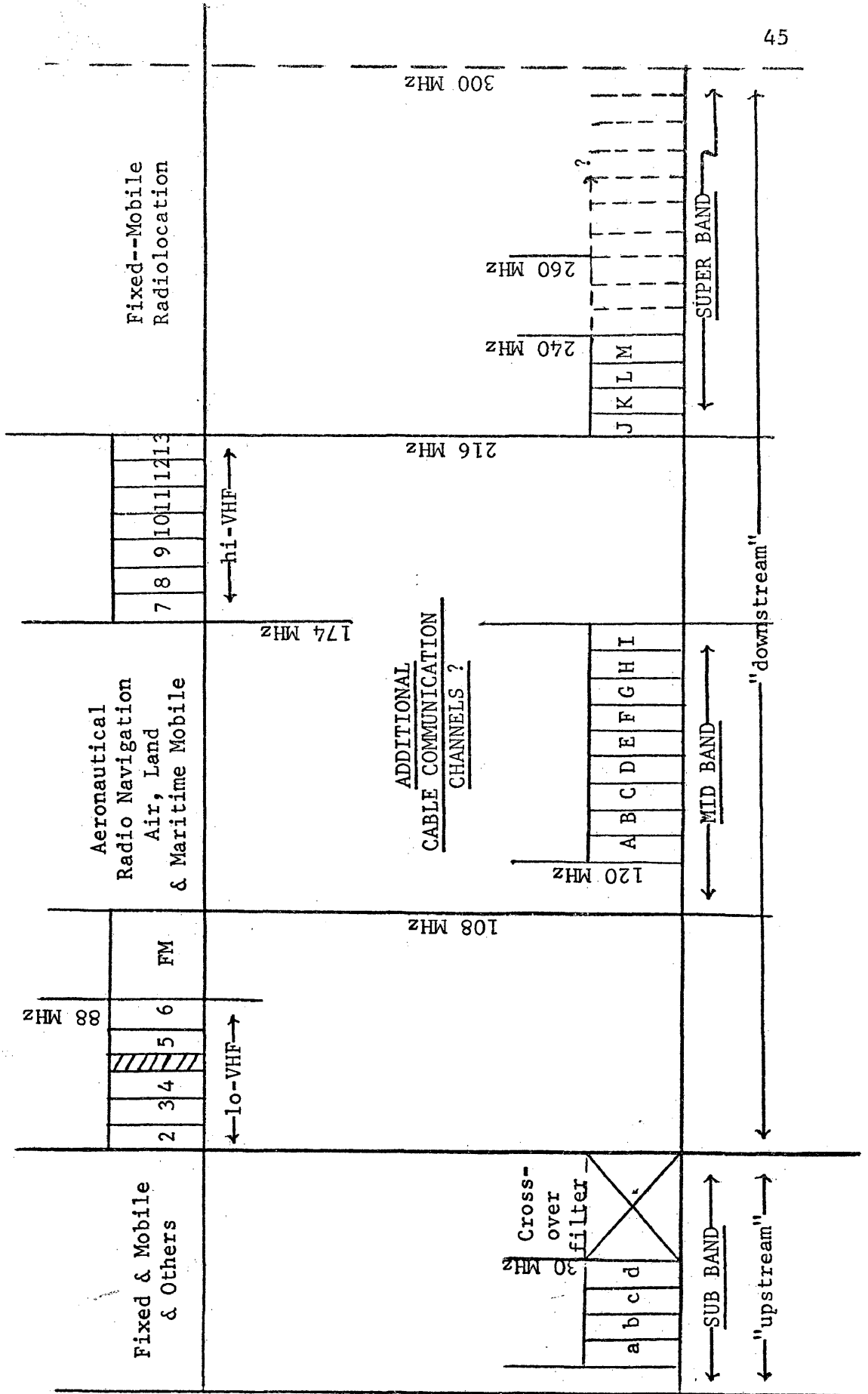
<sup>33</sup>This section relies heavily on Baer, Handbook for Decisionmaking, pp. 19-24.

<sup>34</sup>Schlaflly, "Broadband Communications," p. 26.

technological uncertainty and the risks involved in future system expansion. Technological concerns become critically important in common carrier operations as the availability of multiple channels is the basis for common carrier access.

TABLE I I  
FREQUENCY SPECTRUM CHART

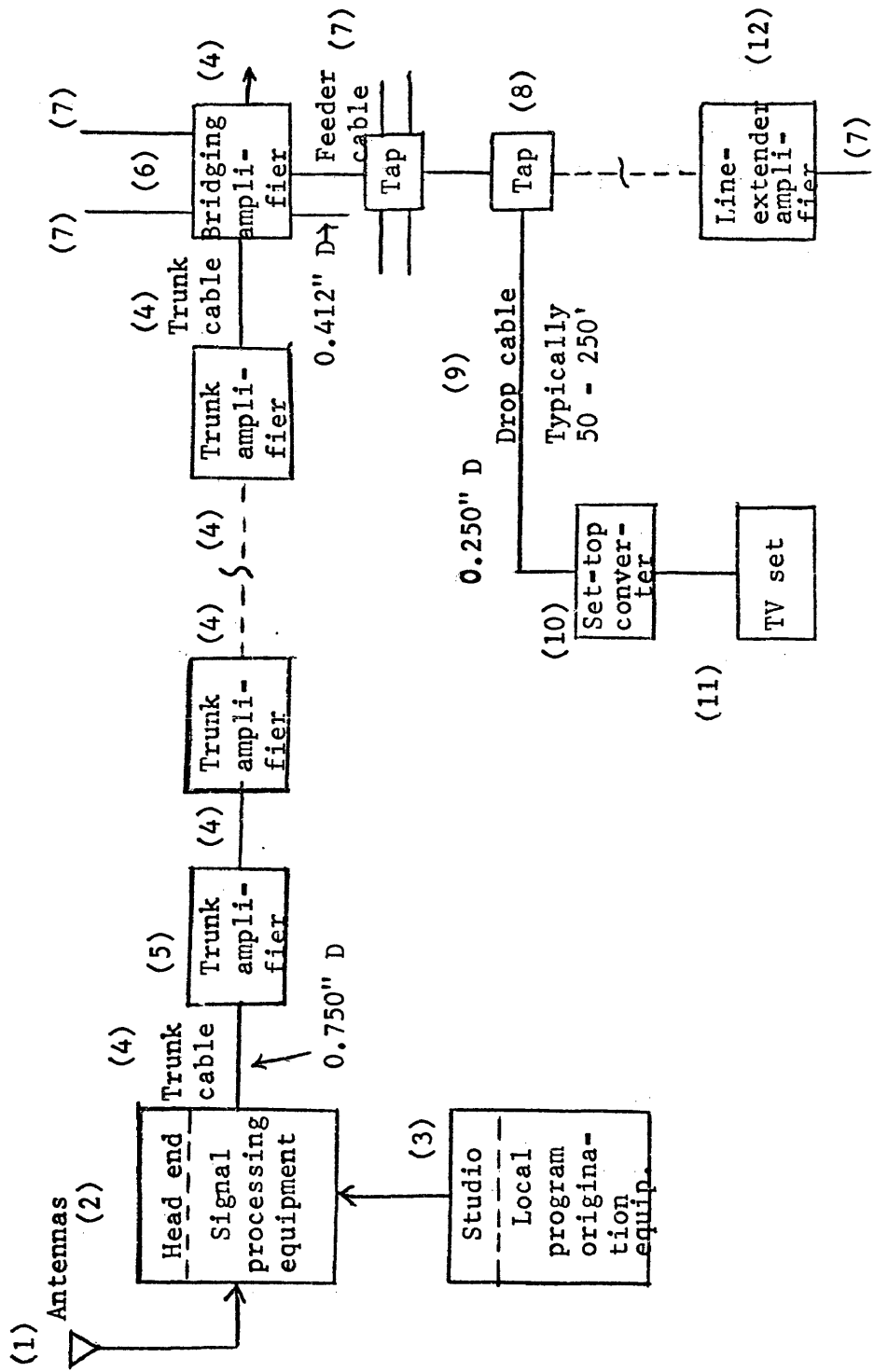
VHF TV BROADCAST CHANNELS



0 Megahertz



TABLE II  
CATV DISTRIBUTION



## CHAPTER III

### CATV: REGULATORY DILEMMA

In four decades of regulating single-channel broadcasting, the Federal Communications Commission has adopted a number of methods to encourage program diversity. For instance, a potential licensee has to prove it will provide better service than any competing applicant; comparative hearings are required to consider petitions opposing renewal of a station's license; the Commission's "Fairness Doctrine" requires that broadcasters give reply time for controversial issues; the "duopoly rule" limits the number of broadcasting stations one individual or corporation may own and finally, the "Blue Book" sets forth general program guidelines. But spectrum space in the very-high-frequency (VHF) band is sufficient to provide only a few television channels--typically two to four--in most major cities. This posed a constraint in view of the FCC's policy of promoting program diversity.

The Commission became strongly persuaded in the early 1950's that the development of broadcasting in the ultra-high-frequency (UHF) portion of the frequency band, in addition to VHF, was the most promising approach to relieving the problem. Although the number of channels in major markets using both VHF and UHF would remain restricted, typically ranging from five to seven, this would still be a significant improvement over broadcasting without UHF.<sup>1</sup>

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<sup>1</sup>Leland L. Johnson, Cable Television and the Question of Protecting Local Broadcasting (Rand Corp. Memo. R-595-MF), October, 1970, p. 1.

However, the growth of UHF has been slower and less profitable than had been hoped. VHF and UHF have significantly different technical and economic characteristics. The technical differences are less significant than the economic differences, but, even from a technical viewpoint, UHF channel assignments are less advantageous than VHF channel assignments, because more power and antenna height are required for UHFs to obtain the same area coverage as VHFs. UHF signals are also more vulnerable to obstacles such as rough terrain.<sup>2</sup> But the root of the problem goes back to the beginning of television operations. VHF channels were the first ones licensed and they tended to dominate the major markets.

. . . . most of the popular programming was on Channels 2 through 13, there was little consumer interest in television receivers capable of receiving UHF channels. In the absence of such receivers, UHF broadcasters were unable to interest advertisers in their programming; and as a consequence, they lacked the financial means to underwrite popular mass audience programming.<sup>3</sup>

This is the atmosphere in which cable television emerged. The potential of cable for bringing many additional channels into metropolitan areas, and the potential conflicts with over-the-air broadcasting, was hardly perceived. At that time, most observers had never heard of cable television, much less had perceived its long-term potential.<sup>4</sup> Although the FCC's attempts at activating the UHF channels came during CATV's infancy, the consequences of its decision had a powerful effect on the regulatory development of cable television. This effect resulted in

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<sup>2</sup>Jones, Regulation of Cable Television by the State of New York, p. 12.

<sup>3</sup>Ibid., p. 13.

<sup>4</sup>Johnson, Protecting Local Broadcasting, p. 1.

restrictive policies that were to govern the industry for nearly ten years.

The slow and halting progress toward achievement of the goals set for UHF and the potential of CATV as an additional rather than an auxiliary broadcast service have left the FCC with a national communication policy that seems at odds with economic and technical reality.<sup>5</sup>

The Commission's insistence that CATV cannot be allowed to destroy UHF and its further insistence that local broadcasters be protected have been major reasons for the FCC's restrictive policies.<sup>6</sup> This attitude apparently has had some bearing on the Commission's failure to "act on the very important issue of common carrier access to CATV--a problem which the Commission consistently delights in raising and then never resolving."<sup>7</sup> The multi-channel capacity inherent in common carrier access might, due to audience fragmentation, pose an economic hardship for local broadcasters.

FCC Rejects Legal Application of Common Carrier Doctrine  
to CATV in Frontier Case

In light of this illustration it is interesting to note that the FCC's first formal assessment of cable television dealt with the economic impact of such systems on local broadcasters. It is rather coincidental, too, that this assessment dealt with the common carrier issue. On

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<sup>5</sup>Charles O. Verrill, Jr., "CATV's Emerging Role: Cablecaster or Common Carrier?" Law and Contemporary Problems, Vol. 34, 1969, p. 590.

<sup>6</sup>Notice of Inquiry and Notice of Proposed Rulemaking, 1 F.C.C. 2d., 1965, p. 469.

<sup>7</sup>Michael Botein, "CATV Regulation: A Jumble of Jurisdictions," New York University Law Review, Vol. 45, 1970, p. 839.

