

**Competition In  
Local Distribution:  
The Cable Television  
Industry**

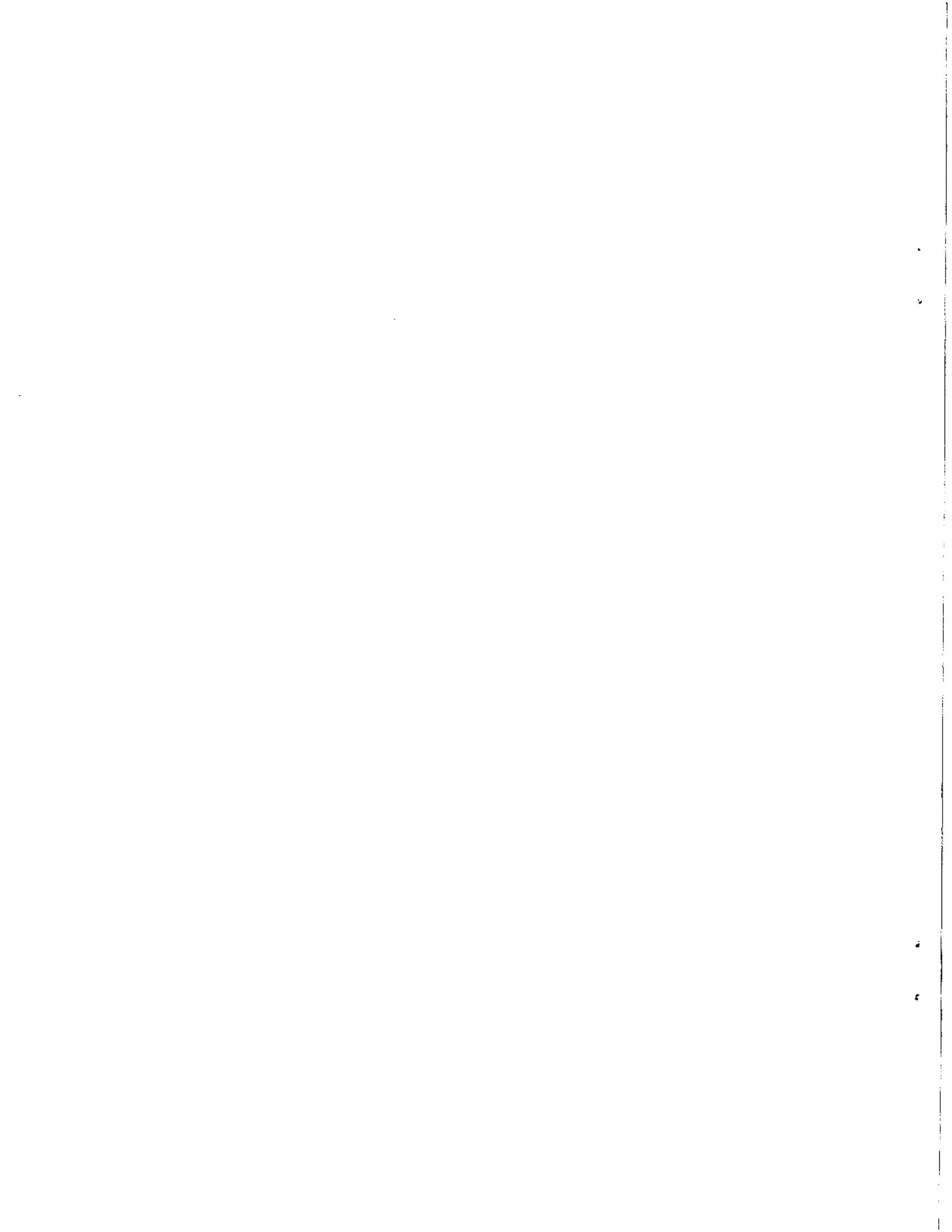
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Center for Information  
Policy Research

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## PROGRAM ON INFORMATION RESOURCES POLICY

Harvard University

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## Contributors

Abt Associates Inc.  
 Action for Children's Television  
 American Broadcasting Companies, Inc.  
 American District Telegraph Co.  
 American Telephone & Telegraph Co.  
 Arthur D. Little, Inc.  
 Auerbach Publishers Inc.  
 Automated Marketing Systems  
 Bell Telephone Company  
     of Pennsylvania  
 Berner & Berner  
 The Boston Globe  
 Booz-Allen Hamilton  
 Canada Post  
 CBS Inc.  
 Channel Four Television Co. (Ltd.)  
     (United Kingdom)  
 Citibank N.A.  
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 Communications Workers of America  
 Computer & Communications Industry Assoc.  
 COMSAT  
 Continental Cablevision, Inc.  
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Lee Enterprises, Inc.  
 MCI Telecommunications, Inc.  
 McKinsey & Co., Inc.  
 Mead Data Central  
 MITRE Corp.  
 Motorola, Inc.  
 National Association of Letter Carriers  
 NCR Corp.  
 National Telephone Cooperative Assoc.  
 New York Times Co.  
 NEC Corp. (Japan)  
 Nippon Telegraph & Telephone Public  
     Corp. (Japan)  
 Norfolk & Southern Corporation  
 Northern Telecom Ltd. (Canada)  
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     Commission (Australia)  
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 St. Regis Paper Co.  
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 Seiden & de Cuevas, Inc.  
 Source Telecomputing Corp.  
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 Telecommunications Research  
     Action Center (TRAC)  
 Time Inc.  
 Times Mirror Co.  
 Times Publishing Co.  
 United Parcel Service  
 United States Government:  
     Central Intelligence Agency  
     Department of Commerce:  
         National Technical Information Service  
         National Telecommunications and  
         Information Administration  
     Department of Defense:  
         Office of the Under Secretary of  
         Defense for Policy  
     Department of Energy  
     Federal Communications Commission  
     Internal Revenue Service  
     National Aeronautics and Space Admin.  
     National Communications System  
     National Security Agency  
     United States Postal Rate Commission  
     United States Postal Service  
 U.S. - Japan Foundation  
 United Telecommunications, Inc.  
 Voice of America  
 Warner Amex Cable Communications Inc.  
 Warner Communications, Inc.  
 The Washington Post Co.  
 Western Union

<sup>161</sup>In the Matter of Deregulation of Radio, 84 FCC 2d 968 (1981).

<sup>162</sup>In August 1981 Congress extended the license period for television stations from three to five years and from three to seven years for radio. P.L. 97-35, 95 Stat. 357, Sec. 1241 (a).

<sup>163</sup>Supra, n. 46-49.

<sup>164</sup>Carterfone 13 FCC 2d 420 recon den. 14 FCC 2d 571 (1968).

<sup>165</sup>The Execuent case forced the FCC to open up interexchange MTS to new players such as MCI (MCI Telecommunications Corp. v. FCC (Execunet I) 561 F 2d 365 (D.C. Cir 1977), cert denied, 434 U.S. 1040 (1978); MCI Telecommunications Corp. v. FCC (Execunet II), 580 F 2d 590 (D.C. Cir. 1978) cert denied 439 U.S. 980 (1978)). The case reversed the FCC's decision that MCI was not authorized to offer Execuent because they believed that MCI's authority was limited to private line services (MCI Telecommunications Inc. 60 FCC 2d (1976) under the general guidelines created for SCC's (Specialized Common Carrier Services, 24 FCC 2d 318 (1970)).

<sup>166</sup>Second Computer Inquiry 77 FCC 2d 384 (1980).

<sup>167</sup>M. Warner, "Rep. Wirth Ends Bid to Revise AT&T Pact, Citing Tactics by Firm's Backers," Wall Street Journal, July 21, 1982, p. 2.

<sup>168</sup>"Quiet Year Seen for Telecommunications Policy," Communications Daily, January 2, 1983, pp. 1-2 and "Access Charge Will Become Hot Political Issue If Rates Skyrocket," Communications Daily, December 10, 1982, pp. 4-5.

<sup>169</sup>Hochberg.

<sup>170</sup>"Top Legal Officers of Nearly Half of States Warn Justice and Court of Near Endless Local Litigation on Justice/AT&T Consent Settlement, Expecting States to Exercise Authority Within Their Jurisdictions to Prevent Divestiture or Make Other Changes," Telecommunications Reports, 48:18 (3 May 82), 7-9.

<sup>171</sup>"Total of 6 Appeal Notices Filed in AT&T Antitrust Settlement Case," Communications Daily, October 27, 1982, p. 1.

<sup>172</sup>State of New York Public Service Commission, Case No. 27091. While MCTV argues in its comments that cable television is neither a common carrier nor a monopoly and is appropriately regulated by the State's Cable Television Commission, New York Telephone Company, in arguments echoing AT&T's comments opposing unregulated data transmissions on FM subchannels, argues that MCTV's service and its own are "interchangeable" and should be regulated. [Comments of New York Telephone Company in New York State PSC Case No. 27091 (filed January 7, 1983)].

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<sup>137</sup>"Proposal of Microband Corporation," p. 36.

<sup>138</sup>S. Cobb, "Multichannel MDS Declared Success, Awaits FCC Action," Multichannel News, March 7, 1983, pp. 1,19.

<sup>139</sup>L. Huffman, "NCTA Report Predicts Competition Will Cause Drop in Cable Penetration," Multichannel News, 3:16 (April 26, 1982), p. 1.

<sup>140</sup>See, for example, "ABC Execs Peddle Anti-Cable Punch To Lunch Bunch," Variety, October 15, 1980; L. Brown, "Cable and Disk Programs Not for NBC," New York Times, July 26, 1979, p. C19; P. Funt "Tomorrow—'A Video Supermarket,'" New York Times, July 22, 1979, p. D1; or T. Schwartz, "Have the Networks Rspnded to Cable?" New York Times, June 6, 1982, Sec 2, p. 35.

<sup>141</sup>E. Pace, "Networks Ease into Cable TV," New York Times, December 20, 1981, p. 35; J. Cooney, "ABC Will Offer Cable TV Programming For Performing and Visual Arts in April," Wall Street Journal, December 3, 1980, p. 8; "Three from ABC in 1981," Multichannel News, November 24, 1980; A. Levy "Hearst and ABC Make It Official," Multichannel News, February 9, 1981, p. 1; "ABC, Getty Oil Form Cable-TV Service Featuring Sports," Wall Street Journal, September 24, 1981, p. 48; J. Loftus, "Affills Have Real Sinkin' Spell As ABC Grows in Cable & Pay," Variety, September 30, 1981, p. 61; T. Schwartz, "Cable News Service is Planned by ABC and Westinghouse," New York Times, August 12, 1981, p. A1; F. Beermann, "ABC Cable TV Plans Are Roaring Along," Variety, February 4, 1981, p. 131; J. Cooney, "ABC Seeks to Set Up Low-Power Stations In Five Cities on Limited Pay-TV Basis," Wall Street Journal, January 28, 1981, p. 14; and T. Bierbaum, "ABC Video's Herb Granath Maps Big Non-Broadcast Plans, High Hopes for Home View," Variety, May 19, 1982, p. 85.

<sup>142</sup>F. Beerman, "ABC Shows Its Hand—Lotsa Surprises," Variety, May 5, 1982, p. 115; "ABC, Cox Broadcasting Set Pay-TV Venture In Programs, Hardware," Wall Street Journal, May 3, 1982, p. 16.

<sup>143</sup>C. Fraser, "CBS Cable to Produce Arts Programs," New York Times, November 27, 1980, p. C26; J. Loftus, "Slam-Bang CBS On Cable-Homevid Bid," Variety, December 31, 1980, p. 27; J. Loftus, "Paley's Culture Comes to Cable," Variety, October 21, 1981, p. 61; J. Boyle, "CBS Cable Will Cease Operation Within 90 Days," Multichannel News, September 20, 1982, pp. 1, 54; "CBS Cable to Disband," CableVision, September 27, 1982, pp. 13-14; J. Baker, "Conclusion of a Class Act," CableVision, October 4, 1982, pp. 4-16; "CBS Exec Outlines CBS Cable Problems," Multichannel News, November 22, 1982, p. 17.

<sup>144</sup>"CBS Breaks Back Into Cable," Broadcasting, March 1, 1982, p. 35.

<sup>145</sup>N. Kleinfield, "CBS and Bell Plan Video-Text Test," New York Times, October 9, 1981, p. D1; S. Knoll, "CBS, AT&T Venture One See As Videotext Giant: Many Poised To Enter Biz," Variety, April 28, 1982, p. 47; "CBS and AT&T In 2d Videotex Test," New York Times, February 2, 1983; "American Bell

## EXECUTIVE SUMMARY

. Cable's success or failure as a local distribution alternative may depend as much upon regulatory responses by state authorities as upon its ability to compete. Technological developments and market demands are creating regulatory pressures, on the one hand to encourage competition in local distribution by permitting cable to develop without regulatory constraints, while on the other calling for bypass restrictions to protect local operating companies. The key question confronting regulators is how to balance seemingly conflicting traditional economic, political, and social objectives, such as universal, affordable, reliable service; economic efficiency; adoption of technological advances.

. As the number and diversity of interexchange communications services have grown since the mid-1970s, so too has the importance of local distribution. Just as AT&T's virtual monopoly in interexchange services now faces competition, potential for competition from several technologies is emerging in the local distribution market, with cable television perhaps the most powerful among them.