April 2, 1958, the Commission denied a petition by a group of television and radio broadcasters that it assert jurisdiction over CATV as a common carrier.<sup>8</sup> Frontier Broadcasting Co. claimed that CATV systems were common carriers and requested the Commission to authorize CATV systems as communication common carriers and "to establish a basis upon which reasonable charges, practices, classifications and regulations can be determined."<sup>9</sup> Frontier Broadcasting Co. contended that CATV systems were engaged in "wire communication" within the meaning of Section 3 (a) of the Communications Act\* and:

. . . that they will serve any member of the public who undertakes to pay the applicable charges and to whom the service can feasibly be provided; that the systems' undertaking is to transmit signals originating with broadcast stations to the system's subscriber and that the operations of the systems are in interstate commerce. They conclude, therefore, that CATV systems are common carriers engaged in interstate commerce thus subject to provisions of the Communications Act relating to common carriers.<sup>10</sup>

The defendant, Laramie Community TV Co., denied it was a common carrier because they merely engaged in providing a physical facility, such as many apartment houses and motels provide, whereby people may obtain clearer television reception. Their main argument stated that they were not a common carrier in the ordinary sense because the

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<sup>8</sup> Frontier Broadcasting Co., 24 F.C.C., 1958, p. 251.

<sup>9</sup> Ibid.

\* Wire communication defined as transmission of writing, signs, signals, pictures, and sounds of all kinds by aid of wire, cable, or other like connection between points of origin and reception of such transmission, including all instrumentalities, facilities, apparatus, and services incidental to such transmission.

<sup>10</sup> Ibid., p. 252.

customer has no voice in what programs/information is to be received other than his option to turn off the set.<sup>11</sup> Upon consideration of the arguments presented the Commission handed down a landmark decision saying in part:

Even though the operation of a CATV system may have several attributes in common with the operation of a communications common carrier, particularly to the extent that there is an offer to transmit by wire, intelligence in the form of television broadcast signals to any member of the public who desires to subscribe to the service, there appears to be at least one significant difference. This difference lies in the fact that the specific signals received and distributed by the CATV system are, of necessity, determined by the CATV system and not the subscriber. No individual subscriber has the option nor may he compel the CATV system to receive and deliver a particular signal at a given time; nor has he the option or right to compel the station to receive and deliver signals different from, or in addition to, those offered or selected by the CATV system . . . . These considerations appear to militate against a conclusion that CATV systems are engaged in a common carrier undertaking.<sup>12</sup>

The Frontier case did little to alter the common carrier doctrine per se yet it served as a kind of stumbling block, making the Commission quite chary about the common carrier subject. So much, in fact, it was not until nearly a decade later that any action was taken to resolve the issue. The Frontier decision has been reaffirmed in two subsequent cases. In Philadelphia Television Broadcasting Co., v. FCC,<sup>13</sup> the court held that the position taken by the FCC that regulating CATV as adjuncts of the nation's broadcasting system was a "more appropriate

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<sup>11</sup> Ibid., p. 253.

<sup>12</sup> Ibid., p. 254.

<sup>13</sup> Philadelphia Television Broadcasting Co. v. F.C.E., 359 F. 2d., (D.C. Cir), 1966, p. 282.

avenue for Commission action than wide range of regulation implicit in common carrier treatment."<sup>14</sup> In United States, v. Southwestern Cable Co.,<sup>15</sup> a case whose scope had far-reaching effects in the industry, the court said that although the FCC found that CATV was related to interstate transmission cable systems were neither common carriers nor broadcasters. Therefore, CATV did not apply to any of the principal regulatory categories created by the Communications Act.

FCC Refuses to Assume Jurisdiction Over CATV  
In 1959 Notice of Inquiry

The history of FCC regulation of cable television is complex and confusing. During the time the Frontier case was being heard, the FCC requested authority from Congress to regulate CATV but no legislation was enacted. After its initial refusal to assert jurisdiction, the FCC, in obvious response to CATV's threat to over-the-air broadcasting, has come full circle. This study does not intend to examine the entire regulatory history of the Commission, rather only those rulings applicable to the common carrier concept.

Shortly after the Frontier case the FCC issued A Notice of Inquiry<sup>16</sup> where it posed various questions concerning its power to regulate CATV systems. The Commission determined that it had no jurisdiction over

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<sup>14</sup> Ibid., p. 284.

<sup>15</sup> United States v. Southwestern Cable Co., 392 U.S., 1968, p. 157; also U.S. Law Week, Vol. 36, 1968, p. 4553.

<sup>16</sup> 26 F.C.C., 1959, pp. 403-417.

cable television as a common carrier and cited its decision in Frontier Broadcasting Co. It also dismissed the assertion that jurisdiction could be assumed under the power to control broadcasters, since CATV transmission to customers was entirely by wire, any radio links being only between the "head end" of the cable and the master antenna and never to subscribers.<sup>17</sup> A major point of the Inquiry stated that a CATV system's use of common carrier microwave for long-range transmission of its signals was no basis for jurisdiction. A case being heard near the time the Inquiry was released also denied that the Commission had "plenary power to regulate any and all enterprises which happen to be connected with one of the many aspects of communications."<sup>18</sup>

FCC Attempts to Regulate Cable Television  
Through Microwave Common Carriers

Shortly after the Inquiry the FCC handed down a decision that modified its position. It issued a "procedural rule"<sup>19</sup> under which it could regulate those common carriers that had been licensed to serve CATV and that had been created for that purpose. By requiring those carriers desiring to expand to show that in the preceding licensing period at least 50 percent of their total service hours and 50 percent of the channels over which they operated were used by customers not directly controlling or controlled by the applicant, the Commission

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<sup>17</sup> Ibid., p. 405.

<sup>18</sup> CATV and TV Repeater Services, 26 F.C.C., (Docket 12443), 1959, p. 429.

<sup>19</sup> 47 C.F.R. Sec. 21.709 (1965); see also 1 F.C.C. 2d., 1965, p. 902.



was ostensibly attempting to guarantee that only a common carrier fulfilling a public need would utilize a frequency reserved to the public. It was not until the Carter Mountain case that the Commission completely reversed its decision.

In Carter Mountain,<sup>20</sup> the FCC denied a license for the construction of a microwave transmission and relay network serving several CATV systems in Wyoming on the grounds that the proposed use of the facility would substantially impair the economic situation of a local television station. Carter Mountain represents the assumption by the FCC of control over CATV systems making use of common carrier microwave transmissions. The practical effect of the "procedural rule" and Carter Mountain was a move by the FCC to gain control over cable television through the common carriers.<sup>21</sup> The Carter Mountain decision would, in time, provide the jurisdictional foundation for the First Report and Order of 1965.

FCC Issues 1965 Notice Followed by 1966 Second Report  
and Order Granting FCC Official Authority  
to Regulate CATV

On April 23, 1965, the FCC issued two documents simultaneously, its First Report and Order<sup>22</sup> and a Notice of Inquiry and Notice of Proposed

<sup>20</sup>Carter Mountain Transmission Corp., 32 F.C.C., 1962, pp. 459-468; see also Carter Mountain Transmission Corp. v. FCC, 321 F. 2d., (D.C. Cir.), 1963, pp. 359-369.

<sup>21</sup>\_\_\_\_\_, "The Wire Mire: The FCC and CATV," Harvard Law Review, Vol. 79, 1965, p. 370.

<sup>22</sup>In the matter of Amendment to Subpart I, Part 21, to Adopt Rules and Regulations to Govern the Grant of Authorization in the Domestic Point to Point Microwave Radio Service for Microwave Radio Stations Used to Relay Television Signals to CATV; First Report and Order, 38 F.C.C., 1965, pp. 683-690.

Rule Making.<sup>23</sup> The First Report and Order was basically a general application of restrictions for all microwave-served CATV systems. It was the Notice of Inquiry and not the First Report and Order that was important, as the Notice asserted FCC jurisdiction over cable television but asked what form and to what degree this jurisdiction should be established. Secondly, the Notice imposed a freeze (that was not lifted until the 1972 Cable Television Report and Order) upon major market penetration while information could be gathered to determine the best way to regulate CATV.

Response to the Commission's invitation in the Notice of Inquiry, for CATV operators and interested parties to file suggestions and comments set the stage for the 1966 Second Report and Order.<sup>24</sup> For all practical purposes the Second Report and Order signified the FCC's official authority to regulate community antenna television.\* Several restrictions were placed on the cable industry, two of which have direct bearing on this study:

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<sup>23</sup>In the matter of Amendment of Part 24, 74 (Proposed Subpart J and 9) to Adopt Rules Relating to the Distribution of Television Broadcast Signals by CATV, and Related Matters; Notice of Inquiry and Notice of Proposed Rulemaking, 1 F.C.C. 2d., 1965, pp. 453-467

<sup>24</sup>Amendment of Subpart L, Part 91, to Adopt Rules and Regulations to Govern the Grant of Authorization in the Business Radio Service for Microwave Stations to Relay Television Signals to Community Antenna Systems (Second Report and Order), 2 F.C.C. 2d., 1966, pp. 725-801; see also: Edward Greenberg, "Wire Television and the FCC's Second Report and Order on CATV Systems," Journal of Law and Economics, Vol. 10, 1967, pp. 181-203.

\*CATV was to be regulated not because it was a common carrier, or because it rebroadcasts television services, or because it is a broadcast service, but rather because, in the FCC's judgment, it posed a threat--if unregulated--to "free television." (Verrill, "Cablecaster or Common Carrier," p. 593.)

1. Compulsory carriage: a CATV system must carry the signals of local stations.
2. Major-market/distant-station policy: under this rule a CATV system may not import into the 100 largest TV markets (embracing metropolitan areas containing over 80 percent of the nation's population) unless it is given permission by the Commission, following a hearing which would determine whether CATV operations in a particular area "would be consistent with the public interest, and particularly the establishment and healthy maintenance of UHF television broadcast service."<sup>25</sup>

These two restrictions coupled with the Frontier decision alter the rationale that CATV is not a common carrier. In the Frontier case the FCC found a distinction between CATV and the traditional common carrier services in that the CATV operator had the final choice in selecting the signals to be carried over the system. The subscriber could only choose from the existing signals. The subsequent development of CATV regulation in the Second Report and Order has eliminated this distinction. The compulsory carriage rule and major-market/distant-station policy has shifted the discretion as to which signals are to be carried over a cable system from the CATV operator to the FCC. Thus far the FCC has failed to re-evaluate the 1958 Frontier decision and to project, on a long-term basis, whether the ultimate role of community antenna television should be a common carrier.

The legal rationale for the contrary conclusion no longer has merit since CATV clearly falls within not only the

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<sup>25</sup>Second Report and Order-1966, p. 782.

statutory definition but also the Commission's own articulation of principles establishing what is a common carrier.<sup>26</sup>

Two years later on November 26, 1968 Commissioner Cox in Southern Bell Telephone and Telegraph Co.,<sup>27\*</sup> indicated:

. . . . at some time in the future the CATV industry may develop in such a way that we will have to consider whether it should be subject to common carrier regulation. For the present, however, I think the actual conduct of the business of distributing television signals by cable to subscribers for a monthly fee is not a common carrier activity . . . .<sup>28</sup>

Commissioner Cox expressed doubt whether the FCC could force CATV operations to become common carriers since, "I see no way in which we could require the various parties concerned to adjust their relationships so as to fit common carrier concepts."<sup>29</sup> The Commissioner's statement was not published until 1969, just after the Commission reached the tentative conclusion, a turn-about in policy, that cable operators should operate as common carriers on at least some channels. Commissioner Cox indicated

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<sup>26</sup>Verrill, "Cablecaster or Common Carrier," p. 607.

<sup>27\*</sup>Southern Bell Telephone & Telegraph Co., 16 F.C.C. 2d., 1969, pp. 491-495 (concurring statement of Commissioner Kenneth A. Cox and dissent of Commissioner Nicholas Johnson). This case involved granting the application of So. Bell Tel. & Tel. Co. for authority to construct and operate CATV channel facilities to serve a non-affiliated customer in Ga. In an earlier decision the Commission ruled that the furnishing by telephone companies of channels of communications to CATV operators is a common carrier undertaking. The FCC therefore required telephone companies to file tariffs covering the provision of such service. (Common Carrier Tariffs for CATV Systems, 4 F.C.C. 2d. 257 (1966), p. 260. The Commission also held in General Telephone Co. of California, 13 F.C.C. 2d. 448 (1968) that the provision of channel service is an interstate common carriage service and that, therefore, telephone companies must obtain Section 214 authorization from the FCC before constructing facilities to provide this service. These two cases gave the FCC "indirect" jurisdiction over CATV.

<sup>28</sup>Ibid., p. 492.