. Cable television has viewed the telephone industry, especially AT&T, as a potential competitor. However, two trends (cable deregulation at the federal level and the creation by many urban cable operators of an infrastructure capable of providing local distribution services) have made cable a prime candidate to compete with local telephone operating companies for local distribution business. In many cities, cable may become an unregulated competitor of the telephone company for private line, data, access, and other telecommunications services.

. The major players and stakeholders include: cable television systems, common carriers such as AT&T, local operating companies, and other interexchange carriers; digital termination services (DTS); multipoint distribution services (MDS); broadcasters; entertainment programmers; business users such as firms generating data or security companies; electronic publishers; and regulators.

. If the long-range goal is to have a competitive local distribution market, regulators and corporate players will have to develop policies to manage the transition from regulated monopoly to full competition without causing dislocations from uneconomic bypass or stifling potential competitors.

111 "Wheeler Calls AT&T Pact 'Deceptive.'"

112 "Brown Seeks To Establish Common Ground With Publishers in ANPA Convention Talk," Telecommunications Reports, 48:18 (May 3, 1982), 21.

113 Testimony of William G. McGowan, Chairman of Board, MCI Communications Corp. before the Subcommittee on energy and Commerce, U.S. House of Representatives, March 9, 1982.

114 ITT's Corporate Vice President, George F. Knapp appearing before the House of Representatives Subcommittee on Telecommunications Consumer Protection and Finance, February 25, 1982, as quoted in Telecommunications Reports, 48:9 (March 1, 1982), 23.

115 See, for example, the discussion of telecommunications technology in, John S. Mayo, "Evolution of the Intelligent Telecommunications Network," Science, 215 (February 12, 82), 831-837.

116 MTS and WATS Market Structure, CC Docket No. 78-72, \_\_\_\_\_ FCC 2d \_\_\_\_\_, (1982).

117 See, for example, "New Services Key to Survival Say Local Telco Officials," Multichannel News, March 1, 1982, p. 21; W. Falconer and C. Skrzypczak, "The Bell System On Its Way to a Digital Network," Bell Lab Record, 59:5 (May/June 1981), pp. 138-145.

118 Supra, n. 97, 98. Although the MFJ limits former BOCs to providing "exchange telecommunications and exchange access service," (at 228) several BOC's have proposed building cable television distribution plant for lease to cable operators. Such a "lease back" arrangement might be permitted under the terms of the MFJ if it is viewed as an extension of exchange telecommunications. However, it seems less likely that a BOC would be able to contract with a cable operator as a construction company. See, for example: "Pennsylvania Bell Seeks to Build Systems in Philly," Multichannel News, December 13, 1982, p. 1; S. Paul, "Michigan Bell Seeks To Build Cable System in Detroit," Multichannel News, January 10, 1983, p.15; "BOCS Already Aggressively Pursue Business Deals With Cable Companies", Cable News, January 14, 1983, p.2; "C&P Offers To Build D.C. Cable System; BOCs' Interest in CATV Mounts," Communications Daily, March 10, 1983, p. 4.

119 Cellular Mobile Communications Systems, Report and Order, 86 FCC 2d 469 (1982).

120 See, for example, Robert Metz, "Western Union Turnaround," New York Times, April 8, 1982, p. D8.

121 "GTE Challenges AT&T With Private-Line Service," Computerworld, April 5, 1982, p. 6; and Barnett, "Multichannel Industries Aim at Growing Business Data Markets."

122 See, for example, the description of cable proposals that will provide "complete business communications services designed to compete with the phone company." in L. Huffman, "Montgomery Co. Receives Bids From Eight Firms," Multichannel News, February 8, 1982, p. 1.



## FRAMING THE ISSUES

The number and diversity of intercity communications services have multiplied substantially since the early 1970s. It was during that period that the Federal Communications Commission (FCC) created general guidelines for specialized common carriers and then, in 1977, was forced by the courts to allow new players into the interexchange (i.e., long distance) dial-up voice business.<sup>1</sup> By the early 1980s AT&T and Western Union had been joined by competitors such as MCI, Southern Pacific Communications, Satellite Business Systems (SBS), Tymnet, and others in the intercity voice and data communications markets. Virtually all of these services, however, still have to use the existing telephone operating company's local loop for "last mile" connection to reach their customers. Only AT&T had the ability to provide a national end-to-end service. In the future, however, it appears that all interexchange services, including AT&T, will be on a much more equal footing with respect to the local operating telephone companies for access to the local loop.

Because of the traditional rate structure for access to the local loop as well as its current technical limitations for data transport, many users of telecommunication services are starting to investigate ways to bypass the local exchange. Indeed, local distribution has been called the weak link and "next frontier" in the development of new communications services.<sup>2</sup> One industry with the potential to develop local distribution services in competition with local telephone operating companies is cable television. This paper examines the implications arising from cable's potential entry as a competitive force in local telecommunications distribution.

<sup>78</sup>L. Huffman, "Cox Asks FCC To Approve New Business Data Service," Multichannel News, May 3, 1982, p. 9. See below (p. 23) for description of DTS.

<sup>79</sup>See comments by former director of the House Communications Subcommittee, Harry (Chip) Shooshan, "Shooshan Warns Cable to Avoid Becoming Known as Common Carrier," Broadcasting, November 23, 1981; "Pressure Grows for Law Requiring Leased Access," Multichannel News, March 8, 1982, p. 1; "Legal tightrope," p. 107; and "Common Carrier Look-alike?" CableVision, February 7, 1983, p. 60.

<sup>80</sup>See, for example, comments of TCI president John Malone in, Fred Dawson, "The hottest story in town," CableVision, November 22, 1982, pp. 242, 244.

<sup>81</sup>C. Mayer, "MCI Explores Use of Cable TV," Washington Post, November 19, 1982, p. C1; "MCI To Test Cable System for Telephone Service," Wall Street Journal, November 19, 1982, p. 8; "MCI Plans Test of New Cable Tie," New York Times, November 19, 1982; and "McGowan Proposes Cable-Telephone Connection for Long Distance Access," Communications Daily, November 22, 1982, p. 1.

<sup>82</sup>Mayer, "MCI Explores Use of Cable TV," and S. Schley, "MCI Chairman Seeks Alliance With Cable," Multichannel News, November 29, 1982, p. 1.

<sup>83</sup>Id.

<sup>84</sup>"MCI Going For It," CableVision, December 6, 1982, p. 72. See also, infra, pp.40-41.

<sup>85</sup>"GTE Plans Voice, Data Services By Satellite," Multichannel News, March 29, 1982, and "GTE Challenges AT&T With Private-Line Service," Computerworld, April 5, 1982, p. 6.

<sup>86</sup>TvB president Roger Rice wrote cable advertisers attacking cable as an advertising medium, saying, in part, "Put your commercials where prospective customers can see them [Broadcast television]." "CAB Wants Retraction of TV Ad Bureau Letter," Multichannel News February 22, 1982. Also see, for example, "Ogilvy Downbeat on Network TC Prospects by '90," Broadcasting January 11, 1982, p. 39; and Paul Klein, "The Networks' Incredible Shrinking Pie," Variety, January 13, 1982, p. 158.

<sup>87</sup>N.R. Kleinfield, "Newspapers Stalk Cable TV," New York Times, June 25, 1981, p. D1.

<sup>88</sup>"Madison, WI, Newspapers To Sell Cable Ad Avails," Multichannel News, June 28, 1982, p. 8.

<sup>89</sup>"Cable Seen As Alternative to Local Telephone Loops," Multichannel News, December 6, 1982, p. 20; also see, infra, pp. 34 and 40-41.

<sup>90</sup>L. Huffman, "Bell Exec Says AT&T Not Interested in Cable," Multichannel News, May 10, 1982, p. 3.

own transmission facilities."<sup>7</sup> In addition, the separated Bell Operating Companies will be restricted to providing regulated services.<sup>8</sup>

Since 1970 the FCC had forbidden cable system ownership and operation by AT&T under any circumstance and by co-located independent telephone companies in most situations.<sup>9</sup> Reflecting Commission practice, these restrictions were formally modified in 1981 to allow telephone-cable cross ownership in small rural markets in which it is deemed uneconomical for a traditional cable company to provide service.<sup>10</sup>

A FCC Staff Report on Cable Ownership released the same month, in 1981, however, proposed the continuation of all telephone-cable cross-ownership rules except for the rural area exemptions.<sup>11</sup> On November 5, 1982, one day after the FCC declined to eliminate its requirement for telephone operating companies to obtain waivers before building or buying a cable system,<sup>12</sup> the United States Independent Telephone Association (USITA) petitioned the FCC to repeal its telephone-cable cross-ownership rules altogether.<sup>13</sup> Noting that the cable television industry "is no longer an infant, but a multi-billion dollar industry in which many of the system owners dwarf all but the largest telephone companies,"<sup>14</sup> USITA stated that "the speculative evils" presumed by the FCC's ban did not exist.<sup>15</sup>

Two bills considered by Congress in 1981 would have codified these cross-ownership restrictions. The "Telecommunications Competition and Deregulation Act of 1981" (S. 898), passed by the Senate in October 1981, contained provisions prohibiting AT&T from entering cable as well as "alarm services, mass media service, or mass media product."<sup>16</sup> The House version of the legislation (HR 5158), abandoned after subcommittee approval, would also have prohibited telephone-cable cross-ownership.<sup>17</sup> Such Congressional action seems to have been superseded by the prohibitions on AT&T activities

<sup>62</sup>Ibid. and also see, "Two File Bids for Fairfax," Multichannel News, February 22, 1982, p. 1.

<sup>63</sup>For an excellent discussion of technical matters affecting data transport by cable systems, see Deborah Lynn Estrin, Data Communications via Cable Television Networks: Technical and Policy Considerations, (Cambridge, MA: MIT Laboratory for Computer Science, May 1982); see also, "Multichannel Industries Aim at Growing Business Data Markets," Multichannel News, Multichannel Technologies Report, March 1, 1982, p. II-18.

<sup>64</sup>An addressable converter is the "black box" installed by the cable company at the subscriber's television set that allows the cable operator to select which homes will receive a particular signal just as a telephone call "addresses" a particular telephone.

<sup>65</sup>"Experts See Lower Prices For Addressable Converters," Multichannel News, April 5, 1982, p. 6; see also, "PPV and enhanced services: Reality sets in," CableVision, November 22, 1982, pp. 244-260.

<sup>66</sup>See, for example, L. Huffman, "NCTA Report Predicts Competition Will Cause Drop In Cable Penetration," Multichannel News, April 26, 1982, p. 1; E. Holsendolph, "Tougher Times for Cable TV," New York Times, July 11, 1982, Sec. 3, p. 1; and "CTAM Melody: How Ya' Gonna Keep 'Em Hooked On The Wire After They've Sampled Feevee?" Variety, July 14, 1982, p. 92.

<sup>67</sup>See, for example, M. Roth, "A Cable Fairy Tale In Chi Where Everyone Is Wired And No One Makes Money," Variety, May 26, 1982, p. 42; T. Schwartz, "Cable TV: High Risk," New York Times, July 15, 1982, p. B1; and, G. Livingston, "Promises Of Cheap (\$2) Cable, 5% Of Profits, 52 Channels Help Cablevision Win Boston Franchise," Variety, August 19, 1981, p. 55.

<sup>68</sup>See, for example, M. Christopher, "Why local officials rap cable systems," Advertising Age, November 9, 1981; and M. Roth, "Cable-City Marriage Goes Sour, Both Unfaithful To The Other; Oh, What Might Have Been," Variety, July 7, 1982, p. 33.

<sup>69</sup>Loretto v Teleprompter Manhattan CATV Corp. et al. \_\_\_\_\_ U.S. \_\_\_\_\_ (No. 81-244) 50 U.S.L.W. 4988 (June 30, 1982); "Chi's Highland Park Case May Turn On Two Unresolved Issues Left From N.Y. Cable Decision," Variety, July 7, 1982, p. 39; D. Narrod, "Court Bans Cable Operator From Digging City Streets," Multichannel News, July 26, 1982, p. 1.

<sup>70</sup>In its "Boulder decision" the Supreme Court ruled that cities and towns are subject to liability under Federal antitrust laws when they regulate economic activity such as in granting cable television franchises unless granted specific powers to do so by the state. [Community Communications Co., Inc., v. City of Boulder, Colorado, 455 U.S. 40 (1982)]. The decision meant that the city of Boulder, Colorado could be sued by the cable television operator that charged that the city's franchising policies favored a competing company and restrained trade in violation of antitrust law. The cable industry is concerned that one result of the decision will be more overbuilds in which more than one cable company offers service to

## CABLE TELEVISION: REGULATORY JURISDICTION AND OVERSIGHT

When cable television first developed in the late 1940s and early 1950s it was not regulated by the FCC or any other Federal agency. It was typically regulated, if at all, through the granting of franchises by local municipalities. In 1955 FCC chairman John Doerfer rejected any notion of FCC jurisdiction over cable operation, then known as community antenna television (CATV). In 1958 the FCC rejected a request to classify CATV as a common carrier<sup>21</sup> and the following year found no basis for asserting jurisdiction over CATV despite the pleas from the broadcasting industry.<sup>22</sup> In 1962, however, the FCC denied the use of a microwave service to import distant television signals for CATV distribution because of economic injury to a local broadcaster.<sup>23</sup> The following year the Commission proposed to regulate all microwave-fed cable systems<sup>24</sup> and in 1965 asserted jurisdiction over CATV microwave service<sup>25</sup> and placed a freeze on microwave importation of distant television signals for CATV distribution in the top 100 markets.<sup>26</sup> In its Second Report and Order<sup>27</sup> in Docket Nos. 14895, 15233, and 15971 in 1966, the Commission asserted jurisdiction over all CATV operations, mandated local signal carriage and nonduplication protection and required a hearing before importation of distant signals into the top 100 markets. These rules were challenged, but the Supreme Court upheld the FCC's jurisdiction over CATV in 1968, approving of regulations "reasonably ancillary" to the Commission's regulation of broadcasting.<sup>28</sup>

By 1968, therefore, the FCC's role of regulating cable as an activity ancillary to broadcasting had been established and upheld by the courts.

<sup>26</sup>1 FCC 2d 453.

<sup>27</sup>Second Report and Order in Docket Nos. 14895, 15233, 15971, 2 FCC 2d 725 (1966).

<sup>28</sup>U.S. v. Southwestern Cable 392 U.S. 157 (1968).

<sup>29</sup>Sloan Commission on Cable Communications, On the Cable: Television of Abundance, (New York: McGraw Hill), 1971.

<sup>30</sup>First Report and Order in Docket No. 18397, 20 FCC 2d 201; upheld by U.S. Supreme Court in U.S. v. Midwest Video Corp. 406 U.S. 649 (1972).

<sup>31</sup>Cable Television Report and Order in Docket Nos. 18397, 18397-A, 19373, 18416, 18892, 18894, 36 FCC 2d 143 (1972).

<sup>32</sup>Report and Order in Docket No. 20508, 59 FCC 2d 294 (1976)

<sup>33</sup>FCC v. Midwest Video Corp., 440 U.S. 689 (1979).

<sup>34</sup>This situation is not unique to cable television; for example, direct broadcast satellites, multipoint distribution systems, FM radio stations, and broadcast television signals can all be used for point-to-point transmissions as well as for "broadcasting."

<sup>35</sup>National Association of Regulatory Utility Commissioners v. Federal Communications Commission, 533 F. 2d 601 (1976).

<sup>36</sup>Id.

<sup>37</sup>47 U.S.C. Sec. 152 (b).

<sup>38</sup>533 F.2d 601, (1976).

<sup>39</sup>General Telephone Company of California et al. v. Federal Communications Commission, 413 F. 2d 390, cert. denied, 396 U.S. 888 (1969).

<sup>40</sup>413 F. 2d 390.

<sup>41</sup>47 U.S.C. Sec. 221 (b) (1962).

<sup>42</sup>47 U.S.C. Sec. 153 (r) (1964).

<sup>43</sup>413 F. 2d 390.

<sup>44</sup>S. 66, Sec. 607(c). Similar legislation was submitted by Sen. Goldwater in 1982 during the 97th Congress (S. 2172); see also, accompanying Senate Report 97-518.

<sup>45</sup>"New York Cable Operators Challenge Access Rules," Multichannel News, August 9, 1982, p. 20.

<sup>46</sup>Report and Order in Docket No. 20618 (1976).

broadcasting to warrant their imposition. The court did not rule on the Constitutional issues other than to say that they were not "frivolous."<sup>33</sup>

It is ironic that when the FCC denied common carrier status for cable in the Frontier case in 1958 and then asserted jurisdiction on the basis that cable was ancillary to broadcasting in 1966, it limited its ability to address cable's common carrier-like functions. The Communications Act of 1934 separates the FCC's regulatory responsibilities into two titles. Title II sets out the rules governing common carriers while Title III regulates broadcasting. Title III specifically prohibits the FCC from regulating broadcasters as common carriers. Unlike common carriers, who must make their service available to anyone on a nondiscriminatory basis and without any control of content, broadcasters were given the responsibility of content selection as well as transmission. In passing the Act, Congress in 1934 did not foresee the situation in which an enterprise might assume characteristics of both broadcaster and common carrier depending upon its mode of operation.<sup>34</sup> Therefore, to protect and require responsibility from the broadcaster and to protect the potential user of the common carrier, the Act forbids the FCC from imposing both forms of regulation upon an activity.

#### Blurring Distinction Between State and Federal Jurisdictions

The courts, however, have recognized that Title II and Title III distinctions between carriers and broadcasters are no longer easily made. The majority opinion in National Association of Regulatory Utility Commissioners v. Federal Communications Commission (NARUC v. FCC) concluded that the FCC could not preempt state regulation of two-way, non-video, data



## NOTES

<sup>1</sup>MCI Telecommunications Corp. v. FCC (Execunet I) 561 F 2d 365 (D.C. Cir 1977), cert denied, 434 U.S. 1040 (1978).

<sup>2</sup>J.L. Charter, D.N. Hatfield, R.K. Salaman "Local Distribution---The Next Frontier," National Telecommunications and Information Administration, (NTIA-TM-81-54), April 1981.

<sup>3</sup>"Freeing AT&T for 'Information Age,'" Broadcasting, January 11, 1982, p. 27.

<sup>4</sup>L. Huffman, "Wheeler Calls AT&T Pact 'Deceptive'," Multichannel News, March 1, 1982, p. 4.

<sup>5</sup>"After the breakup, the breaking away," Broadcasting, January 18, 1982, p. 31.

<sup>6</sup>"NCTA Names John Saeman As Chairman," Multichannel News, February 22, 1982, p. 1.

<sup>7</sup>United States v. AT&T Co., 552 F. Supp. 131, 231 (1982)(Opinion and Order Modifying Final Judgment), aff'd mem, sub. nom. Maryland v. United States, 51 U.S.L.W. 3632 (Feb. 28, 1983)(hereinafter, "MFJ");see also, infra, pp. 21-22.

<sup>8</sup>Id. at 227.

<sup>9</sup>Final Report and Order, 21 FCC 2d 307 (1970). It should be noted that despite these restrictions, independent telephone companies are permitted to operate cable systems in areas they do not otherwise service. Also, any telephone company including AT&T is permitted to provide cable plant to cable operators for system operation or may offer broadband video services on a regulated tariffed (common carrier) basis; AT&T provides such a service for national distribution of television signals to television stations and BOC's such as New York Telephone provide it for pay-movie distribution to hotels.

<sup>10</sup>Elimination of the Telephone Company-Cable Television Cross Ownership Rules for Rural Areas, 88 FCC 2d 564 (1981). It should be noted, however, that the relaxation of telephone-cable cross-ownership rules will not apply to former BOCs under the terms of the MFJ.

<sup>11</sup>FCC Staff Report, FCC Policy on Cable Ownership, November 1981.

A strong case, however, can be made to permit cable/telephone cross-ownership as a means of encouraging competition between the two industries as their services converge. In the most articulate and well-developed discussion of the advantages of such an approach, Noam argues that direct competition between cable and telephone in an integrated telecommunications environment "provides the key to a structural solution to thorny monopoly issues in telecommunications." E. Noam, "Towards An Integrated



court also rejected additional claims of exemption from FCC oversight including the carriers' assertion of exemption under Section 221(b) which exempts "telephone exchange service" from FCC jurisdiction.<sup>41</sup> The court's reasoning here was based upon the Act's definition of "telephone exchange service" as a service "operated to furnish to subscribers intercommunicating service . . . ."<sup>42</sup> The court concluded that, "clearly, CATV channel distribution service does not contemplate furnishing subscribers with 'intercommunicating service' of the type usually identified with a telephone exchange."<sup>43</sup> It is possible therefore, that as cable operators move into new interactive services, the regulation of the local cable distribution activity, to the extent it remains intrastate, might still be exempt from FCC jurisdiction under an extension of the Appeals Court's logic in GTE defining the exemption for "telephone exchange service." Such a preclusion of federal jurisdiction could, however, open the door to potential state intervention or possible federal legislation. Indeed, legislation introduced by Sen. Barry Goldwater in 1983 would prohibit virtually any regulation of such interactive services.<sup>44</sup> Since the Courts overturned the FCC's access rules on the basis of jurisdiction and did not rule on the constitutional issues, states and cities have not, so far, been prevented from imposing their own access, two-way, and channel capacity requirements. It is possible, of course, that in the future such local requirements could be vacated by the courts on Constitutional grounds.<sup>45</sup>

although there are moves in that direction. It is possible, therefore, that cable's success or failure as a local distribution alternative may depend as much upon regulatory responses by state authorities as upon its ability to compete.

Technological developments and market demands are creating regulatory pressures, on the one hand to encourage competition in local distribution by permitting cable to develop without regulatory constraints, while on the other calling for bypass restrictions to protect local operating companies. Since state regulators cannot affect the entry of potential bypass technologies such as DTS, MDS, and cellular mobile radio, they may focus on cable in their attempts to protect local operating companies from potential bypass. However, since cable television is only one of several potential local distribution competitors, regulators need to recognize that even if cable is constrained in its telecommunications activities, local distribution likely will become more competitive in any case.

The key question confronting regulators, therefore, is how to balance seemingly conflicting traditional economic, political, and social objectives (e.g., universal affordable reliable service, economic efficiency, adoption of technological advances). If, for example, state regulators permit unregulated entry into local distribution by cable television without also deregulating the LOCs, they may be encouraging uneconomic bypass which might affect rates and universal service. Alternatively, if they prohibit or regulate such entry, they may be limiting or slowing competition which could achieve desirable goals such as more economical and efficient service. Likewise, prematurely deregulating the LOCs could also have undesirable effects.

In 1977 the U.S. Court of Appeals held that the FCC had exceeded its authority in imposing restrictions on pay cable's pay services<sup>50</sup> resulting in a virtual elimination of the rules. In 1977 the FCC relaxed its restrictions on distant signal importation making it easier for a cable operator to obtain a waiver to the 1972 rules.<sup>51</sup> In 1980 the Commission eliminated the distant signal importation restrictions altogether. It also ended the protection of local broadcasters through its rules on syndicated exclusivity.<sup>52</sup> The rule change was challenged by broadcasters but upheld by the courts in 1981.<sup>53</sup> There have also been recent proposals to eliminate the "must carry" rules requiring cable systems to carry all local and significantly viewed television station upon request although it is uncertain that these obligations will be eliminated any time soon.

The result of this trend towards content deregulation of cable is that the FCC has reduced its role as protector of the local broadcaster and has virtually eliminated all rules restricting cable programming. Additionally, because it regulates cable as a broadcast function, the FCC does not regulate other common carrier-type nonvideo services provided by cable as long as they are intrastate in nature.

In light of federal deregulation of cable, most regulation takes place at the local level with the municipality granting the franchise. Only 11 states regulate cable on a comprehensive statewide basis<sup>54</sup> although others do provide varying degrees of guidance to municipalities though without specific regulatory mandates and regulate aspects such as privacy of two-way systems. Municipal regulation ranges from the nonexistent to specific and daily oversight.<sup>55</sup> Based on trade press reports, however, only a few cities have indicated any activity in either using or regulating cable's potential for providing various local distribution services. New

Figure 1

EXISTING TECHNICAL CAPABILITIES OF LOCAL DISTRIBUTION ALTERNATIVES

Has Capacity For:

<u>Services</u>	<u>Has Capacity For:</u>			<u>Real time/ Two Way</u>
	<u>High Speed data</u>	<u>Low Speed data</u>	<u>Voice</u>	
<u>Wired</u>				
<u>Telephone</u>				
Switched Network	0	.	.	.
Private Line	0	.	.	. <sup>2</sup>
Cable Television	.	.	.	0 <sup>2</sup>
<u>Over the Air Transmission</u>				
<u>Microwave</u>				
MDS	.	.	.	.
DTS	.	.	.	.
Private Microwave	.	.	.	0
<u>Broadcast</u>				
Television(VBI) <sup>1</sup>	.	.	.	.
FM Subcarrier	.	.	.	.
AM Baseband	.	.	.	.
Cellular Mobile Radio	.	.	.	.

Key

- . = has major capability
- 0 = has some capability

1 - Television could provide voice and video as part of their standard service but not as part of their data transmission using the vertical blanking interval (VBI).  
 2 - Few systems currently have activated this capability.

distribution, however, cable operators began buying the service and increasing their revenues. The advent of satellite-fed pay programming (and later advertiser supported programming) is significant because it permitted cable operators to generate substantial revenue and become profitable in urban areas where before they had been marginal operations. Therefore, after 1975 what had been predominantly a rural and small town medium began competing for the largest and potentially most profitable markets. Potential pay revenue became an important incentive upon which the cable industry sought urban franchises.

The competitive "landrush" atmosphere created by the competition for urban cable franchises resulted in the largest cable multiple system operators' (MSOs) competing with one another for the anticipated lucrative franchises.<sup>60</sup> In order to "get the best deal" from prospective operators, cities have hired consultants, created boards and commissions, and have played the MSOs against one another in a bidding process. The companies have learned that what gets them favorable reviews from the consultants and city commissions includes, among others, many channels (as many as 220 in Denver),<sup>61</sup> two-way interactive systems and institutional loops that provide telecommunications services to public institutions and local businesses,<sup>62</sup> local access channels, and support for local production and cablecasting. These systems are also bidding two-way interactive systems because of the possibility of using them for what is expected to be highly profitable pay-per-view programming. Although having a long way to go, the technology for using coaxial cable for two-way communication, including addressability and switching, has progressed significantly in the past several years.<sup>63</sup> The reliability of addressable converters<sup>64</sup> necessary for pay-per-view programming has increased while the prices have dropped over the past

- . Implications for continuity, connectivity, and coordination in local distribution markets if new entrants are permitted to provide services without oversight or service requirements.
  