<sup>29</sup>Ibid.

these common carrier operations would represent only a small part of the cable service.<sup>30</sup>

December 12, 1968 Notice Encourages Cable  
Systems to Operate as Common Carriers

The Commission's proposal that the public interest would be served by encouraging CATV systems to operate as common carriers on some channels was contained in its Notice of Proposed Rulemaking and Notice of Inquiry released on December 12, 1968.<sup>31</sup> The rationale behind its decision was to:

. . . provide an outlet for others to present programs of their own choosing, free from any control of the CATV operator as to content except as required by the Commission's rules or applicable law. It might also provide a low cost outlet for political candidates, possibly advertisers, programs on a subscription basis, and various modestly funded organizations and entities in the community who may be unable to afford time on or obtain access to broadcast facilities. And it might further provide a means for municipal authorities to fulfill any of their community needs that are not sufficiently met through CATV's obligation to act as a local outlet.<sup>32</sup>

The Proposed Rulemaking did not require CATV systems to operate as common carriers on some channel(s) but said the cable operator may if he chose to do so. The Commission stated its intent to "return to this issue as the industry develops."<sup>33</sup>

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<sup>30</sup> Ibid.

<sup>31</sup> Amendment of Part 74, Subpart K of the Commission's Rules and Regulations Relative to Community Antenna Television Systems (Notice of Proposed Rulemaking), Docket 18397, 15 F.C.C. 2d., 1968, pp. 417-504; see also Harold Barnett and Edward Greenberg, "A Proposal for Wired City Television," Washington University Law Quarterly, 1968, pp. 1-27.

<sup>32</sup> Notice of Proposed Rulemaking, December 12, 1968, p. 427.

<sup>33</sup> Ibid., p. 421.

A second major provision of the December 12th Notice was the Commission's encouragement of cable operators to originate their own programming. The FCC felt the public interest would be served by "increasing the number of local outlets for community self-expression and for augmenting the public's choice of programs and types of services."<sup>34</sup> This seemingly "harmless" proposal which was implemented in a First Report and Order in Docket 18397<sup>35</sup> has been a major point of contention in the present common carrier operations of CATV. The First Report and Order in Docket 18397, released on October 24, 1969, established rules regarding program origination and the standards cable systems would be required to adhere to in their programming. Specifically, the rules stated that on or after January 1, 1971, no CATV system having 3,500 or more subscribers could carry the signals of any television station unless the system also operated to a significant extent as a local outlet for "cablecasting" (the term coined by the FCC to describe CATV program origination.). This document not only marked the first move by the FCC toward allowing CATV something more than a role supplementary to over-the-air broadcasting, it necessitated the need to re-evaluate the role of CATV systems. The Commission had for several years regarded CATV as a business that distributed television signals.<sup>36</sup> Then in its December 12th Notice the FCC encouraged CATV systems to operate as common carriers but who would exercise no control over program content. Now cable

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<sup>34</sup> Ibid.

<sup>35</sup> First Report and Order in Docket 18397, 20 F.C.C. 2d., 1969, pp. 201-236.

<sup>36</sup> Southern Bell Tel. & Tel. Co., p. 492.

operators were being forced to originate their own programming. The Commission through its rulings, has combined the programming and transmitting function of CATV. The conflict is an economic one. The cable operator has an interest in maximizing the audience for his own programs as against those of competing programmers using leased (common-carrier) channels. This conflict of interest is inherent in the cable operator's dual role as a programmer in his own right and a common carrier of programs offered by others.<sup>37</sup>

The Commission stated its rationale for requiring cablecasting and encouraging some common carrier operations promoted the basic purpose for which the Commission was created:

. . . regulating interstate and foreign commerce in communication by wire and radio so as to make available, so far as possible, to all people of the United States a rapid, efficient, nationwide, and worldwide wire and radio communication service with adequate facilities at reasonable charges.<sup>38</sup>

This philosophy, perhaps more than any other, has served as the foundation for the subsequent rulings whereby the Commission sought the development of sufficient channel availability on all CATV systems. Although the Commission has yet to require that CATV systems operate as common carriers, their rulings that set forth channel capacity seem a strong step in that direction.

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<sup>37</sup> Stephen R. Barnett, "State, Federal and Local Regulation of Cable Television," Notre Dame Lawyer, Vol. 47, 1972, p. 745.

<sup>38</sup> First Report and Order in Docket 18397, p. 201.

1970 Second Further Notice Specifies  
Multi-Channel Requirements

On July 1, 1970, the FCC released two documents, Notice of Proposed Rulemaking (Docket 18894)<sup>39</sup> and Second Further Notice of Proposed Rulemaking (Docket 18397-A).<sup>40</sup> The former document served to notify cable operators that the Commission intended to continue to require "minimum system capacities adequate to serve foreseeable demand, and thus caution operators to avoid the economic burden of installing inadequate capacity that will soon need to be expanded at extra cost."<sup>41</sup> The Commission did not specify a minimum channel capacity, but mentioned that 20-channel systems were proposed by many cable operators in the larger markets. The second document set forth specific requirements to provide sufficient channel availability. These include:

- A) Local government channel: at least one channel for use without charge by local government and for free political broadcasts during primary and general elections.
- B) Local public access channels: in order to facilitate further presentation of views, cable systems will be required to make channel time available on one or more channels at no cost to local citizens or groups, which are not engaged in programming for advertising revenue, but which desire to present views on matters of concern to them.
- C) Leased channels: cable operators would make available to third parties, either permanently or on a one-shot basis, channels for commercial operation by third parties.

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<sup>39</sup>Notice of Proposed Rulemaking (Docket 18894), 25 F.C.C. 2d., 1970, pp. 38-57.

<sup>40</sup>Second Further Notice of Proposed Rulemaking (Docket 18397-A), 24 F.C.C. 2d., 1970, pp. 580-621.

<sup>41</sup>Notice of Proposed Rulemaking, 1970, p. 40.



- D) Channels devoted to instructional uses (e.g. courses conducted for students either by or in coordination with public or private institutions; instruction by professional groups for their members, doctors, engineers, etc.). We ask for comment on the number of such channels (e.g., a specified number; a percentage of the system's capacity).<sup>42</sup>

The Commission requested comments on its proposals that systems of twenty or more channels provide at least 50 percent of their channels, on a demand basis, for the purpose specified in the Second Further Notice of Proposed Rulemaking.<sup>43</sup> In regards to the leased channels, the Commission re-emphasized their importance and promised to take "appropriate action to insure their availability (e.g., that the rates charged in such channels are reasonable and nondiscriminatory)."<sup>44</sup> Although the Commission did not use the words "common carrier," its specification that the rates charged for the leased channel must be reasonable and nondiscriminatory, thus implies at least a modified form of common carrier access.<sup>45</sup>

Cable Television Report and Order Sets Forth Rules  
Governing Use of Nonbroadcast Channels

The present rules governing community antenna television, the Cable Television Report and Order,<sup>46</sup> was released on February 12, 1972 and is

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<sup>42</sup> Second Further Notice of Proposed Rulemaking, 1970, p. 587.

<sup>43</sup> Ibid.

<sup>44</sup> Ibid., footnote 14.

<sup>45</sup> Howard M. Liberman, "Common Carrier CATV: Problems and Proposals," 37 Brooklyn Law Review, Vol. 37, 1971, p. 536.

<sup>46</sup> Cable Television Report and Order, 37 Fed. Reg., 1972, pp. 3252-3341.

best known as the "consensus agreement." The prelude to the most recent cable television regulation has been characterized by Nicholas Johnson:

In future years, when students of law or government wish to study the decision making process at its worst, when they look for examples of industry domination of government, when they look for Presidential interference in the operation of an agency responsible to Congress, they will look to the FCC handling of the never-ending saga of cable television as a classic case.<sup>47</sup>

For more than three years the Commission gathered data, solicited views, heard arguments, evaluated studies, examined alternatives and finally turned to public panel discussions (unique in communications rule making) in order to substantiate its current regulatory effort. The rules the Commission finally adopted are the result of a number of interwoven proceedings.<sup>48</sup> In February, 1969, and March, 1971, oral presentations were heard between the Commission and recognized authorities regarding specific issues of cable television regulation. Following these public proceedings the Commission formulated a plan for cable television, "designed to allow for fulfillment of the technological promise of cable and, at the same time, to maintain the existing structure of broadcasting."<sup>49</sup>

These proposals were described before Congress and a formal "Letter of Intent"<sup>50</sup> was released on August 5, 1971, which described in detail the course the FCC planned to adopt. But the "Letter of Intent" was

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<sup>47</sup> Steven R. Rivkin, Cable Television: A Guide to Federal Regulation (Rand Corp. Memo. R-1138-NSF), March, 1973, p. 210.

<sup>48</sup> Cable Television Report and Order, p. 3253.

<sup>49</sup> Ibid.

<sup>50</sup> FCC, Report to Congress, CATV Regulation, "Letter of Intent," reprinted in 22 P & F Radio Reg. 2d., 1971, pp. 1755-1772.

met with sharp criticism particularly from broadcasters and copyright owners but with support from the White House and FCC chairman Dean Burch one result of the conflicts among these four parties prompted a meeting where:

. . . the vested economic interests--broadcasters (who felt threatened by this new technological competition), copyright holders (who were afraid cable systems would diminish the value of their products), and the cable industry (who felt threatened by the political power of the broadcasters--once joined by Chairman Burch and the President--to stop our August 5 policy entirely in Congress)--met with the representatives of the White House and with FCC Chairman Burch . . . .<sup>51</sup>

Within three months the "consensus agreement" was born. Under the circumstances which the present cable regulations were conceived, it is not surprising, perhaps, that the Commission's proposals for common carrier access differed little from the 1970 Second Further Notice of Proposed Rulemaking, even after extensive hearings before the Commission by members of the American Civil Liberties Union, the primary advocates of common carrier access.<sup>52</sup> Several sections of the 1972 Cable Television Report and Order addressed themselves to access to and use of nonbroadcast channels.

Sec. 120--The rules require 20 channel capacity (actual or potential) in the top 100 markets, also additional channel 6 MHz in width suitable for transmission of Class II or Class III signals.

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<sup>51</sup>Rivkin, A Guide to Federal Regulation, p. 215.

<sup>52</sup>Statements of John de J. Pemberton, Jr. on behalf of New York Civil Liberties Union on Proposed Franchise Grants for Cable Service in the Borough of Manhattan, July 23, 1970; testimony to Illinois Commerce Commission by Jerrold N. Oppenheim on March 1, 1971; Irwin Karp before FCC on March 18, 1971. (Unpublished in FCC Reports)

- Sec. 121--In order to promote program diversity cable television systems will have to provide one dedicated, noncommercial public access channel available without charge at all times on a first-come, first-served nondiscriminatory basis and, without charge during a developmental period, one channel for educational use and another channel for local government use.
- Sec. 122--The encouragement of UHF television was used to foster local service broadcasting; the public access channel will offer a practical opportunity to participate in community dialogue through a mass medium. A system operator will be obliged to provide only use of the channel without charge, but production cost (aside from live studio presentations not exceeding 5 minutes in length) may be charged to users.
- Sec. 125--In addition to the designated channels and broadcast channels, cable systems shall make available for leased use the remainder of the required bandwidth; if the public, education, and Government access channels are not being used, they may be used for leased operation.
- Sec. 126--A new channel must be made operational whenever all operational channels are in use during 80 percent of the weekdays, for 80 percent of the time during any consecutive 3-hour period for 6 weeks running, the system will then have 6 months in which to make a new channel available. (Known as the "N plus 1" rule)
- Sec. 128--Requires CATV operators to install return communication facilities on at least a non-voice basis.
- Sec. 136--The Commission recognized that open access carries with it certain risks, but that regulation awaits experience. Commission will explore the feasibility of providing a lock switch to cut off public access or leased channels, should subscribers wish to control channel selection.
- Sec. 137--Encourages experimentation in regards to the best way to handle applications for access time, how production facilities will be provided, how the public can obtain advance notice of which programs will be presented, etc.

- Sec. 140--Eases cable operators concerns about potential civil and criminal liability resulting from use of the public and leased access channels. Since the cable operator has no control over content, it is unlikely that a suit would be brought against any CATV system over libelous material.
- Sec. 143--The Commission encourages refinement of half-inch video tape and recording equipment that will be available to the public which does not conform to technical broadcast standards.
- Sec. 146--The suggestion has been made that cable television systems be prohibited from originating their own programming and be restricted entirely to a common carrier role. We have considered these possibilities but feel that it would be premature to adopt either at this time. At this stage in the development of the cable industry, it is the system operator who has the greatest incentive to produce originated material attractive to existing and potential subscribers. We have tried to encourage this origination both through our origination rules and by structuring the broadcast signal carriage rules to stimulate the development of nonbroadcast services. At the same time, we have recognized that during this developmental stage we should not adopt rules that constrain experimentation and innovation in the services that cable systems provide but, rather, that we should seek to keep our future options open. When cable penetration reaches high levels and demand increases for leased channel operations, we will revisit this matter. For now, we remain of the view that the most appropriate mix for the orderly development of cable and for encouraging the maximization of its potential for public benefit is one that embraces . . . a multipurpose CATV operation combining carriage of broadcast signals with program origination and common carrier service. <sup>53</sup>

These access rules will be applicable to all new systems that become operational after March 31, 1972, in the top 100 markets. Systems currently operating in those markets have until March 31, 1977, to comply.