- . Implications for cable systems retaining control over their entertainment channels if their non-entertainment services are classified as common carrier: What is the likelihood that such classification might result in common carrier classification for all cable services? Would such a risk be an acceptable cost for entry into local distribution?

One way some cable operators have responded to these concerns and pressures is to buy, sell, and trade systems in order to cluster systems geographically to allow for more economical operation and regional interconnection for information (data) distribution as well as entertainment and advertising.<sup>71</sup> Another response to these forces is to develop new potential sources of revenue, for example, by using cable to provide non-entertainment telecommunications services.<sup>72</sup>

The implications of these events for this study is that the cable television industry has developed the technical ability and the incentive to utilize its rights of way to provide specific services in direct competition with regulated traditional common carriers.\* The result of the trend of deregulation at the federal level converging with the development of infrastructures for potential use in local distribution is that in many cities cable has an option to become an unregulated competitor of the telephone company for private line, enhanced data, access bypass, and other specialized telecommunications services.

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\*The issue of whether cable operators will still be required to provide access capacity and production support if local requirements are ever found to be in violation of the Constitution is the topic for another paper. Likewise, the issue of mandatory leased access is a related but separate issue.

## QUESTIONS AND ISSUES

The foregoing discussion suggests that the cable industry may be poised to enter the local distribution market. Many urban cable systems have some of the necessary technical infrastructure as a result of bidding and building institutional and business loops and by having a two-way addressable capacity (for billing and security services in addition to pay-per-view programming). At this time, there appear to be no federal regulatory barriers to cable entry into the local distribution market while there appear to be significant opportunities for providing alternative private line service and alternative bypass "last mile" interconnection for all types of interexchange carriers. Many policy-related questions remain, however, about cable's entry into this market. The following outline of questions and issues provides a framework for examining the public and private policy questions arising from the competing objectives sought by various stakeholders and the options for addressing these questions.

- . What objectives, explicit or implicit, underlie current policy about local distribution of telecommunications services? What alternative objectives are sought by which stakeholders?
- . What are the pros and cons of requiring/encouraging/permitting/prohibiting cable system operators from offering local distribution telecommunications services?
- . If cable system operators are prohibited from offering local distribution telecommunications services, what are the implications for the objectives of the various stakeholders?
- . If cable system operators are at least permitted to offer such local distribution services, what are the pros and cons of regulating or not regulating entry and/or operation?



content. Because of their traditional control of both conduit and content, cable operators are looking for joint ventures in the new forms of electronic information such as videotext and home shopping.

Many cable operators have promised loops dedicated to local institutions such as the schools and to businesses for data or other content as part of their franchise bids in urban areas. Few of these loops have been activated to date, but those that have demonstrate an ability to provide satisfactory end-to-end service at lower prices than the tariffed local telephone company.<sup>77</sup> Some cable operators see a potential in using these institutional/business loops for private line data services bypassing the local operating company, and at least three (Cox Cable, Continental Cablevision, and Warner Amex) have sought to extend this local distribution activity by applying for digital-termination service (DTS) licenses.<sup>78</sup> Other operators are worried that development of these services will classify their entire operation as common carrier,<sup>79</sup> while still others doubt the viability of such services.<sup>80</sup>

Perhaps the most publicized plan for cable-bypass of the local loop was the announcement in late 1982 that MCI would deliver its interexchange service in Omaha, Nebraska via Cox Cable's two-way cable system instead of Northwestern Bell local lines.<sup>81</sup> MCI Chairman William McGowan, who made the announcement to an audience of cable industry representatives, indicated that the Omaha demonstration, initially involving broadband data, was only the first of a number of pending experiments, including some that would use such a cable-bypass for interconnecting MCI's voice network.<sup>82</sup> McGowan was quoted as saying in his prepared remarks that MCI needs "a local distributor who can get us down the block and into the home at a good price. Our goal is to reach this mass market [small business and

Greene's acceptance of a modified decree, several states appealed his decision threatening to undo the settlement.<sup>171</sup>

While it is not clear how all state regulators might react to what they perceived as bypass threats to local distribution services, at least three state utility commissions have begun investigations into whether they can and/or should assert jurisdiction over cable systems' two-way interactive services and impose common carrier-like requirements. The New York State Public Service Commission, in October 1976, issued an Order to Show Cause why Manhattan Cable Television, Inc. (MCTV) should not be required to apply for a Certificate of Public Convenience and Necessity for or, alternatively, terminate its two-way, point-to-point broadband data transmission services.<sup>172</sup> After lying dormant for nearly six years, the case was revived by the PSC in November 1982 when it issued a Notice of Intent to Act. By early 1983, the PSC had not ruled in the proceeding.

In New Jersey, the Office of Cable Television, which is part of the State's Department of Energy's Board of Public Utilities, established an inquiry into its jurisdiction over and rate regulation of two-way cable services in 1982.<sup>173</sup> The Office received comments from the cable television industry, the alarm services industry, New Jersey Bell Telephone Company and others in mid-1982 but had not issued a ruling by early 1983.

Finally, in January 1983, the Nebraska Public Service Commission issued a Notice of Public Hearing to gather information about Cox's proposed two-way services in Omaha and "to assess the impact of said operations on telephone rate payers and existing carriers of telecommunications service." In April, it issued a Cease and Desist Order against Cox's two-way data service.<sup>174</sup> These actions by New York, New Jersey, and Nebraska indicate state regulators' concern about competitive

cable network programs.<sup>88</sup> Newspapers also see cable as a potential competitor, however, if they are not permitted access to cable channels for their use.

Similarly, the potential large-business users who are aware of cable's local distribution capabilities see cable as one more alternative to the local telephone company in the increasingly varied mix of specialized services. A potential barrier to rapid adoption of cable networks for data transport, however, is the concern of knowledgeable telecommunications managers of potential business users that cable systems are unsophisticated and unreliable. Cable operators which have developed their systems in the past based upon entertainment may not yet be oriented toward the communications needs of business users which are the likely users of two-way cable services. Among business' concerns are cable's traditionally lower design specifications, lack of backup power and lack of redundancy. This perception is a particular problem in the security/alarm business where, if used at all, cable is usually employed as a secondary backup. While any technical limitations can be readily remedied, the institutional perceptions of reliability problems may impede the adoption of cable networks for critical or sensitive communications.

Local telephone companies are just becoming aware of cable's potential as a local distribution competitor, but where a competitive threat is perceived, the local operating companies have been "very, very concerned" about the threat of bypass.<sup>89</sup>

Responding to heavy criticism after the announcement of the proposed settlement of the Justice Department's anti-trust suit, AT&T denied intentions that it wanted to enter the cable television business. Randall Tobias, AT&T vice president for residence sales and services told the 1982

unconstrained AT&T would enter the information creation as well as transmission business and, therefore, were pleased by Judge Greene's modifications prohibiting AT&T from providing information over its own lines for seven years. Under the settlement, the former Bell operating companies will be permitted to provide transmission capacity, multiplexing and demultiplexing services, information access services, and metering and billing services for customers, but not information.

### Regulators

The federal government, through the Federal Communications Commission, has some regulatory jurisdiction over aspects of broadcasting, cable television and interstate telephone service (including local distribution of interstate service). Over the past decade, however, there has been a trend toward deregulation in broadcasting and especially in cable television at the federal level. The FCC has recently eliminated most content regulations for radio stations<sup>161</sup> and Congress has extended the license periods for both radio and television stations.<sup>162</sup> The FCC has also eliminated almost all restrictions it had placed on cable television, mostly following court rulings; for all practical purposes, it merely keeps track of cable systems.<sup>163</sup>

The traditional telephone arena has been slightly different. Although the FCC is deregulating the telephone equipment market,<sup>164</sup> has allowed for increased competition in the interexchange market,<sup>165</sup> and, through its Computer II Inquiry,<sup>166</sup> allowed AT&T to engage in unregulated activities

. American Telephone & Telegraph Co.(AT&T)

On August 24, 1982, Judge Harold H. Greene of the United States District Court for the District of Columbia entered the Modification of Final Judgment (MFJ) in the government's antitrust suit against AT&T.<sup>94</sup> Although the consent decree signed by the Department of Justice and AT&T in January 1982 ended the government's 1974 antitrust suit against the company, the agreement was technically entered by the court as a modification of the Final Judgment entered in January 1956 ending the government's 1949 complaint filed against Western Electric and AT&T.

The 1982 MFJ required the separation from AT&T of its 22 local operating companies.<sup>95</sup> These separated Bell operating companies (BOCs), with few exceptions, are limited to providing "exchange telecommunications and exchange access functions."<sup>96</sup> They are required to "provide to all interexchange carriers and information service providers" access and other services "equal in type, quality, and price to that provided AT&T. . . ."<sup>97</sup> In addition, former BOCs will be prohibited from providing "any product or service, except exchange telecommunications and exchange access service, that is not a natural monopoly service actually regulated by tariff."<sup>98</sup> While these limitations appear, at least initially, to be extremely constraining, the BOCs still have wide latitude to develop the transport business and related functions (e.g., billing, directory services, routing, etc.).<sup>99</sup> In addition, Judge Greene permitted the BOCs to sell, but not manufacture, customer premises equipment (CPE)<sup>100</sup> and to publish printed classified directories (Yellow Pages).<sup>101</sup> Further, the restrictions imposed on the BOCs can be "removed upon a showing by the petitioning BOC

mass entertainment producer/providers are increasingly involved in cable distribution, but, since they are dependent upon wideband capacity, they do not use telephone for distribution (except for ordinary business functions).

. Businesses

Virtually every business generates information (voice or data) that has to be transmitted to other offices of the firm or to other firms. These businesses are very heavy users of telephone distribution for both voice and, increasingly, data. The largest businesses, generating the largest amounts of information (voice and data) have been the largest users of OICs for interexchange communication. They are also the first users of alternative local distribution services and will likely be very heavy users of these services as they develop. Most of the business information transmitted does not need terribly wide bandwidths, therefore allowing them to use existing or upgraded telephone lines. Data communications can be transmitted between user end points that are "dense" or "non-dense," packed together or spread out. Both "dense" and "non-dense" data flow can be between business and business, business and residence, or residence and residence. Each of these situations may need a different bandwidth and system capacity. New techniques in digital transmission will likely permit greater use of existing telephone lines for data transmission, although the need for wideband will exist, especially for high-speed dense data transmission.

An additional type of "business" data user that has traditionally used telephone lines is the security and alarm service (e.g., ADT). Such

interexchange division (ATTIX, formerly Long Lines) which will also provide intrastate (intraLATA) toll service.

Some players see AT&T as the "800-pound gorilla" and THE competition. The cable television industry opposed the settlement because they believed it did not go far enough in restricting AT&T.<sup>109</sup> The American Newspaper Publishers Association (ANPA) voiced similar opposition stating that AT&T entry into the information business could impair the "free flow of electronic information."<sup>110</sup> And NCTA president, Tom Wheeler, called for a coalition of newspapers and cable operators to oppose AT&T's entry into the information and entertainment business.<sup>111</sup>

Speaking at the 1982 ANPA annual convention, AT&T Chairman Charles L. Brown conceded that AT&T could not win a "turf war" with the publishers. Rather, he said that the newspaper industry should view AT&T as the existing "transport system" for delivery of their "electronic information service" and, therefore, not in conflict with the "mainstream" of the publishing business.<sup>112</sup>

Although AT&T will be permitted to enter the local distribution market in competition with its former operating companies, whether or when it would is not likely to be known for some time. Its major competitors in the interexchange market view the consent decree and the post-settlement AT&T with varying degrees of trepidation. The seemingly conflicting positions taken by various players who otherwise would be thought to take similar positions is indicative of the complex tangle of interests that has developed as a result of blurred and sometimes conflicting roles. MCI, for example, as an interexchange carrier, "consistently hailed" the proposal as constructive for both AT&T's competitors and consumers because it guarantees equal access to the local loop for "last mile" connections.<sup>113</sup>

distribution services, without interfering with their traditional services.

Other players see broadcasters primarily as mass entertainment and information producer/programmers. Traditional competing information providers such as newspapers are wary of broadcast teletext's potential but several who own broadcast stations have begun experimenting with their own versions. Because the use of broadcast sideband distribution of data is so new, there is little, though growing, awareness as to its potential and, therefore, competitive possibilities. One indication of the growing awareness of the potential for this service is AT&T's opposition to the FCC's proposed rule making. In comments filed with the FCC, AT&T objected to authorizing unregulated carrier-like service, noting that the proposed service would be ancillary to broadcast operations, it would not be subject to common carrier regulation. Although not opposed to removing restrictions on FM subchannels, AT&T believes that any carrier-like uses of such channels should be regulated as a common carrier, concluding that, "it is arbitrary and anticompetitive to allow an FM broadcast station to provide a common carrier service on an essentially unregulated basis while applying full common carrier regulation to a non-broadcast competitor offering the same service."<sup>157</sup>

### Content Providers

Content providers can be categorized in at least two ways: (1) by whether they currently use the telephone company for local distribution; or, (2) by the type of content they provide. The following discussion is organized by type of content provided but it notes the dominant existing forms of distribution.



also see restrictive federal and state regulation as a severe burden and constraint on their development of new services.

For the first time, local operating companies (LOCs) are beginning to see potential significant competition to their traditional monopoly over local distribution and openly express fear of being bypassed. Indeed, one of the major issues in the FCC's access charge proceeding (CC Docket No. 78-72) was the bypass threat.<sup>116</sup> The proliferation of microwave technology and the potential of fiber optics in the coming decades coupled with the easing of regulatory barriers to entry of new services has resulted in possible new competition for LOCs.<sup>117</sup> Competition from other carrier services in the traditional transmission business is more understandable to the LOCs than the less-familiar operations of cable companies. Whereas telephone companies have traditionally provided discrete services, the cable industry finds it natural to bundle services, such as transmission and programming.

Local operating companies, especially those that are currently part of the Bell system, are viewed by competitors and potential competitors with distrust and a certain amount of fear. The BOCs are restricted, under the settlement, to providing regulated local exchange and local distribution services,<sup>118</sup> therefore creating a market for new entrants in enhanced services. Yet these new entrants fear that independent LOCs (non-Bell) will unfairly be able to compete in the new nonregulated areas, including enhanced services and information provision, limiting opportunities for themselves. Cable television operators are particularly wary of LOC competition, both in the local distribution market as well as in their traditional domain of entertainment and information programming.

and actively opposed the development of cable and subscription television.<sup>140</sup> More recently, however, broadcasters, led by two of the networks and large group owners, have begun to participate actively in new ventures exploiting the new technologies. ABC, for example, has formed numerous joint ventures for cable networks, ranging from a cultural network to a woman's network to pay-per-view sports offerings.<sup>141</sup> It has also proposed a joint venture with Sony for an off-hours pay television network using its television affiliates.<sup>142</sup>

CBS created a cultural cable network, which ceased operation after a little more than a year because it failed to attract sufficient advertising,<sup>143</sup> and purchased cable systems.<sup>144</sup> It has also formed a joint venture with AT&T to provide an experimental videotex service.<sup>145</sup> This is in addition to its rather extensive teletext experiments using several of its owned and operated television stations.<sup>146</sup> As described previously, CBS has formed a joint venture with Contemporary Communications Corp. for a multichannel MDS pay television service in each city where it owns a television station.<sup>147</sup> Contemporary Communications is the second largest MDS licensee and was among the first group of applicants authorized by the FCC to offer Digital Electronic Message Service using DTS facilities.<sup>148</sup> CBS has also received approval from the FCC to proceed with its plans for developing high-definition television (HDTV) direct broadcast satellites.<sup>149</sup>

Local broadcasters are also competing more aggressively with new competitors. Many have entered the cable business by purchasing cable systems outside of their markets, and some have begun to program cable channels in their own markets, in effect competing with themselves. One station in Madison, Wisconsin, has arranged with the local cable operator

in the interexchange business and are generating revenue for last mile interconnection, the local operating companies see the OICs as users of their service and not as competitors. As the OICs move into local distribution and/or end-to-end services (e.g. with satellite up and down links or DTS facilities), however, the LOCs will begin to see them as competitors.<sup>122</sup> Cable operators who are even thinking about local distribution see these other carriers as users of their alternative local distribution services. Information providers see the OICs as a less expensive alternative to AT&T in interexchange service but, for the most part, have not exhibited awareness of their local distribution potential. This price differential will likely diminish, however, as the FCC implements the equal access provisions of the settlement and its recently decided upon access plan.<sup>123</sup>

#### . Digital Termination Services (DTS)

In 1981 the FCC authorized an additional wideband microwave local distribution service for data communications called Digital Termination Service (DTS). DTS is intended to provide the local connection for long-haul data networks (e.g. SBS or Tymnet) as well as for purely local distribution. An experiment in November 1981 involving SBS, Tymnet, Local Digital Distribution Co., Manhattan Cable Television, and Viacom transmitted data between New York and San Francisco using an SBS satellite channel connected with a local cable television channel in New York and cable and microwave (DTS) channels in San Francisco. Participating users in the experiment included RCA Americom, ITT World Communications, Wells Fargo Bank, and Merrill Lynch Pierce Fenner and Smith. The experimental

use by data users. In part to remedy this conflict, Microband Corporation of America (a subsidiary of Tymshare, Inc.), one MDS carrier, has proposed to the FCC that it modify its rules and increase the number of carriers in each market from two to three and, at the same time, allocate each carrier five channels.<sup>135</sup> The second largest MDS carrier, Contemporary Communications Corporation, has formed a joint venture with CBS and has followed Microband's lead in filing for between four and eight MDS channels in each of the markets where CBS owns and operates television stations. Under the agreement with Contemporary Communications, CBS would program and market the service in competition with cable television.<sup>136</sup>

Microband's proposal calls for a multichannel "wireless cable" service called "Urbanet" which would include multiple video entertainment services (e.g., premium channels, pay-per-view programs, and specialized entertainment services), information services (e.g., teletext, electronic mail, data base retrieval, directories, etc.), transactional services (e.g. banking, stock transactions, bill paying, ticket purchasing, home shopping, etc.), and value-added services (e.g., security, word processing and teleconferencing).<sup>137</sup> It is proposed that Urbanet will achieve its two-way capacity by using existing telephone service from the customer to the microwave operator's computer. In addition, Channel View, an MDS carrier in Salt Lake City, began an eight-channel MDS trial in Fall 1982. Initial results indicate that multichannel MDS is both technically feasible and commercially viable.<sup>138</sup>

As common carriers authorized to provide local distribution services, MDS providers have the potential to become important players in this arena. To date, however, their major profit-making activity has been in pay

a number of telephone operating companies have indicated that they may be interested in offering similar services.<sup>129</sup>

. Multipoint Distribution Services (MDS)

Multipoint Distribution Services are microwave common carrier services originally authorized by the FCC to provide closed-circuit television transmissions to multiple points within urban areas. The FCC's rules, adopted in 1974,<sup>130</sup> allocated two MDS channels in each market to be used by common carrier licensees usually operating on only one channel. When it established MDS, the Commission envisioned many communication services in addition to television, such as transmission of high-speed data, audio, and control signals.<sup>131</sup> Thus, many of the early MDS carriers attempted to develop distribution business services; however, for the most part, these proved to be unprofitable because of the high cost of operation and customers' fragmented use.<sup>132</sup>

When pay television networks began distributing programming by communication satellites, local operators began using MDS for local pay television distribution in markets in which cable did not exist. This use "enabled MDS carriers to reduce their marketing costs, for long-term, large-volume sales became possible."<sup>133</sup> One result of the growth of MDS-distributed pay television services was the reduction in price of MDS reception equipment -- from over \$1,000 to under \$100 per unit.<sup>134</sup> Once pay services provided a high-volume base of revenue for MDS, the services could provide data and information services much more economically.

However, since most MDS carriers are limited to one channel per market, the increased use of MDS for pay services has resulted in reduced

connection entirely bypassed the local telephone operating companies and reportedly demonstrated that such DTS and cable local distribution can provide greater bandwidth at a lower price than AT&T's existing Dataphone Digital Service (DDS).<sup>124</sup> More than 25 companies including SBS, Tymnet, MCI, Western Union, Southern Pacific Communications, GTE Telenet, ITT, Contemporary Communications Corp., Warner-Amex Cable Communications, and Cox Cable Communications have applied to the FCC for authorization to offer DTS. Cox was the first cable company to apply for DTS licenses, and it intends to use DTS frequencies to supplement its institutional networks in eight cities and to extend, via DTS, such services into areas beyond their cable franchises.<sup>125</sup>

On July 15, 1982, the FCC approved the first group of five applications to build intercity Digital Electronic Message Services (DEMS) utilizing DTS frequencies and facilities for local distribution. Each carrier has proposed building an intercity network connecting 40 or more local DTS nodes by satellite or terrestrial intercity channels.<sup>126</sup>

As the list of DTS applicants illustrates, DTS is a service that can be developed and used by a variety of players to supplement their existing local distribution services (e.g. a cable company) or to extend their intercity service to the end user (e.g. SBS, Tymnet, MCI). In either case, the service is intended to bypass the local telephone operating company and is being sold to potential customers as providing more than 26 times greater bandwidth than the existing local loop (up to 256Kbps vs. 9.6Kbps) and at a considerable savings over AT&T's DDS.<sup>127</sup> AT&T has responded to this potential competition by proposing to offer new wideband services and by evaluating its DDS rates to see if they can be lowered.<sup>128</sup> In addition,

television, although some observers believe they may become increasingly important providers of last-mile services to interexchange carriers (i.e., ATTIX and OICs), in competition with local telephone companies and cable. The per-unit cost of receiving equipment may decline further. And unlike cable, the systems' basic costs are paid for by up-front user-purchased equipment, reducing the capital needs of the MDS carrier. Moreover, with pay television revenues covering much or all of the carriers' fixed plant, they could price data communication services at attractive marginal rates.

Cable system operators are generally concerned about competition from MDS and other over-the-air distribution systems<sup>139</sup> and, as of early 1983, the FCC still had not acted on the Microband and Contemporary Communications Corp. proposals. It is not clear what the LOCs' responses to the proposal will be, particularly in terms of the potential for an MDS bypass to the local loop.

#### . Broadcasters

While broadcasters are generally thought of as providers of mass entertainment and information (news), they are also entering the electronic information arena. First, some have begun experimenting with teletext and videotex services, and secondly, they have begun to use their spare bandwidth (sideband) for paging services and for local data transmission by second parties, including some experiments with remote sensor control. Many broadcasters are intrigued with teletext but it is not clear to what extent they are aware of the potential in paging or data markets.

Initially, broadcasters, especially the networks, were slow to recognize the new technologies for delivering entertainment and information

. Other Interexchange Carriers (OICs)

There has been a proliferation of other exchange carriers (OICs) in the past several years. OICs are, for the most part, in the interexchange (long distance) low volume market (e.g. MCI's Execunet, Southern Pacific's Sprint, GTE's Telenet, etc.) including voice and data, or the interexchange high volume business data market (e.g. SBS, Tymnet). A few of these offer end-to-end services while most have to use the local operating company for the "last mile." Several new services have begun operation to provide alternative "last mile" connections or the equivalent to private line services using multipoint distribution service (MDS) microwave links. Another newly authorized potentially competitive local distribution service is mobile cellular radio, although local LOCs will be able to participate in at least half of the licenses granted by the FCC.<sup>119</sup> Western Union is an OIC that is not new but is often overlooked as a potential major player in local distribution. In addition to its national distribution network including communication satellites and national microwave network, Western Union wires reach many buildings in older urban markets.<sup>120</sup>

At the interexchange level, these OICs see opportunities, especially in light of the proposed settlement, which will give them equal access with ATTIX to the local loop for "last mile" distribution. They are becoming increasingly aware of the potential for cable in local distribution, as some of them have used cable industry facilities for "last mile" distribution in selected sites and demonstration projects.<sup>121</sup>

AT&T views the OICs as important competitors and will likely compete more aggressively on both price and service if permitted to do so by the FCC. The LOCs are not sure how to view the OICs. As long as the LOCs are



to provide local programming for three channels so that audiences do not have to tune to out-of-market, cable-imported stations when they are dissatisfied with network fare.<sup>150</sup> Another station, in Moline, Illinois, has undertaken a similar project with consumer, entertainment, and children's programming.<sup>151</sup> Radio stations have also begun experimenting with leasing cable frequencies for cable radio operations in order to extend their audiences by offering formats that differ from those they broadcast.<sup>152</sup>

In addition to more aggressively extending their traditional entertainment services, broadcasters are beginning to utilize their transmission potential for point-to-point or addressed information and data distribution. In an effort to become more independent of federal funding, National Public Radio (NPR) has entered into a joint venture with Mobile Communications Corporation of America to offer a national paging and data distribution service using its leased satellite channels and the sidebands of local member stations.<sup>153</sup> Four commercial firms -- MCI, American Express, Metromedia and Communications Industries -- have announced that they will be establishing a similar service.<sup>154</sup> In addition, the FCC has proposed to modify its rules governing FM broadcasting to permit more specialized point-to-point services utilizing FM sidebands (SCA).<sup>155</sup> One firm, Printer Terminal Communications Corporation, offers a local data communications network it calls Local Area Data Distribution (LADD) in the Los Angeles area. The service has a range of 50 to 150 miles, can accommodate multiple users at rates of up to 9.6Kbps and is currently in commercial operation.<sup>156</sup> These and other data and "audiotex" services (e.g., Dow Jones' DowAlert) provide a potential opportunity for broadcasters to use portions of their bandwidth for specialized local

ITT, on the other hand, is a much more diversified organization that wants equal access to the local loop for its interexchange carrier but, because of its equipment manufacturing subsidiaries, is displeased that the settlement did not separate Western Electric from AT&T nor prohibit AT&T from remaining in the customer premises equipment market. It called the proposed settlement a "decisive victory for AT&T."<sup>114</sup> AT&T, not surprisingly, supported the consent decree modification and opposed legislation limiting activities permitted by the settlement.