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<sup>53</sup> Cable Television Report and Order, pp. 3269-3272.

Reconsideration of Report and Order Encourages  
Common Carrier Experimentation

On July 14, 1972, the FCC made public its Reconsideration of Report and Order<sup>54</sup> wherein the Commission acknowledged the American Civil Liberties Union's challenge of the Commission's authority to require cable systems serving 3,500 or more subscribers to originate their own programming while urging common carrier operations on some cable channels. Answering the ACLU, the FCC referred back to their consideration in the 1972 Cable Television Report and Order:

The ACLU's approach, which may prove sound eventually, at the present time does not afford the industry the flexibility that we desire to encourage experimentation and innovation. Further, we doubt very much if, in new systems in major markets, a scarcity of access channels will arise from a cable operator's excessive use of bandwidth for his own origination purposes; but if a problem should arise, we shall be alert to take action to maintain our emphasis on the provision of access channels.<sup>55</sup>

The brief history of common carrier doctrine in relation to community antenna television can be characterized by a regulatory turn-about. At first the FCC in Frontier Broadcasting Co. deemed cable television not to be a common carrier because the customer exercised no choice in selecting the television signals that were to be delivered. The healthy survival of UHF broadcasting seemed to be an underlying factor in the FCC's compulsory carriage and major-market/distant-station policies which in turn seemed to negate the rationale of the Frontier case. The Commission has yet to re-evaluate the Frontier decision. A conflict arose in subsequent legislation due to the dual role that the Commission

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<sup>54</sup> Reconsideration of Report and Order, 37 Fed. Reg., 1972, pp. 13848-13910.

<sup>55</sup> Ibid., p. 13857.

placed CATV systems under by requiring cablecasting and encouraging common carrier operations on some cable channels. Currently, CATV is in a state of flux. The FCC does not regulate cable television as a common carrier but has encouraged operators to experiment as common carriers on some channels. The Commission says it intends to revisit the matter at a later stage in the development of cable. "It is, nevertheless, an issue which must be resolved before CATV achieves large-scale, multi-channel capacity; vesting control of forty or more communication channels in one entity invites their abuse."<sup>56</sup>

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<sup>56</sup>Botein, "A Jumble of Jurisdictions," p. 839.

## CHAPTER IV

### THE ECONOMICS OF COMMON CARRIER CABLE TELEVISION

The economics of a common carrier cable system are complex. The preceding chapters have examined the technological and regulatory aspects of a common carrier CATV system. Reception problems inherent in multi-channel cable systems await the development of more sophisticated broadcast equipment and scholars feel with some farsightedness on the part of government agencies some of the regulatory problems could become untangled. But the issue of cable economics is a different story. While experts feel the technological and regulatory problems can be somewhat stabilized, economically cable television is subject to fluctuations of the marketplace. To further complicate matters, cable television operators are not only burdened with the problems of rate structures, but as broadcasters they must face the issues inherent in that industry as well, including program costs and advertising.

These two areas, CATV rate regulation coupled with the programming function of cable television, pose complicated problems.

#### Regulation of Subscription Fees and Access Rates Poses Economic Problems

Regulation of rates by cable companies has been a sensitive issue. Fear of public-utility ratemaking on the classic rate-of-return model has been a principal reason for the cable industry's opposition to any type of common carrier or public utility status. Industry spokesmen



usually point to the case of Connecticut as an example of how state regulation (including rate regulation) has completely stifled cable growth.<sup>1</sup>

Rate regulation for common carrier CATV has three aspects: (a) the regulation of rates for rental of studio equipment, (b) the regulation of rates which subscribers pay to receive the cable services and (c) the regulation of rates which users pay to lease a channel.<sup>2</sup> An argument against regulating the first aspect is possible since the business of renting studio equipment is not a natural monopoly.<sup>3</sup> However, the purpose of requiring the CATV company to maintain a studio is to insure that the citizens who can least afford to buy their own equipment will have feasible opportunity for access to this medium. Hence, rate regulation of the rental of studio equipment can be justified as a necessary and integral aspect of common carrier CATV.<sup>4</sup> The second and third areas of rate regulation are closely related since both the user and subscriber pay to receive the benefit of a given channel. For example, a subscriber who pays \$10 per month to receive twenty channels of programming pays \$.50 per month per channel. A user who leases one of those channels also pays a monthly, daily or hourly fee for that same channel. Thus, assuming the profits of the CATV company are regulated on a full cost basis, the regulation of access rates will necessitate the

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<sup>1</sup>Office of the General Counsel, National Cable Television Association, "The CATV Industry & Regulation," (pamphlet, no page numbers or date).

<sup>2</sup>Lieberman, "Common Carrier CATV," p. 543.

<sup>3</sup>Richard Posner, "Natural Monopoly and Its Regulation," Stanford Law Review, Vol. 21, 1970, p. 575.

<sup>4</sup>Lieberman, "Common Carrier CATV," p. 543.

regulation of subscriber rates.<sup>5</sup> The interrelatedness between the rates being charged to users and those to subscribers presents the problem of how these rates should be apportioned.

Lack of Economic Guidelines Makes the Establishment  
of a "Fair Rate-of-Return" Difficult

By far the most controversial aspect of rate regulation for common carrier cable television is in establishing a "fair" rate of return. One proposal calls for a regulatory commission which would ascertain rate base, rate structure, allowed rate of return, etc. Such issues as valuation of equipment costs, anticipated obsolescence, marginal cost factors and market forces would have to be considered by the regulatory commission.

The economic complexities of a CATV common carrier are probably most evident in the circular process of determining a standard for a "fair rate of return."

An appropriate definition of the fair rate of return must take into account the risk characteristics of the investment. But these risk characteristics in turn are determined in large part by the behavior of the regulatory commission. How much variance there will be in the earnings of a regulated company depends upon how often the regulatory agency re-determines the rate structure and the allowed rate of return and what basis it uses for such determinations. There are no investment risks which are really comparable to those involved in investment in a regulated utility other than investment in another regulated utility. Thus, many state regulatory commissions in an effort to escape circularity

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<sup>5</sup>Ibid.

set their allowed rate of return by reference to the return allowed in the state next door. Cumulatively, the results of this process are not satisfactory.<sup>6</sup>

There are numerous plans and objections to rate-of-return regulation in general which cannot be discussed at length here. It is important to point out the complexities and hazards to economic regulation of relatively new ventures such as cable television. Although many existing cable companies have been quite profitable from the outset, extension of cable into major urban markets already served by multiple television stations probably involves substantial financial risk. If rate-of-return regulation which minimizes the reward for entrepreneurship is imposed, businessmen might be discouraged from starting new ventures into the cable television industry. The extension of common carrier principles to the regulation of rates on the cable involves numerous practical and theoretical problems.

Whatever the merits from the point of view of diversity of access to giving the cable common carrier status an economic analysis counsels caution before applying the rate-setting aspects of common carrier regulation.<sup>7</sup>

State Public Utility Regulation of CATV  
Resembles Common Carrier Regulation

The problem of rate regulation for cable television is far more significant than merely determining specified rate bases and rate structures, and has become a key point of contention between those who advocate local vs. state vs. federal regulation of cable television.

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<sup>6</sup> Leonard M. Ross, Economic and Legal Aspects of CATV Systems (Working Paper IX, Prepared for Center for Policy Research and Columbia University), 1972, p. 146.

<sup>7</sup> Ibid., p. 154.

The regulatory problem overlaps economic issues and vice-versa.

When the need for regulation finally became apparent however, response came from every governmental level --cities, states and the Federal Government. This surge of activity has produced a regulatory nightmare haunted by overlapping jurisdictions and conflicting regulations.<sup>8</sup>

This dilemma has come to be known as "three-tier regulation." Arguments have been built supporting regulation at each level of government. Although these arguments are not within the scope of this study, this multi-jurisdictional system of CATV regulation could pose the thorny constitutional problem of deciding which regulatory scheme to sustain for common carrier operations.

On the local level, planning and franchising CATV systems must take place within the framework of federal and state laws. Local authority to franchise and regulate cable television derives from the cable system's need for access to city streets, utility poles and other rights-of-way. The recent Cable Television Report and Order contains rules and guidelines that strongly affect the choices open to local franchising authorities. The FCC limits franchise fees to 5 percent of total subscribers revenues and requires a special showing if the fee is more than 3 percent.<sup>9</sup> The franchising authority must show that the higher fee is justified by a local regulatory program for cable. The Commission also requires that rates for leased channels be reasonable and nondiscriminatory. Federal and local regulation of rates and revenues has been somewhat unstructured. The primary significance of three-tier regulation is

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<sup>8</sup> Botein, "A Jumble of Jurisdictions," p. 816.

<sup>9</sup> Cable Television Report and Order, p. 3281.

the move in the past three years toward enactment of legislation subjecting cable television to state regulation through the state's existing public utilities commission. This action is directly related to this study, as public utility regulation resembles common carrier regulations in some respects.<sup>10</sup> The legal basis for this action stems from TV Pix, Inc. v. Taylor<sup>11</sup> in which the Supreme Court held that states, and by implication local government, had the power to regulate those aspects of CATV upon which the FCC had not acted.

Before 1971, five states--Connecticut,<sup>12</sup> Nevada,<sup>13</sup> Rhode Island,<sup>14</sup> Vermont,<sup>15</sup> and Hawaii<sup>16</sup> had each adopted legislation creating a state regulatory commission to govern CATV. In 1971 New York<sup>17</sup> and New Jersey<sup>18</sup> imposed a one-year moratorium on the franchises of cable systems while legislatures sought to devise a state regulatory plan. Two states, Illinois<sup>19</sup> and Massachusetts<sup>20</sup> followed this action in January, 1972.

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<sup>10</sup>Sol Schildhause, Chief, Cable Television Bureau, Federal Communications Commission, personal letter, May 25, 1973.

<sup>11</sup>TV Pix, Inc. v. Taylor, 15 P & F Radio Reg., (D. Nev.), 1968, pp. 2004-2113.

<sup>12</sup>Conn. Stats. ch. 289, sec. 16-330 to 333 (1966 Rev.).

<sup>13</sup>Nev. Rev. Stat. 711.010 et seq. (Supp. 1971).

<sup>14</sup>R.I. Gen. Laws Ann. sec. 39-19-1 et seq. (Supp. 1970).

<sup>15</sup>Vt. Stat. Ann. ch. 30, sec. 501 et seq. (Supp. 1971).

<sup>16</sup>1970 Hawaii Laws ch. 114.

<sup>17</sup>N.Y. Gen. Munic. Laws sec. 88 (McKinney Supp. 1972).

<sup>18</sup>New Jersey Laws (1971) Reg. Sess. ch. 221.

<sup>19</sup>Illinois Commerce Commission, Investigation of Cable Television and Other Forms of Broadband Cable Communications in the State of Illinois, reprinted in 22 P & F Radio Reg. 2d., 1971, pp. 2192-2206.

<sup>20</sup>Mass. Gen. Laws (1971) Reg. Sess. ch. 113.

State regulation of cable TV is pending in Iowa<sup>21</sup> and California.<sup>22</sup> The states now regulating CATV placed cable within the general scheme of public utility regulation by statutory enactment. In addition to requiring that cable systems obtain a certificate of public convenience and necessity and filing tariff schedules, these states establish at least the semantic basis for rate regulation by classifying CATV as a public utility. There are significant differences in each state's approach to the issue of rate regulation. Only the Nevada statute explicitly gives its commission the power to set rates; the Connecticut statute limits the "rates of return to the amount that is fair, just and reasonable."<sup>23</sup> Vermont is completely silent on the matter<sup>24</sup> while the Rhode Island statute prohibits discriminatory rates<sup>25</sup> but does not explicitly give its commission any power to make rates.

These commissions have a general authority to regulate public utility rates which presumably extends to CATV by nature of their definition. The cable industry has a traditional fear of state regulation and there appears to be a certain hesitancy on the part of some states to impose it, perhaps due to the belief that CATV lacks

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<sup>21</sup>Barnett, "Regulation of Cable Television," p. 687.

<sup>22</sup>Senate Bills #1330, #754, introduced by Senator Anthony Beilenson, May 7, 1973, and Senator Alfred E. Alquist, April 2, 1973, California State Capitol Bill Room.

<sup>23</sup>Howard E. Hausman, Chairman, Public Utilities Commission, State of Connecticut, personal letter, June 9, 1973.

<sup>24</sup>Susan M. Hudson, Public Service Board, State of Vermont, personal letter, July 11, 1973.