#### . Local Operating Companies (LOCs)

Independent telephone companies and Bell operating companies (BOCs), after implementation of the consent decree, will look very similar in their capacities to provide local exchange services. New exchange areas called Local Access and Transport Areas (LATAs) are being created as part of the MFJ reorganization. LOCs are highly regulated by the 50 states and face potential challenges from new competitors operating under varying degrees of regulation and restriction. These firms have traditionally viewed their primary business as providing local switched voice, although they are increasingly providing links for data. Their greatest asset is that they provide virtually universal switched service. Their obligation to provide universal service, however, is also one of their greatest burdens. In addition, they have a possible initial disadvantage compared to some of the new entrants because of the narrowband capacity of the "twisted copper pair" although it appears that the "twisted pair" will be able to serve many, if not most, data transmission needs, especially over short distances, once new digital transmission techniques are perfected.<sup>115</sup> They

. Entertainment Programmers

Most mass media entertainment programming is distributed by broadcasting or cable television for simultaneous consumption or in movie theatres for mass but not necessarily simultaneous viewing and by home video (cassettes and discs) controlled by the viewer. This form comprises the vast bulk of content carried on cable television. Coupled with subscription fees or pay-per-view billing, mass entertainment programming, especially movies and sports, account for a significant portion of a cable system's revenue: \$355 million in 1979 (19.6%) and an estimated \$1.1 billion (31.2%) in 1982.<sup>158</sup>

Except for network distribution to broadcast television stations for local broadcast, video programming is not distributed via telephone lines. Even the networks' use of telephone company land lines is being replaced by less expensive satellite distribution. Until recently, satellite distribution of television programming to broadcast stations for local transmission was provided only by non-AT&T carriers (e.g., RCA). The FCC, however, has recently authorized AT&T to distribute such programming to broadcast stations via its COMSTAR satellites.<sup>159</sup>

Most of the mass entertainment content is produced by production companies in Hollywood, New York, and a few other locations. Some of the producers are very large while other "independents" operate with few, if any, assets. Some producers are also owners and operators of conduits, as in the case of the television networks (who are also broadcast station licensees), and cable operators (who may be owners of cable networks, such as Time Inc.'s ATC cable subsidiary and its HBO network). All of these

that there is no substantial possibility that it could use its monopoly power to impede competition in the market it seeks to enter.<sup>102</sup>

Although AT&T is free to engage in virtually any activity after divestiture, it is still<sup>6</sup> restricted in several important ways. Under the provisions of the Computer II decision,<sup>103</sup> AT&T must offer any unregulated service through its separate subsidiary American Bell and, responding in part to fears expressed by the publishing and cable television industries, Judge Greene has prohibited AT&T from "electronic publishing over its own transmission facilities,<sup>104</sup> with the exception of electronic directory services (i.e., electronic "Yellow Pages") and audio services such as time and weather that were offered before the settlement.<sup>105</sup> Recognizing the rapidly changing nature of the market, however, the MFJ states that "this restriction shall be removed after seven years from the date of entry of the decree, unless the Court finds that competitive conditions clearly require its extension."<sup>106</sup>

Following the antitrust settlement and forces previously set in motion by the FCC's Computer Inquiry II decision,<sup>107</sup> AT&T is regarded as a potential entrant in the information-provision business. The restrictions on information provision imposed by Judge Greene will inhibit a direct role as an information provider for at least seven years, but through its unregulated subsidiary, American Bell, AT&T will be able to participate in many information-related services. Although it would be permitted to enter the cable television business purely as a transmission provider, it has denied wanting to do so because it has numerous opportunities in other markets.<sup>108</sup> AT&T's largest business in the immediate post-divestiture environment will be interexchange (long distance) service provided by its

services connect local businesses and residences with a central office usually by telephone lines and occasionally by their own lines. They could readily shift to alternative local distribution systems serving the necessary geographic areas. Indeed, security and alarm is one of the services the cable industry is most excited about for future development on their own and in joint ventures with security companies.<sup>160</sup> Security firms have been slow to shift from telephone lines to cable, however, because of a perception that cable systems are not yet as reliable.

#### . Electronic Publishers

Over the past several years numerous players in traditional information and dissemination activities have entered the developing videotex markets. Newspapers, wire services, broadcast stations, and magazine publishers have all begun experimenting with electronic versions of their traditional content packages. In addition, some direct marketing firms, retailers, airlines, and financial services have begun developing and offering information as part of these publicly available databases. Some databases are distributed by broadcast signals (teletext) and are not interactive, while others are distributed by telephone line or cable (videotex) and have the potential to be interactive. Few of the videotex systems under development or in use require broad bandwidths, so they can use existing twisted-pair telephone lines for local distribution. This technology as now implemented does restrict their development and use of graphics. Many cable companies, however, want to offer these services and have begun forming joint ventures to provide the content as well as the distribution for such services. Both NCTA and ANPA were concerned that an

NCTA convention that AT&T had no interest in providing traditional cable television services and would "not oppose legislative provisions" prohibiting it from doing so.<sup>90</sup> He went on to say, however, that AT&T plans to extend its two-way home and business communications activities and to become "the most viable way of transmitting videotex." In addition, he spoke of "hybrid" cable-telephone two-way systems and other forms of cable-telephone collaborations as examples of how the two industries can work together in ways "beneficial for both." Tobias did note, however, that "cable's emerging data and information businesses will eventually put it in head-to-head competition with AT&T."<sup>91</sup> Although the final modification of the AT&T-Justice consent decree prohibits AT&T from producing information for distribution over its own transmission lines, the cable industry would like to see the ban extended beyond the seven years stipulated by Judge Greene.<sup>92</sup>

Finally, various government agencies view cable primarily as a consumer entertainment medium and, as such, impose few regulations on its operation. Oversight by the FCC at the federal level has been diminishing through a steady program of deregulation. Only 11 states regulate cable at the state level and many of these have been reducing their involvement through a plan of deregulation (e.g. Massachusetts, New York, and California). Several states, however, have begun to look into cable provision of non-video services.<sup>93</sup> The greatest regulation of cable is at the local level with the franchising authority. Once the franchise is granted, however, most municipalities do not provide much oversight or impose very many restrictions; their greatest involvement is usually in overseeing rate increases.

through a separate subsidiary, the Commission was constrained by the 1956 consent decree in how far it could go in deregulating AT&T.

Congress, for the past several sessions, unsuccessfully attempted to encourage competition in telecommunications through legislation. The most recent attempts were S.898 which passed the Senate in October 1981, and H.R.5158, which died after being passed by a subcommittee.<sup>167</sup> New legislation, now that the consent decree has accomplished the breakup of AT&T, is not likely. Most participants would like to see "short form" legislation consisting of provisions dealing with national security, FCC ability to forbear, and FCC jurisdiction over intrastate toll service. However, it is unlikely that any legislation will pass Congress at least until there is time to observe the effects of the settlement.<sup>168</sup>

The states regulate intrastate telephone service, both exchange and interexchange services. Only 11 states also regulate cable television in a comprehensive fashion.<sup>169</sup> Although they may be precluded from overseeing intrastate interLATA service, the state regulators will oversee intrastate local distribution alternatives to existing exchange services. They will have to weigh the social, economic, and political implications of the issues outlined below. Spurred by the opportunity presented by the court's Tunney Act procedures enabling public comment, state regulators and their representative (NARUC) vigorously protested the proposed consent decree modification and have threatened local vetos of provisions of the proposed settlement and protracted litigation.<sup>170</sup> In their comments to the court, the state regulators indicated that they feared the proposed settlement would weaken LOCs within their jurisdiction and thus the goals of universal end-to-end service and low residential rates. Following Judge

residential customers] without the interference of the telephone companies."<sup>83</sup> Almost immediately, however, questions were raised about potential technical problems and regulatory implications,<sup>84</sup> and, in early 1983, the demonstration project was postponed.

Another innovative use of cable television plant for local loop bypass is planned by the largest independent telephone company, GTE. It proposes to use cable television in markets in which it is not the local carrier to provide termination for a new private line (voice and data) service to be offered by its subsidiary, GTE Satellite Corp.<sup>85</sup>

Other players view cable television primarily as a delivery service for consumer entertainment. Broadcasters see cable as a major competitor in local markets primarily for audience as demonstrated by the Television Ad Bureau's (TvB) attack on cable advertising.<sup>86</sup> It is not surprising that many broadcasters also have entered the cable business (e.g. Westinghouse, Cox, Storer, CBS). Program producers see cable as a new means of distribution, enabling them to bypass the three commercial television networks and the difficult syndication market. Many producers are frustrated by cable, however, in their inability to gain access to the systems. Some have indicated a desire to lease channels but have usually been denied.

Newspaper publishers see cable both as an ally and as a competitor. Many newspaper firms own cable systems and see cable as an alternative means to distribute their traditional products of information and advertising.<sup>87</sup> There have been several joint ventures between publishers and cable operators for videotext type information services (including Times Mirror and Dow Jones) and at least one joint venture in which the local newspaper is selling advertising for the cable operator in national



threats to their regulated local operating companies and may be the beginning of lengthy proceedings in each of the states designed to protect local operating companies from bypass competition.

State regulatory commissions have exhibited concern for the viability of their regulated local operating companies since the announcement of the antitrust settlement in January 1982. Individually and collectively, through their trade association, NARUC, these state agencies have intervened in both Court and FCC proceedings implementing the MFJ.<sup>175</sup> They have indicated concern for the viability of their local operating companies post-divestiture as well as for the maintenance of universal service and low residential rates.<sup>176</sup> It is not surprising, therefore, that the states have begun proceedings investigating, in part, the potential impact on their regulated LOCs of unregulated competition by cable operators. Unless preempted by the FCC, the Courts, or Congress, such state activity can be expected to persist as long as cable is perceived as a bypass threat.<sup>177</sup>

Local government usually has jurisdiction only to regulate cable television. It is typically the level of government that grants the initial cable franchise and oversees system construction, operation, and refranchising. The cities' ability to regulate cable has been brought into question, however, by the 1982 Boulder decision that held that cities are "not exempt from antitrust scrutiny."<sup>178</sup> Nevertheless, there are important policy issues facing municipalities in the area of local distribution by cable companies. Resolution of these issues may call for the cities to forego their natural tendencies to regulate.

PLAYERS<sup>73</sup>Conduit Institutions

## . Cable Television Systems

Cable television operators control both conduit (transmission) and content. They see themselves primarily as providers of entertainment and information to consumers/subscribers. Until very recently, the industry was (and to a large extent still is) run by technical operations people whose greatest experience is in system construction and operation. Increasingly, there are more marketing people in management whose experience is in selling subscriptions to residential subscribers. These two traditional orientations have resulted in a cable industry that is, for the most part, geared to cater to residential subscribers with entertainment services. Through the large MSOs and NCTA, the cable industry has taken the offensive to push for regulatory changes that relieve them of many of the restrictions previously imposed to protect local television broadcasters.<sup>74</sup> They are now pushing forward to have cable defined as an electronic version of a publisher with all of the First Amendment protections accorded to print publishers.<sup>75</sup>

Cable operators and NCTA reject out of hand that they are common carriers and have become increasingly careful not to allow program providers to lease channels lest they be construed as common carriers.<sup>76</sup> Rather, the trend is either for the cable operators to buy (lease) the programming or to enter into joint ventures in which they have control over

- . If entry and operation are not regulated, what are the implications for the objectives of the various stakeholders?
- . If entry and/or operation are regulated, what are the pros and cons of state vs. federal regulation?
- . If the federal government preempts state regulation, what are the implications for the objectives of the various stakeholders arising from the different regulatory regimes that might be imposed?
- . If the federal government does not preempt state action, therefore permitting state regulation, what are the implications, for the stakeholders, arising from the different regulatory regimes available to the states?

Specific implications of the above for stakeholder objectives might include:

- . Implications for "fairness" and "equity" arising from opting for entry of unregulated carriers into competition with highly regulated LOCs.
- . Implications for universal end-to-end service if new local distribution competitors are permitted to "creamskim" the most profitable services. For example, will LOCs be seen as another "service of last resort" such as the New York City subway or U.S. Postal Service?
- . Implications for efficient development of new services if new entrants are prohibited from or restricted in entering the local distribution market.
- . Implications for efficient allocation of resources if development and deployment of new services are based upon uneconomic incentives. For example, will efficiencies expected from competition fail to be realized because regulated carriers--LOCs--will be constrained in responding to competition with new services and/or lower prices?
- . Implications for users--for example, banks, information suppliers, security companies--if access to transmission networks is not required.
- . Implications for regulators wanting to forbear from regulation as local distribution alternatives create competitive markets. For example, do state regulators have the statutory latitude to not regulate competitive services under their jurisdiction?

several years, and it has been estimated that 2 million such devices would be shipped in 1982 with an additional 3.5 million in 1983.<sup>65</sup> What was begun by the FCC in 1972, therefore, has become institutionalized by the competitive franchising process even though the FCC's requirements were vacated in Midwest Video II.

A variety of economic and competitive forces are providing additional incentives for cable systems to utilize their two-way capacities to generate revenue. A report conducted for the NCTA concluded that the cable industry should expect to find increasing competition in its primary and traditional entertainment business, especially pay channels and pay-per-view services, from subscription television (STV), multipoint distribution services (MDS), and satellite-fed master-antenna systems (SMATV).<sup>66</sup> Additional competition is expected from proposed services such as direct-broadcast-to-the-home satellites (DBS) and low-power television (LPTV). The industry is also facing high capital costs in building new systems and upgrading older ones as the result of the high cost of money and extensive promises made in franchising competition and refranchising agreements.<sup>67</sup>

The industry has also expressed concern that if it is unable to fulfill promises (including two-way interactivity) made in the competition for franchises, cities may impose heavy penalties including taking over the systems themselves.<sup>68</sup> Systems are also finding themselves in conflict with municipalities and property owners over such issues as easements and the right to serve tenants over landlord objections.<sup>69</sup> There is also concern that the recent "Boulder" decision may lead to overbuilding and unrestricted destructive competition.<sup>70</sup>

## SUMMARY AND CONCLUSIONS

As the number and diversity of interexchange communications services has grown since the mid-1970s, so too has the importance of local distribution. Just as AT&T's virtual monopoly in interexchange services now faces competition from a variety of competitors, competition is developing in the local distribution market. The traditional natural monopoly of the local operating companies is being questioned by current and potential competitors and by potential users concerned about the apparent limitations of the existing network. In part, this concern is being driven by the increasing use of telecommunications for computer (data) communications and by the need for access to users of competing interexchange services.