<sup>25</sup>Loraine Silberthau, Division of Public Utilities and Carriers, State of Rhode Island and Providence Plantations, personal letter, June 21, 1973.

sufficient public utility characteristics to constitutionally support such a regulation.<sup>26</sup> According to scholars, this proposition seems doubtful. CATV systems usually have an exclusive franchise and thus fall within any classical definition of public utility. Furthermore, even if a cable company does not have an exclusive franchise, it certainly seems to meet the Supreme Court's exceedingly liberal test of a business "affected with a public interest."<sup>27</sup>

The real problem with cable rate regulation seems to be its standards. The use of traditional evaluation methods creates a risk of setting the rate base either too high or too low. Since CATV involves a large initial investment with small immediate return, a newly-constructed CATV system may require setting an artificially low rate base. On the other hand, if the CATV system is well-established and has been depreciated over a substantial period of time, a higher base would be appropriate. Thus, rates must be based upon a flexible formula that correlates the high cost of constructing a CATV system with the comparatively low cost of operating it.<sup>28</sup>

Proposals That Attempt to Establish Reasonable  
Subscription Fees and Access Rates

Subscription and Access Costs Charged On a  
Per Channel, Per Month Basis

One proposal is that the rates for all non-commercial users be regulated so that the cost per channel per month will be the same as the

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<sup>26</sup>Botein, "A Jumble of Jurisdictions," p. 824.

<sup>27</sup>Munn v. Illinois, 94 U.S., 1877, p. 113.

<sup>28</sup>Botein, "Jumble of Jurisdictions," p. 825.

the monthly subscription cost, divided by the number of channels and multiplied by the number of subscribers.<sup>29</sup> Thus the cost of sending a one hour program will be equal to the total cost all CATV subscribers pay to receive that program--whether or not they watch it. Another proposal<sup>30</sup> is that the subscriber pay a nominal monthly charge which would cover upkeep of the system and allow him to receive the local broadcast stations. In addition, the subscriber could choose from the available cable programming and pay a per-program cost, receiving an itemized bill at the end of the month. The cost for each program will include a fixed fee for channel usage plus any charges imposed by the user. Thus a locally produced, non-commercial program might cost the home subscriber a few cents (the user's transmission costs divided by the number of viewers of that program) unless the non-commercial user was willing to pay his own transmission costs. Assuming advertisers will be willing to subsidize the transmission costs of some programs, local commercial programs will be free to the subscriber. The disadvantage of this proposal is that non-commercial users such as politicians, will be faced with the choice of either paying for the time themselves or requiring the viewer to pay to hear their message. A combination of these proposals might allow educational and cultural institutions to be given preferential rate treatment, and political candidates in the particular franchise area an equal allotment of free time, both sub-

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<sup>29</sup> Liberman, "Common Carrier CATV," p. 543.

<sup>30</sup> Leland Johnson, The Future of Cable Television: Some Problems of Federal Regulation (Rand Corp. Memo. RM-6199-FF), January, 1970, pp. 56-61.



sidized by increasing the monthly cost to all subscribers--whether or not they wish to watch these programs.<sup>31</sup>

Allow Rates to be Determined by  
the Economic "Marketplace"

On the opposite side of the issue, is the belief that common carrier access to cable systems can be achieved by a regulation imposing the requirement that access to channels be provided on a fair and non-discriminatory basis and that no further regulation of rate level or return is warranted in cable systems for the foreseeable future.<sup>32</sup>

This approach is supported by the difficulties of arriving at any coherent regulatory standard for regulating rate levels or rates of return. Commonly, rate levels for utilities are supposed to provide a reasonable return on investment-rate base. This traditional concept would be difficult to apply in the present situation. Cable systems have been initiated on the basis of subscriber payments. The cable operator will receive revenues from subscribers fees (which are not now regulated) and from advertising on its own program originations (which are not likely to be controlled).<sup>33</sup>

One of the primary arguments for minimal rate regulation is based on the belief that for cable to grow, it must be allowed a great deal of freedom.

At this particular point in time, at the beginning of the hoped for communications revolution, restrictions and regulations can only prevent allowing the

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<sup>31</sup>Ibid., p. 26.

<sup>32</sup>Lionel Kestenbaum, Common Carrier Access to Cable Communications: Regulatory and Economic Issues (A Report for the Sloan Commission), August, 1971, p. 17.

<sup>33</sup>Ibid.

evolution of cable to its full potential. Instead of anticipating problems, perhaps we would do well to wait and take actions when problems actually evolve.<sup>34</sup>

The cable industry is a high risk business, and contrary to popular belief, "urban cable TV systems are not unlimited roads to immediate riches."<sup>35</sup> As a capital-intensive business, cable operators must invest a great deal more to generate a dollar of income than many other industries. For first generation cable, plant commitment alone, excluding operating and other expenses was three dollars invested for each dollar in sales. Television station investment runs about a dollar investment for every dollar in sales and in some areas, TV sales may run ten dollars in plant expense.<sup>36</sup> Cable earnings were one-fifth the revenue of the broadcast industry, but had half as much total capital committed. As cable operators move into the urban areas, capital investment may be more than doubled. Instead of a minimum of \$80 to \$120 which is today's investment per subscriber in plant cost, approximately \$450 per subscriber is anticipated to build tomorrow's major market system.<sup>37</sup>

Corporations generally are able to fund 60 to 70 percent of their requirements from internal sources. Cable will be fortunate if it can generate 20 to 25 percent of its capital requirements in the next ten years.

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<sup>34</sup>Lois Brown, "Common Carrier: Is This the Public Interest?" (Report Prepared for Metrotel Communications, Inc., Philadelphia), 1972, p. 4.

<sup>35</sup>Ibid., p. 5.

<sup>36</sup>Ibid., p. 7.

<sup>37</sup>Communication News, untitled article, July, 1972, p. 17.

There is a need for a vast amount of external long term financing. An unfavorable regulatory climate will certainly make financing a great deal more difficult in some cases virtually impossible to obtain . . . . In addition to the need to provide some incentive for prospective investors, and some promise of a reasonable return for the operator, a relatively high level of earnings is required for the type of local program production we all hope to see. To restrict subscription fees instead of allowing them to be determined by the market-place would be to place unfair, and at this point unnecessary burdens upon the industry.<sup>38</sup>

#### Establish Different Classifications of Access Users and Charge a Flat Fee

A proposal that has been supported by the American Civil Liberties Union is to charge a flat fee to lease channels as opposed to allowing the cable operator to charge either a share of the revenue or a percentage of profit. This plan would set up functional classifications of users (i.e. educators community groups) with different regulated fees for such users.<sup>39</sup> The basis for this proposal is that the cable operator would discriminate against some kinds of users without such provisions, as in some cases he might be able to obtain 50 percent of the profits and if so he would avoid educational, low income or non-profit users.

But there are some who feel the ACLU proposal is fallacious. Since there are functional classifications of users with different rate schedules, the operator could still discriminate by showing preference for one classification of user over another unless regulated further.<sup>40</sup>

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<sup>38</sup> Brown, "Common Carrier: Is This the Public Interest?" p. 8.

<sup>39</sup> Ibid., p. 12.

<sup>40</sup> Ibid.

In other fields of communication or transportation, as has previously been discussed, the law requires a common carrier to make its facilities available to all members of the general public at rates set by a governmental regulatory authority. Usually the authority is directed by statute to set an overall level of rates designed to afford the carrier a fair rate of return on its invested capital. The regulatory commission may be instructed to assure that the rates are "fair" and "nondiscriminatory" and may require the carrier to make its service physically available (by extending a railway line or a telecommunications pathway) to all residents in a given geographical area. In short, the institution of "common carrier" regulation customarily entails a related series of restrictions on rates, services, equipment and access--enforced by a regulatory agency.

## CHAPTER V

### CATV PROGRAMMING CONFLICTS WITH COMMON CARRIER STATUS

At present, virtually all cable systems are owned by private corporations. They are allowed to operate by virtue of having obtained a franchise from the local municipality or in some cases the state government. The franchise agreement may obligate the cable system owner to provide dedicated channels available free of charge to the local government, the school system or other agencies. It may prohibit certain kinds of programming such as "pay cable" programs for which a separate charge is made for receiving that particular program. The FCC also mandates additional kinds of programs: distant signal carriage is subject to strict regulation and minimal cable-sponsored origination of programming is required for systems with more than a stipulated minimum number of subscribers. Aside from these restrictions and those dealing with the Fairness Doctrine and equal-time rules, the cable operator is himself the judge of what will and will not be transmitted over the cable. As a result, some scholars have suggested that the requirement for CATV to operate as a common carrier is unnecessary; a rational cable entrepreneur would, in the normal course of profit maximization make channel space available to any other entrepreneur who could use it more effectively than he could himself. But concern has been expressed about possible conflicting interests inherent in common carrier CATV.

First it is contended by communication experts that any marginal economic benefits from common carrier access would be outweighed by the system operator's concern over possible adverse impact upon him of use of such channels because it could subject him to liability, be offensive to subscribers or violate his duties for balanced presentations.<sup>1</sup> Second it is felt that common carrier access would conflict with the interests of cable operators in their own programming originations.<sup>2</sup>

FCC Prohibits Program Censorship But has Failed  
to Explicitly Grant Immunity to CATV Operators

Liability has been a thorny issue since the beginning of the common carrier doctrine. Now there are some serious considerations posed in regards to the legal liability of broadcasters for the dissemination of libelous, fraudulent or obscene material. The common course of action a cable operator has taken is to exercise control over content in order to protect himself. But since the cable system provides instantaneous access into subscribers' homes, it seems unacceptable to the public for the operator to avoid all responsibility, particularly in relation to the transmitting of obscene material. A common carrier precedent is the telephone system's practice to avoid transmission of known illegal matter, including obscene material which it enforces by termination of service. "A similar obligation is appropriate here."<sup>3</sup>

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<sup>1</sup>Kestenbaum, Common Carrier Access to Cable Communications, p. 26.

<sup>2</sup>Ibid.

<sup>3</sup>Ibid., p. 29.

Concern has also been expressed about the prospect of vocal extremists using common carrier channels for sensationalism or political confrontations.

The ground for such concern may be exaggerated; a rabble rouser on one of the ten cable channels may obtain no greater public recognition than he would speaking on a street corner, or public park.<sup>4</sup>

Common carrier cable would in part be an electronic public forum and thus carries with it many of the same problems inherent in the First Amendment.

There is also the question of fraud and libel and most communication scholars agree it is proper to hold the programmer liable, not the cable system.<sup>5</sup> If the cable system assumed responsibility, this would lead to prior screening of program content, which is inconsistent with the concept of common carrier access.

Perhaps the unsettled issue of CATV liability can be adequately accommodated within present law. Cable system immunity seems to be supported by the recent trend of Supreme Court decisions which have drastically narrowed newspaper liability for libel related to public issues, permitting recovery only for actual malice.<sup>6</sup> Furthermore, the FCC's requirement that cable systems operate as common carriers on some channels may itself exempt the cable operator from liability. In 1959 in the WDAY case<sup>7</sup> the Supreme Court held that the statutory obligation of

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<sup>4</sup>Ibid., p. 32.

<sup>5</sup>Ibid., p. 29.

<sup>6</sup>The New York Times v. Sullivan, 376 U.S., 1964, p. 254.

<sup>7</sup>Farmers Educational & Cooperative Union of America, North Dakota Division v. WDAY, Inc., 360 U.S., 1959, pp. 525-547.

a broadcaster to provide equal access to political candidates with the explicit stipulation that broadcast licensees could not censor, established an immunity for broadcasters against any liability for defamatory statements made in such political broadcasts. An argument could be made that the required operation on a common carrier basis by cable companies could be interpreted within the scope of the federal statute set forth in WDAY.

The recent rulings by the FCC, although explicit in wording, seem to cloud the issue. The FCC has declared that cable operators "should have no control over program content except as may be required by the Commission's rules and applicable law."<sup>8</sup> The New York City franchise also provides that programming on leased channels "shall be free from any control by the Company except as is required to protect the Company from liability under applicable law."<sup>9</sup> The rulings do not clarify what the "applicable law" is, or whether it can be altered by a regulation imposing common carrier status.

Apart from the legal aspects of liability, cable operators may be concerned that an open access could result in dissemination of material offensive to some people.

Like a broadcaster, a system operator prefers the goodwill of the public and will be sensitive to criticism particularly in the developmental stage of his system. No doubt it is for this reason that many cable operators regard the common carrier proposal as a threat or at least as a nuisance. It is understandable that they have resisted attempts to experiment with common carrier access. It

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<sup>8</sup> Cable Television Report and Order, p. 3289.

<sup>9</sup> Jones, Regulation of Cable Television by the State of New York, p. 49.



is obviously impossible to expect a cable system operator to voluntarily undertake such a policy, so long as he cannot in the eyes of the community disclaim the responsibility for the programming. The latter obstacle, at least, should be overcome if the common carrier obligation were imposed upon him as a matter of law.<sup>10</sup>

CATV Operator's Obligation to Grant Channel Access  
May Conflict with Program Origination Requirement

The FCC has required that all cable systems having 3,500 or more subscribers will be required to utilize one channel for origination of substantial amounts of programming. The validity of this ruling is justified by the fact that, at low levels of cable penetration, the principal economic value of program diversity will be to attract subscribers. As cable penetration reaches substantial proportions, commercial opportunities increase. Concern has been expressed that a conflict may then develop between the cable operator's interests as a broadcaster on the origination channel and his obligations to provide access to others.<sup>11</sup>

It is believed that the cable operator, like other broadcasters would be strongly averse to fragmenting his audience by programming on additional channels, and may seek to reduce such usage by excessive rates or other tactics. In contrast to this view is the idea that:

The danger of conflict-of-interest is lessened in as much as the system operator is already competing for audience with local and distant over-the-air signals so that the additional impact of common carrier users is not likely to be substantial. Moreover, the objective requirement of large channel capacity should prevent exclusionary tendencies.<sup>12</sup>

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<sup>10</sup>Kestenbaum, Common Carrier Access to Cable Communications, p. 32.

<sup>11</sup>Ibid., p. 26.

<sup>12</sup>Ibid., p. 27.

Nevertheless, there may be basis for this concern at a later stage when cable penetration is higher and more stable. At that point, the incentive to add or the risk of losing subscribers will be low, and the cable operator's interest in enhancing the revenues of his origination channel may become significant. Perhaps, the ultimate solution to this problem would be to require the cable company to cease engaging in programming and begin operations as a common carrier when a cable system achieves a certain size. This solution has been incorporated by the New York Public Service Commission: "when any single system, operated substantially as a coordinated whole reaches a certain size (say 50,000 subscribers), the Public Service Commission shall have authority to direct that the system be converted into a 'communications common carrier!'"<sup>13\*</sup> This plan would allow the cable operator to engage in programming through separate affiliates. This approach seems adequate to avert problems of discrimination which throughout the history of the common carrier doctrine have been substantial.

Any tendency the cable system might have to reduce the number of competitive program services would be prevented by the nondiscriminatory rates available to others (as well as its affiliate) and the unavoidable existence of unused channels on the basis of the installed capacity of the system.<sup>14</sup>

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<sup>13</sup> Jones, Regulation of Cable Television by the State of New York, p. 199.

\* This is a familiar pattern for the FCC which adopted a similar pattern toward telephone companies engaging in data processing activities; it permitted them to do so through separate corporate affiliates subject to segregation of accounts, prohibition of favoritism to carrier affiliates, and other safeguards (Docket 16974, Computer Communications Inquiry, April 1, 1970).

<sup>14</sup> Kestenbaum, Common Carrier Access to Cable Communications, p. 28.

The Distinction Between Common Carrier  
Status and "Public Access"

Proposals for common carrier status for CATV are designed to eliminate the conjectured conflict between the cable operator's interest as a broadcaster and his obligation to grant access to others. These proposals contend that ownership of the cable system should carry no special say over program content. The cable operator should be required to make time available to all comers on equal terms. In this manner, the general user would become the program authority, and the owner of the cable system would be relegated to a role as a kind of "traffic cop."<sup>15</sup>

The primary advocate of common carrier cable television has been the American Civil Liberties Union. Their reasons for advocating common carrier status are stated thusly:

1. Cable television is technically capable of serving as a common carrier.
2. Common carrier cable systems would assure full freedom of expression and communication. All sides on any political or social issue could have access to the cable system without need of a "fairness doctrine."
3. A common carrier cable system will more effectively serve the public interest. The physical and economic limitations of over-the-air broadcasting severely limit diversity of programming.<sup>16</sup>

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<sup>15</sup> Ross, Economic and Legal Aspects of CATV Systems, p. 117.

<sup>16</sup> Statement of the American Civil Liberties Union in the Matter of Amendment of Part 74, Subpart K, of the Commission's Rules and Regulations Relative to Community Antenna Television Systems; and Inquiry into the Development of Communications Technology and Services to Formulate Regulatory Policy and Rulemaking and/or Legislative Proposals, Docket #18397-A, March 18, 1971. (unpublished in FCC Reports)

But as this study has already revealed, methods must be found to solve the problems of rate regulation, liability, poor reception and allocation of available channels.

The creation of a common carrier formula is, of course, far more difficult for CATV than for a telephone or telegraph company. As one commentator has indicated, any definition of non-discriminatory access to CATV involves many quasi-subjective determinations, e.g., evaluating the time shown, the channel used and the adjacent program. Although the problem is obviously not subject to exact resolution, some attempt must be made to formulate standards.<sup>17</sup>

Perhaps a problem in formulating standards for common carrier CATV is one of semantics. The Federal Communications Commission and advocates of common carrier status often use the term "public access." Lately, the terms "common carrier" and "public access" are used so interchangeably that they are often treated as one-and-the-same. But there is a basic difference, at least from a regulatory standpoint. Pure and total common carrier regulation as applied to cable TV would completely separate the ownership of the cable system from any power to decide what the cable system is to transmit. The cable operator's role would be restricted to leasing channels to others, and regulation would assure that producers and distributors could lease channels at fair and reasonable terms. The system owner could not supply any services or originate any programming himself.<sup>18</sup> It seems that advocates of common carrier access to cable do not propose in their regulatory scheme pure and total common carrier cable because:

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<sup>17</sup>Botein, "A Jumble of Jurisdictions," p. 839.

<sup>18</sup>Brown, "Common Carrier: Is This the Public Interest?" p. 2.

. . . this would mean that the CATV system could not carry existing broadcast stations without payment for channel leasing by the broadcast industry, i.e., local broadcast stations as well as imported signals would be treated the same way as any other "user" of any kind, and would have to pay the cable operator to transmit the broadcast signals.<sup>19</sup>

It is very doubtful that broadcasters would pay cable operators for signal transmission and without over-the-air broadcast signals, especially distant signals, CATV could not survive. What advocates seem to be asking for is a modified version of the common carrier doctrine. Public access is a fairly new phenomenon. During the FCC's landmark panel hearings on CATV in March, 1971, where the present regulatory policies were being debated there was also the growing crescendo of voices asking for "access" to cable television. These demands were based on the premise that from a technological standpoint, CATV could provide an unlimited number of channels. The terms "common carrier" or "public access" have come to mean a hands-off policy regarding government regulation of CATV. Cable television seems to be evolving from a business of merely providing clearer television reception to a concept of participatory television. Any person with an idea will have access to the communications system; a person will be able to talk back to his television set.<sup>20</sup>

To understand the difference between common carrier and public access, the development of the latter needs to be examined. As has been

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<sup>19</sup> Ibid.

<sup>20</sup> Nicholas Johnson and Gary G. Gerlock, "The Coming Fight for Cable Access," Yale Review of Law and Social Action, Vol. 2, 1972, p. 218.

pointed out, there are many economic and legal implications implicit in the common carrier doctrine. But the roots of the public access concept are philosophical in nature. To come to grips with this is to understand the conflict between the optimistic cry for "public access" on the one hand, and the economic, legal and technical "realities" of the cable television industry on the other.

Theory of Access Established as a New  
"Right to Hear" in Red Lion Case

The case for public access has roots deep in our speech tradition.<sup>21</sup> The First Amendment reads in part that, "Congress shall make no law . . . . abridging the freedom of speech or of the press . . . ." <sup>22</sup> The First Amendment's roots are in the classical argument of John Stuart Mill who thought that only through open discussion is truth discovered and spread.<sup>23</sup>

As Justice Holmes and Brandeis understood the First Amendment's guarantee of freedom of expression, "the best test of truth is the power of the thought to get itself accepted in the competition of the market," and in a government of free men, "the deliberative forces should prevail over the arbitrary." Not only is free speech fundamental; it is paramount, having been accorded a "preferred" position above all other constitutional rights because other rights depend so heavily on free speech.<sup>24</sup>

More recently the Supreme Court has reaffirmed the Holmes-Brandeis marketplace of ideas theory by declaring in the New York Times case a

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<sup>21</sup> Ibid., p. 219.

<sup>22</sup> U.S., Constitution, Amendment I.

<sup>23</sup> John Stuart Mill, On Liberty (People's ed.), 1926, pp. 9-32.

<sup>24</sup> Johnson and Geriok, "Fight for Cable Access," p. 219.

"profound national commitment to the principle that debate on public issues should be uninhibited, robust, and wide-open."<sup>25</sup>

The legal basis for freedom of speech, access to be heard, uninhibited marketplace of ideas or whatever acronym one wishes to use has been cited in several cases throughout legal history.<sup>26</sup> But in 1969 the Supreme Court in a landmark decision, laid the groundwork for the newly emerging "doctrine of public access." The Red Lion<sup>27</sup> case was the Supreme Court's unanimous rejection of the broadcasting industry's argument that the "Fairness Doctrine" was unconstitutional. But as a result of Red Lion broader implications were discussed than just a constitutional test of the Fairness Doctrine.

Red Lion reveals an interplay between the older technical limited access theory, which was justified on the basis of limitations in the spectrum and the new First Amendment based theory of access, which attempts to provide mechanisms for the interchange of ideas in the dominant media.<sup>28</sup>

The Court's decision heavily emphasized maximizing opportunities for expression. Some legal scholars contend that the wording in Red Lion creates a new "right to hear," that is, a constitutional right to more diversity in the broadcast programming available to the public.<sup>29</sup>

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<sup>25</sup>New York Times v. Sullivan, 376 U.S., 1964, p. 254.

<sup>26</sup>Associated Press v. United States, 326 U.S., 1945, pp. 1-20; see also Packaged Programs v. Westinghouse Broadcasting Co., 255 F. 2d., (3rd Cir.), 1958, pp. 708-710.

<sup>27</sup>Red Lion Broadcasting Co. v. FCC, 16 P & F Radio Reg., 1969, pp. 708-710.

<sup>28</sup>Jerome A. Barron, "Access--The Only Choice for the Media," Texas Law Review, Vol. 48, 1970, p. 770.

<sup>29</sup>Johnson and Gerlock, "Fight for Cable Access," p. 219.

The Court stated:

It is the right of the public to receive suitable access to social, political, esthetic, moral and other ideas and experiences which are crucial here. That right may not be abridged either by Congress or the FCC.<sup>30</sup>

Justice White delivered the opinion of the Court and emphasized that the right of the viewers and listeners, not the right of the broadcasters, is paramount. White stated that "it is the purpose of the First Amendment to preserve an uninhibited marketplace of ideas in which truth will ultimately prevail."<sup>31</sup>

The Court relied on the limitation-of-the-spectrum argument for its concluding opinion; even though advances in technology, such as microwave transmission, have led to more efficient utilization of the frequency spectrum.

On the other hand, the opinion is filled with observations that give it a radical undertone throughout and that display the constant tension in the opinion, and perhaps in the Court, between a rationale for broadcast regulation based on limitations of the spectrum and one based on maximizing opportunities for expression.<sup>32</sup>

Although Red Lion does not specifically set forth access provisions, the implications of a new "right" seem evident. It is unfortunate, though, that the words "interest," "need" and "right" are sometimes used interchangeably. The legal implications of a "right" are very different from the implications of a need or an interest.<sup>33</sup> But the wording in Red Lion seems to support the point that access to social, political ideas is a right of the public.

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<sup>30</sup>Red Lion Broadcasting Co. v. FCC, p. 2048.

<sup>31</sup>Ibid., p. 2047.

<sup>32</sup>Barron, "Access--The Only Choice," p. 770.

<sup>33</sup>Geoffrey L. Thomas, "The Listener's Right to Hear in Broadcasting," Stanford Law Review, Vol. 22, 1970, p. 872.



Advocates of public access not only point to the language of the Supreme Court opinion, but contend that the inadequacies of the present broadcasting industry fails to provide a marketplace of ideas.

As Walter Lippmann has noted, the mass media are not particularly well-suited to the dialectical process of finding truth. Most people listen to radio and television sporadically and will not hear the essential evidence and the main arguments on all sides of an issue. Moreover, the idea that radio and television currently provide a marketplace of ideas and that they are producing truth is a myth; if there is a marketplace, it is at best an imperfect market. The broadcasting industry does not and cannot provide the "truth"; even with the best of efforts of most current broadcasters, the listener must still work vigorously for it. Distortion by suppression, emphasis and inadequate depth is endemic to all communication. In furthering the "marketplace of ideas," the Court may be attempting to encourage diversity rather than "truth." There is a presumption that the more ideas available, the better--though of course at some point more ideas will add to confusion rather than enlightenment. The current state of broadcast programming however, is not too many ideas but too few.<sup>34</sup>

The arguments for public access were founded, again, on philosophical tenets of the "marketplace of ideas." The importance of the Red Lion decision seems to be a move on the part of the Supreme Court to guarantee that voices will be heard on electronic communications systems. But the marketplace of ideas is much different from the economic marketplace that governs the present communication's industries.<sup>35</sup>

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<sup>34</sup>Ibid., p. 869.