Several technologies are emerging as potential competitors in the local distribution market, with cable television potentially the most powerful among them. Because of its enormous capacity in bandwidth and ubiquity in franchised areas, cable has the opportunity to develop as a major competitor in local telecommunications distribution. In developing its local distribution potential, cable itself will face competition from other technologies vying for part of the local distribution market (see Figures 1 and 2). Whether cable will develop as a major force in local distribution will depend upon economic, technical, and competitive factors as well as policy decisions by existing or potential regulators. Unlike other local distribution alternatives, cable television's telecommunications services typically are not regulated at any level of government

York City, however, has not only demonstrated an interest in such services, it has begun using them in order to save on its telephone bills.<sup>56</sup>

Likewise, Boston intends to use the institutional loop under construction as part of its new cable system for municipal data transport.<sup>57</sup> With very few exceptions, even states that regulate cable's traditional video entertainment activities do not currently regulate cable's non-video local distribution services, although several are now investigating the possibility.<sup>58</sup> For all practical purposes, therefore, cable's local distribution services, where they exist, remain unregulated.<sup>59</sup>

#### Local Distribution Infrastructures

Even though the FCC's channel capacity and two-way rules have been eliminated, they had an important long-range impact on the nature of the cable business. In 1977 Warner Cable (now Warner Amex Cable Communications) introduced a limited two-way interactive cable system called QUBE in its Columbus, Ohio franchise area. While the system was highly experimental and unprofitable, it became a symbol of the new and high technology possibilities of cable television. It was on the threshold of becoming the "broadband telecommunications network" described in the "blue sky" reports of a decade earlier.

In 1975 Home Box Office (HBO) leased a satellite transponder from RCA in order to demonstrate the feasibility of distributing pay movies to cable systems for redistribution to subscribers. Until that time HBO was primarily a regional operation that was having difficulty attracting cable company affiliates because of national (to the operator) and local (playback) problems. Once the service became available via satellite

Figures 2A and 2B

LOCAL DISTRIBUTION ALTERNATIVES

Figure 2A

Level of Privacy, Universality and Reliability Available

<u>Service</u>	<u>Privacy</u> (1 = high 2 = med 3 = low)	<u>Universality</u>	<u>Reliability</u>
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Wired

Telephone

Switched Network	2	1	1
Private Line	2	2	1
Cable Television	2	2	2

Over the Air Transmission

Microwave

MDS	3	1	2
DTS	3	2	2
Private microwave	3	3	2
Broadcast			
Television(VBI)	3	1	2
FM Subcarrier	3	1	2
AM Baseband	3	1	2
Cellular Mobile Radio	3	2	2

Figure 2B

Primary Regulatory Jurisdiction

<u>Federal</u>	<u>State</u>	<u>Local</u>
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## TRENDS

Several trends have converged within this regulatory framework in such a way as to position cable television to become a potential major entrant in the local distribution of telecommunication services. First, there has been a trend toward deregulating the cable industry. Since 1976 the FCC, partially on its own initiative and partially under court pressure, has been steadily relieving cable operators of many of the rules designed to protect broadcasters. The second trend is the creation by many urban cable operators of an infrastructure capable of providing local distribution services.

Deregulation

Since 1976 the FCC has relieved cable operators of many of the regulations imposed to protect local television stations. In 1976 the FCC eliminated the requirement that local franchising authorities approve subscriber rates<sup>46</sup> although most municipalities still require approval themselves as a major function in their typical ongoing comprehensive franchising and regulation of cable. The same year, the U.S. Court of Appeals for the District of Columbia held in NARUC v. FCC that the FCC could not preempt state regulation of intrastate nonvideo two-way communications via cable.<sup>47</sup> In 1977 the FCC eliminated most of the standards for cable franchising including life of the franchise, complaint procedures, franchising procedures, and construction schedules<sup>48</sup> although most cities and eleven states impose significant franchising standards.<sup>49</sup>



The key question facing corporate players is the role of the private sector in the policy process. Each potential corporate player needs to evaluate its needs and goals, both short and long range, in terms of the evolving competitive telecommunications environment. For example, is it in a corporate player's best interest to encourage competition in local distribution including bypass of the local operating company or, rather, to oppose such bypass in order to retain subsidies for residential service and maintain the highest degree of connectivity? The importance of corporate involvement in the evolving policy debate is obvious for communications transportors which will be affected by whatever policy is followed. Less obvious, but no less important, is involvement by non-transport players such as financial institutions, marketing firms, and information suppliers that might be affected by any change in availability or price of service.

If the long-range goal is to have a competitive local distribution market, regulators and corporate players will have to develop policies to manage the transition from regulated monopoly to full competition without causing dislocations from uneconomic bypass or stifling potential competitors.

communication on leased cable channels on the basis that such activity constituted intrastate common carrier activity and was not ancillary to broadcast television.<sup>35</sup> In stating that such use of cable systems constituted carrier activity, the court distinguished it from non-carrier cable activities ancillary to broadcasting stating that "since it is clearly possible for a given entity to carry on many types of activities, it is at least logical to conclude that one can be a common carrier with regard to some activities but not to others."<sup>36</sup> The court then went on to rule that such activity could not be preempted by the FCC under the terms of Section 152 (b) of the Communications Act,<sup>37</sup> reserving regulation of intrastate carrier communications for the states: "It is uncontroverted that the two-way communications at issue will be intrastate insofar as they are carried on by a cable network entirely encompassed within a single state."<sup>38</sup> Conceivably, however, if such communications became interstate in nature, the FCC might assert jurisdiction and preempt state and local action.

In General Telephone Company of California et al. v. Federal Communications Commission<sup>39</sup> the Appeals Court upheld the FCC's jurisdiction to require a certificate of public convenience and necessity for construction of cable facilities by telephone companies. The plaintiffs challenged the FCC's ability to regulate their construction of cable facilities for lease to cable operators on the basis that such activity was free from FCC jurisdiction because of the intrastate reservation of Section 152(b). The court held that cable systems are engaged in interstate communication that cannot be separated into a component local delivery system: "The stream of communication is essentially uninterrupted and properly indivisible. To categorize respondents' activities as intrastate would disregard the character of the television industry . . . ." <sup>40</sup> The

Communications Market: Overcoming The Local Monopoly of Cable Television," 34 Fed. Comm. L.J. 209 at 257 (1982).

<sup>12</sup>Memorandum Opinion and Order in CC Docket No. 80-767, FCC 2d (released November 9, 1982); "FCC Approved \$5 Billion Capitalization for American Bell's CPE Offering," Communications Daily, November 5, 1982, p. 3. In joining Commissioner Fogarty in dissenting, Commissioner Quello criticized the current situation as one in which cable "can compete with the telephone companies, but the telephone companies cannot compete with cable. "FCC, In Turning Down Reconsideration Requests, Looks Toward CATV Rule Notice Next Year," Telecommunications Reports, 48:45 (November 8, 1982), p. 32.

<sup>13</sup>"USITA's Petition to Repeal Rules," Communications Daily, November 9, 1982, p. 8.

<sup>14</sup>"Wants In," Broadcasting, November 15, 1982. p. 8.

<sup>15</sup>"Noting 13 Years of Study, USITA Asks Commission to Repeal CATV Cross-Ownership Rules," Telecommunications Reports, 48:46 (November 15, 1982), p. 44; "Telco repeal," CableVision, November 22, 1982, p. 26.

<sup>16</sup>S. 898 Sec. 299(b)(1)(A).

<sup>17</sup>H.R. 5158 Sec. 264 (b). The original version of this bill was amended on March 22, 1982, and passed by the Subcommittee on Telecommunications, Finance, and Consumer Protection on March 25, 1982, by a vote of 15 to 0. Although the amended version of the bill would speed up the separation of the Bell operating companies from AT&T and further restrict AT&T, Section 264 (b) would keep the telephone-cable cross ownership prohibitions.

<sup>18</sup>S. 66, "Cable Telecommunications Act of 1983," 98th Cong., 1st Sess., introduced January 26, 1983 (hereinafter, S. 66).

<sup>19</sup>"Wheeler Urges Trial of Ma Bell Suit," Multichannel News, March 2, 1981, p. 16.

<sup>20</sup>Id.

<sup>21</sup>Frontier Broadcasting Co. v. J.E. Collier, 24 FCC 251 (1958)

<sup>22</sup>Inquiry Into the Impact of Community Antenna Systems, Docket No. 12443, 26 FCC 403 (1959).

<sup>23</sup>Carter Mountain Transmission, 22 RR 163 (1962), affirmed in Carter Mountain Transmission v. FCC, 321 F. 2d 359 (D.C. Cir., 1962; cert. denied 375 U.S. 951 (1963)).

<sup>24</sup>28 F.R. 13789 (1963).

<sup>25</sup>First Report and Order in Docket Nos. 13895, 15233, 38 FCC 683 (1965).

In the next few years, however, the role of cable began to evolve into more than the retransmission system called CATV. The Sloan Commission on Cable Communications released a report, On the Cable: The Television of Abundance<sup>29</sup> in 1971 which proclaimed the potential of cable television as a broadband telecommunications network capable of not just one-way retransmission of television signals, but of one-way and two-way specialized, wideband and narrowband telecommunications services. The FCC had already required cable systems with more than 3500 subscribers to provide local origination cablecasting.<sup>30</sup> In 1972 the FCC issued what was known as its cable Third Report and Order which established comprehensive rules governing cable in all television markets.<sup>31</sup> In addition to rules governing carriage of local television signals, the Third Report and Order embraced cable's potential, and required a minimum of 20 channels capacity, two-way capabilities, and channels set aside for access by educational, governmental, and public users. The Commission also proposed a fourth access channel for "leased" access, but did not institute it as a formal requirement until 1976.<sup>32</sup>

The 1972 rules, including the 1976 addition, created a quasi-carrier status for cable systems in which they had to provide part of their capacity for use by third parties over whom they had little control. These requirements, as well as others, were challenged by Midwest Video Corp. on two bases: first, that such requirements were in violation of the plaintiff's Constitutional rights including First Amendment rights, and secondly, that the FCC did not have the jurisdiction to impose such requirements. In affirming the lower court's decision overturning the FCC's access, channel capacity, and two-way rules, the Supreme Court stated that such requirements were not "reasonably ancillary" enough to

<sup>47</sup>National Association of Regulatory Utility Commissioners v. FCC, 533 F. 2d 601 (1976).

<sup>48</sup>Report and Order in Docket No. 21002, 41 RR2d 885.

<sup>49</sup>Philip Hochberg, The States Regulate Cable: A Legislative Analysis of Substantive Provisions, University Program on Information Resources Policy, Report 78-4, Harvard University, Cambridge, MA 02138, July 1978.

<sup>50</sup>Home Box Office v. Federal Communications Commission, 567 F. 2d 9 (1977), cert. denied, 434 U.S. 829 (1977).

<sup>51</sup>Report and Order in Docket No. 20496, 65 FCC 2d 218 (1977).

<sup>52</sup>Report and Order in Docket No. 20988 (Syndicated Exclusivity) and 21284 (Distant Signal Carriage), 79 FCC 2d (Part 2 of 2) (1980).

<sup>53</sup>Malrite TV of New York v. Federal Communications Commission, 652 F. 2d 1140 (Second Cir., 1981), cert. denied sub nom. National Association of Broadcasters, et al. v. FCC 454 U.S. 1143 (1982).

<sup>54</sup>Hochberg.

<sup>55</sup>See, "New York City Puts the Bite on Cable Ops," Multichannel News, March 1, 1982, p. 1.

<sup>56</sup>"Belt-Tightening Gotham to Use Manhattan Cable for Data Sending," Variety, July 1982, p. 42.

<sup>57</sup>"Cable Gets Ready for Business," Business Week, November 22, 1982, p. 119.

<sup>58</sup>Infra, pp. 40-41.

<sup>59</sup>See previous discussion of NARUC and GTE cases.

<sup>60</sup>See, for example: Stan Crock, "As Jousting for Cable-TV Franchises Gets Cutthroat, Tactics Upset Some Officials," Wall Street Journal, October 9, 1979, p. 40; John Bloom, "Invasion of the Cable Snatchers," Texas Monthly March 1980, pp. 93 ; Tony Schwartz, "Powerful Groups Clash in Battles to Acquire Cable TV Franchises," New York Times July 27, 1980, pp. 1, 31; David Garino, "Competition for Cable TV Rights Heating Up, as St. Louis Discovers," Wall Street Journal, March 2, 1981, p. 17; "Cable TV: The Race to Plug In," Business Week, December 8, 1980, pp. 62- ; and William Schmidt, "Millions Spent in Content for 'Showcase' Denver Cable Contract," New York Times, February 22, 1982, p. A12.