<sup>35</sup>Ibid., p. 901.

## CHAPTER VI

### THE NEW YORK EXPERIENCE WITH PUBLIC ACCESS

It is significant to examine the public access experiment in New York City, not only because it was the first but because it serves as an example of one city's attempt to implement on a practical basis the complexities of the common carrier/public access principles.

In the summer of 1970 two companies were granted franchises by the City of New York to provide cable television to the Borough of Manhattan. TelePrompTer, Inc. was awarded the franchise for the area north of 86th Street on the East Side and 79th Street on the West Side, while the franchise for the remainder of the borough was granted to Sterling Manhattan Cable Co. The two companies were to provide service to about 90,000 homes.<sup>1</sup> In exchange for the permission to lay cables in the City streets, the franchise issued by the Bureau of Franchises, required the companies to meet specified performance, construction, service delivery and technical standards. As this study is being written in late August, 1973, the cable companies in New York City are required to have developed a 24-channel system; eleven of which may be allocated to broadcast signals, one reserved for company use, three reserved to the City, four for "additional" use and four for public access programming. Prior to

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<sup>1</sup> \_\_\_\_\_, Public Access in New York City: The New York Experience (A Report for the Fund for the City of New York by the Center for the Analysis of Public Issues), March 1972, p. 2.

the completion of the present system, seventeen channels were offered of which two were set aside for public access.<sup>2</sup>

The public access channels are governed by the rules and regulations issued by the Bureau of Franchises. The salient points are:

- \* There is no charge for public access channel time, although the companies may charge rentals for studio and equipment time.
- \* One of the two channels is reserved for one-time and "special" users, with special attention being required for last-minute users.
- \* The other channel is reserved for regular broadcasts with a limit of seven hours per week, (two in prime time) so that regular viewing constituencies can be developed.
- \* The companies may require pre-screening of all material that may lead to legal action against them.
- \* The companies may require all necessary releases, copyright clearances, indemnifications, etc., they feel necessary to protect themselves from liability.<sup>3</sup>

The two cable companies in New York City were optimistic and enthusiastic about the possibility of public access television for three primary reasons. First was the potential of CATV for public service. As the discussion of cable's potential increased, urban minorities and poverty became important topics. The Urban Institute in a proposal to the Sloan Commission in 1970 projected some of the minority-oriented services which CATV could provide: information on health, job opportunities, welfare and adult education, drug abuse, legal aid, as well as enabling general community participation in local affairs.<sup>4</sup> Other

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<sup>2</sup> Jones, Regulation of Cable Television by the State of New York, Appendix F, p. 5.

<sup>3</sup> \_\_\_\_\_, The New York Experience, p. 22.

<sup>4</sup> \_\_\_\_\_, "Potential Uses of Cable Communications in the Inner City," (Report Prepared for the Urban Institute), November, 1970, pp. 1-10.

organizations such as Urban Communications Group, headed by Theodore S. Ledbetter, Jr., the Office of Communication of the United Churches of Christ, headed by Reverend Everett C. Parker and others organized to represent the interests of the minorities and the poor in the development of access to the CATV medium.

A second reason for the enthusiasm of New York City's two cable companies was the abundant number of channels CATV could provide. The technological problems inherent in multi-channel systems has been discussed previously, but at the onset of cable's introduction into New York City these problems were not known, particularly the problem of "ghost image" caused by tall buildings. At the time there were numerous optimistic speculations about the unlimited number of channels available on a CATV system.

Finally, the development and marketing of lightweight, inexpensive videotape recorders raised enthusiasm about the possibility of public access. The effect of half-inch video equipment in liberating the production process has been substantial.<sup>5</sup> Sony marketed its first half-inch Porta-Pak VTR in the summer of 1968.

Prior to this, video tape equipment was cumbersome, stationary, complex and expensive. Whereas tens of thousands of dollars were once needed to tool up for videotape, now only \$1495 are required. In place of a machine weighing hundreds of pounds and requiring special power lines, all you need now is standard house current to recharge batteries which will let you use the 21-pound system anywhere, independent of external power.<sup>6</sup>

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<sup>5</sup>Richard Calhoun, Public Television Channels in New York City: The First Six Months (Washington, D.C.: Center for Policy Research, Inc.), February, 1972, p. 15.

<sup>6</sup>Michael Shamberg, Guerilla Television (New York: Holt, Rinehart and Winston, 1971), p. 5.

The main advantages of the half-inch Sony Porta-Pak are its cheapness and simplicity of operation. It gives public access people the freedom to go out of the studio and get into the neighborhood. The simplicity of the machine, according to most video culture groups, should destroy the "mystique of expertise" surrounding conventional television production.<sup>7</sup>

As part of New York City's promulgation of the rules governing access, neither cable company charges for channel time for non-commercial presentations though commercial users must pay \$125 to \$250 per hour.<sup>8</sup> In addition to the cable time itself, TelePrompTer provides free of charge the studio equipment and personnel needed to tape and play a simple one-camera, in-studio program, or to plan a pre-recorded program in any of the formats for which TelePrompTer has equipment which include 16 mm film, ½" Sony AV tape, and 1" Ampex 7500 tape. Additional equipment and technical assistance, even a remote unit, are available at additional charge. The arrangements at Sterling Manhattan are similar with the exception of higher rates charged, partly because of the more expensive 2" quadriplex tape equipment they use.<sup>9</sup>

Evaluation of the Public Access Experience  
in New York City

According to all available research to date, there have been only two comprehensive studies conducted that have evaluated the public access

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<sup>7</sup> Calhoun, Public Television Channels, p. 16.

<sup>8</sup> \_\_\_\_\_, The New York Experience, p. 7.

<sup>9</sup> Ibid.

experience in New York City. One study, Public Access Channels: The New York Experience, was published in March, 1972, by the Center for Analysis of Public Issues. The second study entitled Public Television Channel in New York City: The First Six Months, was extensively researched by the Center for Policy Research, Inc. and released in February, 1972. The importance of New York City's experiment with public access was emphasized by both studies in that it represents the first time in this nation that cable television channels have been set aside for public use.

Since the development of public access television is one of the most portentous of the possible new applications of cable technology, and has been the subject of considerable professional and academic debate, the New York City experiment clearly warranted careful analysis.<sup>10</sup>

It was hoped that public access in New York City would represent "a major step toward the political philosopher's dream of participatory democracy; the first genuine 'Town Meeting of the Air.'"<sup>11</sup>

About four months after public access began, the New York Times stated:

Nearly four months after it began its widely heralded experiment in electronic democracy, Public Access Television in New York is barely mumbling in the variegated community accents for which it was designed.<sup>12</sup>

Although the New York Times was rarely encouraging, there were numerous obstacles to the full development and use of public access facilities.

As the report researched by the Center for Policy Research stated:

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<sup>10</sup> Ibid., p. 1.

<sup>11</sup> Calhoun, Public Television Channels, p. 47.

<sup>12</sup> New York Times, October 26, 1971.

First, people simply didn't know about public access and how simple it was to use; secondly, even where known, without encouragement the public would adopt a reticent attitude on the grounds that TV was only for the wealthy and influential; thirdly, that public access was such a new and highly localized phenomenon that there were no model program formats available; fourthly, there were not enough skilled production assistants available in spite of TelePrompTer's offer of technical advice during "reasonable" hours; fifthly, there was a paucity of equipment and editing facilities that could only become more pronounced as the demand for channel time increased; and sixthly, the programming groups were from the outset being blocked from one traditional means of financing production costs, that is, local advertising, by a rule requiring programmers to turn over 100% of all monies derived from such sources to the companies.<sup>13</sup>

The slow start of the public access experiment was not so much the restrictive rules as it was the lack of understanding of the necessary planning needed to get public television started. Many of the public access advocates didn't fully understand the difficulties inherent in attempting so set-up such an operation.

For instance, many people assume that since there are so many groups that seem to be making a tremendous amount of public noise of their desire for access that once access is there that people will just sort of step forth and flood the stations.<sup>14</sup>

But the response to public access fell short of "flooding the stations." After the opening ceremonies on July 1, 1971, very few groups or individuals made use of public access.<sup>15</sup> John Sanfratello, Director of Public Access for Sterling, commented:

I don't think the people that brought up the suggestion of public access really knew what the hell they were talking about. I don't think they had insight enough to

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<sup>13</sup> Calhoun, Public Television Channels, p. 38.

<sup>14</sup> Ibid., p. 48.

<sup>15</sup> Ibid.

look at it and say "You know, we're starting something that our wildest imaginations never even thought about." Well, they should have given it some consideration before it started, not wait until it was on, and then decide, "Okay, now we have it, what are we going to do with it?" or "How, who, will be paying for this?"<sup>16</sup>

On the other hand, Ms. "Red" Burns of the New York University Alternate Media Center has taken the position that public access could not and would not be an immediate success, no matter what kind of planning had gone into it prior to implementation. Ms. Burns' reasoning is based on the argument that the only evaluational index by which public access can be assessed is that traditionally applied to broadcast television. This scale is inapplicable to public access television because the dominant characteristic in its make-up is scarcity of time, a factor which severely limits access to broadcast TV.

This scarcity factor is certainly not a feature of poly-channelled CATV, and so such time-honored devices as audience ratings are no longer applicable to the measure of success.<sup>17</sup>

Yet such devices and expectations remain a part of the evaluational apparatus.

The educational or awareness problem was also immense. Most people never conceive of themselves as using television for their own purposes. They are too used to be acted upon by the medium. "Television is still a land of electronic wizards and technical mysteries; the demystification will take time."<sup>18</sup>

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<sup>16</sup> Ibid., p. 49.

<sup>17</sup> Ibid., p. 50.

<sup>18</sup> \_\_\_\_\_, The New York Experience, p. 33.



## The Limitations of Half-Inch Video Equipment

Chapter two of this study examined some of the technological problems in multi-channel cable systems. The New York City experience seems to clearly manifest some of these limitations.

The frustrating incompatibilities between tape units, the poor transmission quality of low-cost equipment, the lack of flexibility in the cable system itself, all make non-studio public access presentations unnecessarily complex and occasionally impossible.<sup>19</sup>

Public access advocates speculated that the inexpensive, portable video equipment would take television into the neighborhoods. Unfortunately, there are a number of problems with half-inch equipment which at times limit its users to the production of esthetically inferior, non-transmittable (over cable) tapes. John Sanfratello, Director of Public Access for Sterling, commented that technically there are a tremendous number of problems with the signals recorded on half-inch tape.<sup>20</sup> The amplifiers are not built to correct technical errors in half-inch tape. So a cable company either refuses to transmit the signal, or if they do, the picture is very inferior, to the point according to Sanfratello, "that I don't think that very many people will watch it for a great length of time."<sup>21</sup>

It is felt among those working with half-inch tape that its chief limitation is the impossibility of editing, unless it is dubbed onto more expensive (and less available) one-or-two-inch tapes. Attempts at electronic editing onto second generation half-inch tape will not

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<sup>19</sup> Ibid.

<sup>20</sup> Calhoun, Public Television Channels, p. 18.

<sup>21</sup> Ibid.

transmit at all, while trigger editing (stopping and starting the camera during taping) produces "glitches" or tape break-ups with each on-off action.<sup>22</sup> The easiest solution to the editing problem is to shoot in real time--that is, just let the recorder run without interruption, recording everything that goes on. Another suggested method is to edit half-inch tape and then have it shot off a TV monitor in a studio. The only problem is that this method requires the cable operator to make permanently available, a properly aligned camera and monitor.<sup>23</sup>

As yet, no technical standards have been formulated applicable to half-inch video equipment. It is questionable whether any standards could be established. The cable system's modulators and amplifiers are capable of transmitting "quality" signals on regular studio tape (one-or-two-inch), but not on half-inch. As a result of those considerations, the technical end of public access is still uncertain.

#### New York Public Television Channels Require Continuous Financial Support

Probably the most crucial of all problems that New York City public access groups faced was that of financing. Although usage of public access channels was slow during the summer, it picked up considerably during September and October, 1971. Most of the programming was generated by such groups as the Alternate Media Center, Filmmaker's Cooperative, Friends of Haiti, The Federation of New York Tenants Organization, Raindance and the like. With the possible exception of Raindance, none

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<sup>22</sup>Ibid., p. 19.

<sup>23</sup>Ibid.

of the groups had any significant financial resources.<sup>24</sup> Most of the production costs were borne by grants and fellowships. Without adequate provisions in the franchise granted by a city to a cable company for continuing support, public access may be stunted, if not halted.<sup>25</sup> The different programming experiences of TelePrompTer and Sterling demonstrate that free channel time, by itself, is not enough to generate significant spontaneous usage.

Under the proposed FCC rules allowing charges for production facilities, for instance, the Alternate Media Center and Global Village will still get on the cable, but Philip Jordan, Marvin Tobak and the Friends of Haiti will be shut out.<sup>26</sup>

Under the 1972 Cable Television Report and Order the FCC stipulates that cities can now charge a 5 percent franchise fee only if the city can show just cause. As of yet none of the city franchise agreements that have stipulated a franchise fee have channeled this money into supporting public access.

#### Liability Problem Fails to be Significant

The New York experience with public access provides an example of how one cable system dealt with the legal hassles of liability. Sterling Cable Company's initial response was to draft a strongly-worded indemnification contract which would bind the public channel user to hold the cable company harmless in the event of suit, to pay for all legal expenses

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<sup>24</sup> \_\_\_\_\_, The New York Experience, pp. 9-12.

<sup>25</sup> Thomas Freebain, "Public Access in New York City: An Interview with Theadora Sklover," Yale Review of Law and Social Action, Vol. 2, 1972, p. 236.

<sup>26</sup> \_\_\_\_\_, The New York Experience, p. 33.

and all judgments incurred by the cable company, and any other cable system which carried the program and to allow the cable company to hire counsel and appeal decisions virtually without limit. This contract, which is of doubtful enforceability anyhow, was never signed by any users of Sterling's public channels.<sup>27</sup>

Out of protection, the City rules require that the cable companies receive material two weeks in advance of screening, but the companies have been satisfied with submission 48 hours in advance, or even less in some cases.<sup>28</sup>

One proposal that was submitted to the Sterling Cable Company was to require programmers on the public channels to post a bond to assure that such liability could be met by them. This proposal was ignored because it was unfeasible.

This is an unsound, even astounding, suggestion. No other communicator has to show solvency in order to speak or write. The very advantage of cable is to permit low-cost access, and it would be inconsistent with that objective to impose a means test. Furthermore, bonding would be a disproportionately burdensome condition, since liability would rarely arise.<sup>29</sup>

Other proposals were reviewed by the two cable companies as there was great concern over the liability issue. "In actual fact, liability problems have not so far been a major obstacle to programming."<sup>30</sup>

The only instances of censorship we have found to date was the deletion of an unusually explicit sexual scene and a refusal to show a film entirely about copulation.

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<sup>27</sup> Ibid., p. 28.

<sup>28</sup> Ibid., p. 27.

<sup>29</sup> Kestenbaum, Common Carrier Access to Cable Communications, p. 31.

<sup>30</sup> \_\_\_\_\_, The New York Experience, p. 27.

On other occasions, they have permitted shots of genitalia, and raised no objection to the extremely candid presentation by Consumers' Union on flammable clothing, with specific identification of manufacturers and retailers of flammable items.<sup>31</sup>

Both evaluation studies conducted on the experience in New York City with public television cautioned about generalizing from the experience in New York City to other localities. The current level of public access programming was certainly facilitated by the unusual media sophistication of the New York users and the presence of a relatively large number of videotape groups and "media freaks," with amazing technical competence. This phenomena may be peculiar to the largest cities in the country, or possibly just to New York.

All in all, however, for all the shortcomings and problems to date, the New York City experience has been a heartening one. The overwhelming fact is that the channels are being used, spontaneously, by relatively large numbers of people, and for a variety of purposes. Issues of censorship and liability appear to be fading somewhat in importance as people concentrate on the business of producing material for the channels. Program personnel at the cable companies have already remarked on the growing discrimination that users are beginning to show about organizing information for the most effective visual communication. While this is no assurance, of course, that public access television has started on the right path, an encouraging number of signs seem to be pointing in the right direction.<sup>32</sup>

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<sup>31</sup> Ibid.

<sup>32</sup> Ibid., p. 36.

## CHAPTER VII

### CONCLUSIONS

The task of organizing and defining the complex technological, economic and political factors of a common carrier community antenna television system is unquestionably difficult. But out of the maze of regulatory contradictions, technological and economic uncertainty which this study has disclosed, several concepts appear to emerge. Cable television was the unexpected by-product of gaps in program coverage caused by the failure of the FCC to define goals and establish policy before economic forces became too powerful to resist.

The FCC provides an excellent example of what happens to an organization or agency which has not perceived its long range goals. When faced by a challenge whose technology advances at a faster pace than its bureaucracy that agency has two options; impose a freeze or surrender. The FCC has not surrendered. The Commission has been so preoccupied with promoting program diversity and protecting local broadcast endeavors in spectrum broadcasting that it has failed to recognize that cable television could possibly fulfill these goals better than any other medium. Thus far the FCC's regulation of CATV has been based solely upon the degree of threat an industry poses for another rather than development of its own innate qualities. The capabilities of cable television systems to perform various communication roles in a regulatory design allowing their unique flexibility to supplement and enhance existing spectrum services has been almost

completely ignored by the FCC. This has occurred because of the lack of understanding of the legal characteristics and economic potential of a cable operation. As a result the FCC has been able to measure cable only in terms of its effect upon a known quantity--spectrum broadcasting.

Throughout broadcast history the FCC has made several attempts to structure a new broadcasting system upon a concept of local service by local broadcasters and thereby promoting program diversity. A case in point is the Commission's obsession with the healthy survival of UHF broadcasting. But in nearly every attempt the Commission's hopes have been frustrated by the harsh realities of the marketing structure. In the case of spectrum broadcasting the FCC was forcing a local broadcast pattern upon an industry whose program and revenue distribution structures were largely formed by radio experience and upon a population less predictable than the demographic data which it relied upon. Despite FCC decrees, local television stations were not economically suited to provide local oriented programming and despite FCC hopes, the public seemed less concerned with local coverage than network entertainment programming.

It is doubtful, though, whether the FCC really has hoped for successful local broadcast programming. The FCC is at best an understaffed, inefficient organization. The Commission seems to pay lip service to these hopes and considerations, but on a day-to-day administrative basis these idealistic goals do not appear to influence Commission decisions in particular cases. The FCC represents a fluke in our democratic system. So often in the regulatory process those

being regulated soon rise to become the regulator simply because they are the only ones who know what is happening. The Commission members depend heavily on broadcasters for a large portion of their research and on Congress which supervises their activities, for their funds. Within this organizational structure it seems clear why the Commission is concerned with protecting the economic status of the regulated group.

Administrative policy-making, by virtue of the number of factors which must be weighed, requires a considerable lead time over economic trends and technological development. This seems especially true in the field of mass communication regulation with its complex public interest criterion. When the FCC attempts to implement this criterion it points to the Communication Act as the foundation for decision-making. But the Communications Act, unlike the Interstate Commerce Act, as an example, is not designed to prevent the wasteful results of competition, block price wars or duplication of services; it simply allocates a scarce resource among competing applicants. The Communications Act has not served as an adequate regulatory tool to handle the economic and technological complexities which have emerged throughout broadcast history.

When these factors are considered it is perhaps easier to understand why the FCC has been unable to see either the local service or diversity of programming aspects in terms of CATV. The Commission has the capacity of administering broadcast issues, but it does not seem to have the capacity to regulate electronic mass communications effectively in the years ahead without considerable augmentation of its research ability.



There is a chance that the misdirected, myopic vision of the Commission can be altered. Probably for the first time in the history of electronic communication, the technological developments are not completely ahead of the planned use. By 1977 all cable companies in the top 100 markets must have systems with 20-channel capacity. Some of these channels must be utilized on a common carrier or public access basis. But until that time, cable television for all practical purposes is a limited-access medium. This is a crucial point few persons have bothered to consider. Although potentially cable television has unlimited channel access this is not a technological reality and it may not be for quite some time. There are several reception problems that must be worked out before cable can deliver a clear signal over a multi-channel system.

The FCC has stated time and again that it will return to the common carrier issue as the industry develops. But unless the Commission formulates guidelines now it is doubtful whether it will face CATV common carrier operations with any greater skill than it has displayed in the past. Perhaps the FCC often procrastinates on important decision-making policies because of the heavy workload required of this understaffed organization. There are too few manpower resources to adequately research the vast areas of communication which the FCC oversees.

One recommendation this study indicates would be to establish a new administrative commission that would deal exclusively with community antenna television. There is an inherent risk in establishing a new administrative organization; that it will merely emulate the policies of its predecessor or serve the economic interest of those who oversee its activities. To alleviate some of the danger this newly-

established Cable Commission should specify membership requirements. The Cable Commission should have an odd number of members, say seven, of which not more than three would be directly related or employed by the CATV industry. At least two members should represent a minority group, one member should have economic and legal expertise and another should be drawn from the business profession. The commission members would be appointed by the President and approved by Congress. The function of this new Cable Commission would be to: a) adequately research areas of cable before policies are established, b) formulate flexible guidelines for economic aspects of CATV, c) establish minimum technical standards and tests of performance, d) hold public hearings prior to any major, long-range decision making policy, and e) issue licenses and compliance certificates.

Realistically the establishment of a new commission will take a great deal of time. But it is essential that "objective" research get underway now so that when cable operators begin common carrier operations their efforts will not be subject to bureaucratic indecisiveness and hazy guidelines. No institution has the perspective to criticize itself adequately; outside consultants with different perspectives must be used. A research team should be appointed comprised of scholars economically unrelated to the broadcast industry, to thoroughly investigate the regulatory, economic and technological aspects of common carrier CATV. This research investigation should have four basic goals.

The researchers should determine the technological feasibility of common carrier access to cable television. The numerous technological

problems that have arisen in multi-channel systems may make common carrier status impossible in some markets until devices or techniques can be developed to eliminate reception problems. There is a great deal of sophisticated broadcast equipment in the developing stages, but it must be economically marketable so as not to pose a burden on cable operators. Technical standards should be established for half-inch video equipment. Even with the best time base synchronizing equipment, half-inch remains an inferior broadcast product. Compatibilities between half-inch machines and studio playback units should be developed.

Long-range economic policies that will serve as guidelines for the top fifty markets, the second top fifty markets and the remaining markets should be determined. It is important that common carrier economic guidelines be formulated for each market classification because the economics of a major market like New York are much different from the economics of a market like Albuquerque. The issue of rate regulation is particularly crucial to common carrier operations. Rate regulation at the state level has been a dismal failure. Overregulation has almost halted cable growth in the states that assume regulatory responsibilities over CATV. Economic guidelines for common carrier cable TV will be extremely difficult to research. The market structures and economic formulas have been largely determined. But if the research effort can make the cable markets aware of the economic pitfalls and of the options available, perhaps it will prevent the haphazard way state and local governments and cable systems have approached the issue of cable economics in the past. This information should be made readily available before communities embark on the franchising process.

The research investigation should place the hypothetical fears of possible conflicts between cable operators as program originators and as common carriers on the same system into realistic perspective. It seems that many of these unsettled issues such as liability and possible program conflicts have been generated to halt progress toward achieving common carrier access to CATV. There is great risk in formulating long-range common carrier program guidelines on hypothetical information.

The last major goal of the research team should be an extensive examination of the New York experiment with public access. Although the New York experience may indeed be unique, it at least represents a model to examine. The two studies conducted thus far have merely examined the first layer. The notable success of New York's public channels may be due in part to the numerous cultural facilities, diverse minority groups and educational centers upon which the public access groups could draw. But could a smaller, less culturally-diverse metropolitan area or community support a similar effort? A public access experiment should be tried in a smaller market. In some areas common carrier operations may prove to be impossible to sustain on either an economic or programming basis. To produce a one hour television program is a back-breaking effort. The 1972 cable rules specify a government channel, an educational channel or local access channel. To date no research has been conducted to determine if enough programming can be generated at a local level to fill this time. An examination of the New York experience should offer suggestions to other communities on how to make citizens aware of public access and most importantly how to raise funds to channel franchise fees into the

financing of public channels.

These four goals by no means represent all the aspects that need to be investigated. A foremost consideration of a common carrier cable research team or any futureregulatory body should be that common carrier and public access could hold the promise of providing a near-perfect local broadcast service which the FCC has spent years promoting. Some persons fear granting minority access to a broadcast medium that has been traditionally reserved for the middle and upper classes. This is why many efforts to sustain public access have been discouraged. But if goals of a political nature are placed above all other factors as the FCC has done in the past, the result will be a stifling of the natural economic and technological development of common carrier CATV.

Future modes of program delivery may face the same type of repression CATV has experienced. Laser beam or direct satellite broadcast links may pose future threats to CATV. The FCC, as now constituted, does not seem adept at facing new challenges with any greater insight than manifested in the past. There is a need for a new regulatory agency that has the time and resources to adequately project long-range goals and formulate policy. Cable television is not the last, but rather the first in a series of electronic transmission techniques of the future which will require a thorough and perceptive consideration of the proper regulatory action.

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