<sup>61</sup>See, "Daniels & ATC Unit Wins Denver on Vote of 10-3," Multichannel News, March 1, 1982 p. 1. The 220 channel original bid has been subsequently modified, however, and the city and operator have renegotiated a 60 channel system in part as a result of pressure brought by a lawsuit. See "Denver Council Reacts Favorably to Mile Hi Plan," Multichannel News, January 10, 1983, pp. 1, 12.

contained in the MFJ. A comprehensive "Cable Telecommunications" bill submitted at the beginning of the 98th Congress in 1983 contained no cross-ownership prohibitions.<sup>18</sup>

It is important to note that the cable industry is not concerned exclusively about telephone entry into its traditional domain of providing television and other entertainment services. They are just as concerned, if not more so, that AT&T would "destroy cable's developing local distribution business."<sup>19</sup> Nearly a year before the announcement of the proposed consent decree, NCTA president Wheeler said that cable's future lay with the provision of data and other information services and that a settlement permitting AT&T to enter cable "would destroy the independent cable industry" including the cable alternative to telephone local distribution.<sup>20</sup>

The foregoing public debate to date has reflected cable industry fears, and hence the notion that cable television requires protection from unfair competition from the telephone companies, especially AT&T. Very little public debate has focused on the related, but inverse, question of the impact of cable television competition with local operating companies (LOC's) on the local distribution of telecommunications services.

Several forces appear to be converging, however, that raise important questions about such competition. It is the objective of this paper to identify:

- (1) these forces;
- (2) the players potentially affected by such competition; and
- (3) some of the social, political, and economic issues that will confront policymakers.

the same homes. Although most cable franchises are granted as "nonexclusive," with few exceptions, the practice has been that only one cable operator serves a specified geographic area. It is now feared that in order to avoid antitrust liabilities cities may grant multiple franchises if asked to do so at renewal time. D. Narrod, "Boulder Verdict, Renewals May Increase Overbuilds," Multichannel News, May 3, 1982, p. 49.

<sup>71</sup>Narrod, "Cable Executives Look to Trades As Consolidation Move Accelerates," Multichannel News, June 14, 1982, p. 1; see also, "Clustering by design: Emerging trend being driven by basic economic needs, demands," CableVision, August 16, 1982, p. 49; "MSO's See Greater Use of 'Cluster' Strategy," Multichannel News, October 11, 1982, p. 22; "ATC Trades Systems with Group W Cable," Multichannel News, December 6, 1982, p. 19; "Cable Interconnects: Making big ones out of little ones," Broadcasting, March 1, 1982, p. 59; "250 Gather to Investigate Massachusetts Interconnect," Multichannel News, October 11, 1982; and "New Jersey Link," CableVision, November 22, 1982, p. 73.

<sup>72</sup>"PPV and enhanced services," p. 247.

<sup>73</sup>The description of players and how they see themselves and others in the emerging local distribution arena is based upon the author's observations of how the players see themselves, their competitors and others. It is intended to generate comment from players to develop a more accurate description of players' self and other perceptions. This approach is modeled on that taken by Kurt Borchardt in Actors and Stakes, A Map of the Communications Arena, Program on Information Resources Policy, Working Paper W-78-8, Harvard University, Cambridge, MA 02138, June 1978.

<sup>74</sup>See, FCC v. Midwest Video Corp., 440 U.S. 689 (1979); as well as Report and Order in Docket No. 20496, 65 FCC 2d 218 (1977), Report and Order in Dockets Nos. 20988 and 21284 79 FCC 2d 663 (1980), and Malrite TV of New York v. Federal Communications Commission, 652 F. 2d 1140 (Second Cir. 1981), Cert denied sub nom. National Association of Broadcasters, et al. v. FCC, 454 U.S. 1143 (1982).

<sup>75</sup>See for example, Robert Ross' Cable Television and the First Amendment (Washington., D.C.: NCTA, 1981) and statements by NCTA president Tom Wheeler that cable is really in the business of "publishing information" e.g. in Lucy Huffman, "Wheeler Calls AT&T Pact 'Deceptive'," Multichannel News, March 1, 1982, p. 4; see also, "Cable, Newspapers Should Define Telepublishing Before Gov't Does," Multichannel News, October 11, 1982, p. 41 and "NCTA Opposes Geller's Plan," Multichannel News, January 10, 1983, p. 7.

<sup>76</sup>Lucy Huffman, "Pressure Grows for Law Requiring Leased Access," Multichannel News, March 8, 1982, p. 1; and Gary Witt, "Legal tightrope: Leased access can raise cable operator revenues but also can trigger common carrier troubles," CableVision, November 15, 1982, p. 107.

<sup>77</sup>For a description of recent cable-data transmission demonstrations and ongoing projects see, Toni Barnett, "Multichannel Industries Aim at Growing Business Data Markets," Multichannel News, Multichannel Technologies Report, March 1, 1982, p. II-18.



### Telephone Seen As Cable Competitor

As an industry, cable television has viewed the telephone industry, especially AT&T, as a potential competitor. Following the announcement by the U.S. Justice Department that it had tentatively reached a proposed settlement in its seven-year anti-trust suit against AT&T, Tom Wheeler, president of the National Cable Television Association (NCTA) was quoted as attacking the "closed door agreement" because "only Congress should make decisions as to whether a company as huge and as pervasive as even the new AT&T, should sit astride the flow of news, information, and entertainment."<sup>3</sup> Several weeks later he characterized the agreement as "the greatest deceptive ploy since Br'er Rabbit begged not to be thrown into the briar patch."<sup>4</sup> Irving Kahn, president of Broadband Communications, has characterized AT&T as the competition and the proposed settlement as a "disappointment" and a "disaster."<sup>5</sup> And following the announcement of the proposed settlement, the NCTA board passed a resolution opposing AT&T entry into cable television or other mass media activities.<sup>6</sup>

These and similar attacks on the modification to the 1956 consent decree reflect the cable industry's long-held fear that if permitted to offer traditional cable television services (e.g. video entertainment, pay programming), telephone companies, especially AT&T, would quickly dominate the market and eliminate cable television's viability. Indeed, the cable industry is not alone in this belief. In the Modification of Final Judgment (MFJ) entered by Judge Harold Greene in August 1982, AT&T is prohibited from providing information or "electronic publishing over its



<sup>91</sup>Id.; see also, Randall L. Tobias, "American Bell . . . and the Cable Industry," Multichannel Almanac, December 27, 1982, pp. II-8-13.

<sup>92</sup>"NCTA Board Puts Deregulation at Top of '83 List," Broadcasting, September 20, 1982, pp. 30-31.

<sup>93</sup>See discussion of pending state regulatory actions, infra, pp.40-41.

<sup>94</sup>MFJ, See supra, n.7.

<sup>95</sup>Id. at 226.

<sup>96</sup>Id.

<sup>97</sup>Id. at 227.

<sup>98</sup>Id. at 227-228.

<sup>99</sup>Id. at 228.

<sup>100</sup>Id. at 231.

<sup>101</sup>Id.

<sup>102</sup>Id.

<sup>103</sup>Final Decision in Docket No. 20828 (Second Computer Inquiry), 77 FCC 2d 384 (1980), recon., 84 FCC 2d 50 (1980) (Reconsideration Order), recon. 88 FCC 2d 512 (1981) (Further Reconsideration Order), affid. sub nom. Computer and Communications Industry Association v. FCC, 693 F. 2d 198 (D.C. Cir. 1982).

<sup>104</sup>MFJ. The MFJ defines "electronic publishing as, "the provision of any information which AT&T or its affiliates has, or has caused to be, originated, authored, compiled, collected, or edited, or in which it has a direct or indirect financial or proprietary interest, and which is disseminated to an unaffiliated person through some electronic means." [Part VIII(D)]at 231.

<sup>105</sup>Id.

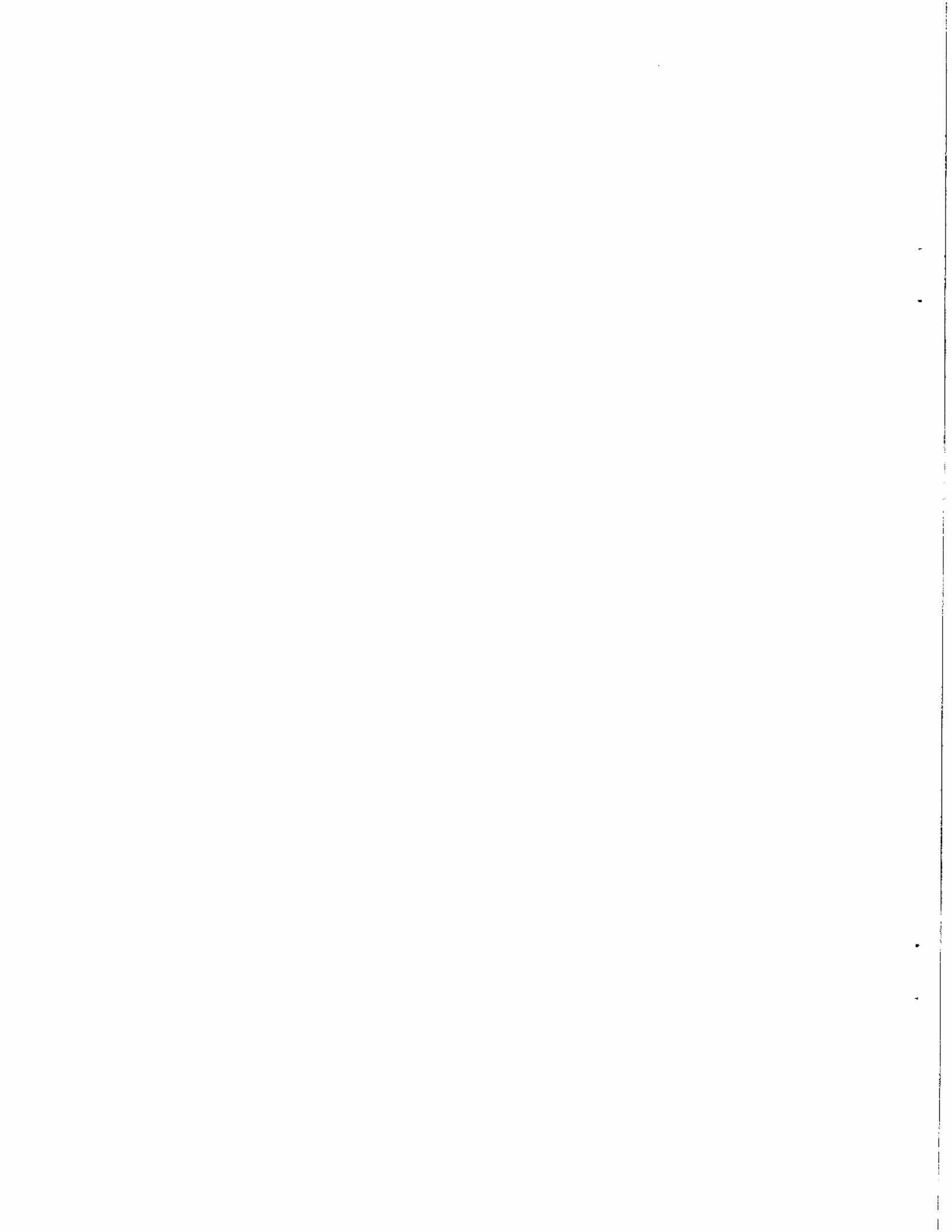
<sup>106</sup>Id.

<sup>107</sup>Final Decision in Docket No. 20828 (Second Computer Inquiry), 77 FCC 2d 384 (1980).

<sup>108</sup>Supra, no. 91.

<sup>109</sup>"Freeing AT&T for 'information age:'" "Wheeler Calls AT&T Pact 'Deceptive,'" and "NCTA Names John Saeman as Chairman."

<sup>110</sup>Press Release, ANPA, January 25, 1982.



<sup>123</sup>"Access Charges Hashed Out at Special FCC Session," Communications Daily, November 30, 1982, p. 1; "Complex Compromise System of Access Charges, With Minimum Flat Rate Imposed On Users At Outset and Almost Complete Reliance On That Method For NTS Costs At Conclusion of Seven-Year Transition Period, To Be Acted On In FCC's Most Important, Difficult Case," Telecommunications Reports, 48:51 (December 20, 1982), pp. 1-3; "FCC Okays Complex Access Charge Plan Moving Toward Flat Rate, Customer-Borne Fees Over 7-Year Transition," Communications Daily, December 23, 1982, pp. 1-3.

<sup>124</sup>P. Hirsch, "SBS, Tymnet Experimental Net Bypasses Bell," Computerworld, November 30, 1981, p. 10.

<sup>125</sup>L. Huffman, "Cox Asks FCC To Approve New Business Data Service," Multichannel News, May 3, 1982, p. 9.

<sup>126</sup>P. Hirsch, "FCC Gives Dems Green Light to Five Carriers," Computerworld, July 22, 1982, p. 12; see also, E. Holsendolph, "High-Speed Data Link Approved," New York Times, July 16, 1982, p. D1; and "FCC Clears 5 Concerns To Offer New Service For Transmitting DATA," Wall Street Journal, July 19, 1982, p. 10.

<sup>127</sup>Id.

<sup>128</sup>P. Hirsch, "Competition for DTS: Bell Moving To Digital Net by '84," Computerworld, November 16, 1981, p. 1; and "AT&T Makes New Offering Of 1.544 MBPS Service Designated Terrestrial Digital Service, And With Simplified Rate Structure; New DDS And Supergroup Tariffs Set For Late 1982," Telecommunication Reports, 48:27 (July 5, 1982), 11.

<sup>129</sup>Hirsch, "FCC Gives Dems Green Light."

<sup>130</sup>Amendments of Parts, 1, 2, 21, and 43, of the Commission's Rules and Regulations to Provide for Licensing and Regulation of Common Carrier Radio Stations in the Multipoint Distribution Service, Report and Order, Docket No. 19493, 45 FCC 2d 616 (1974).

<sup>131</sup>Id.

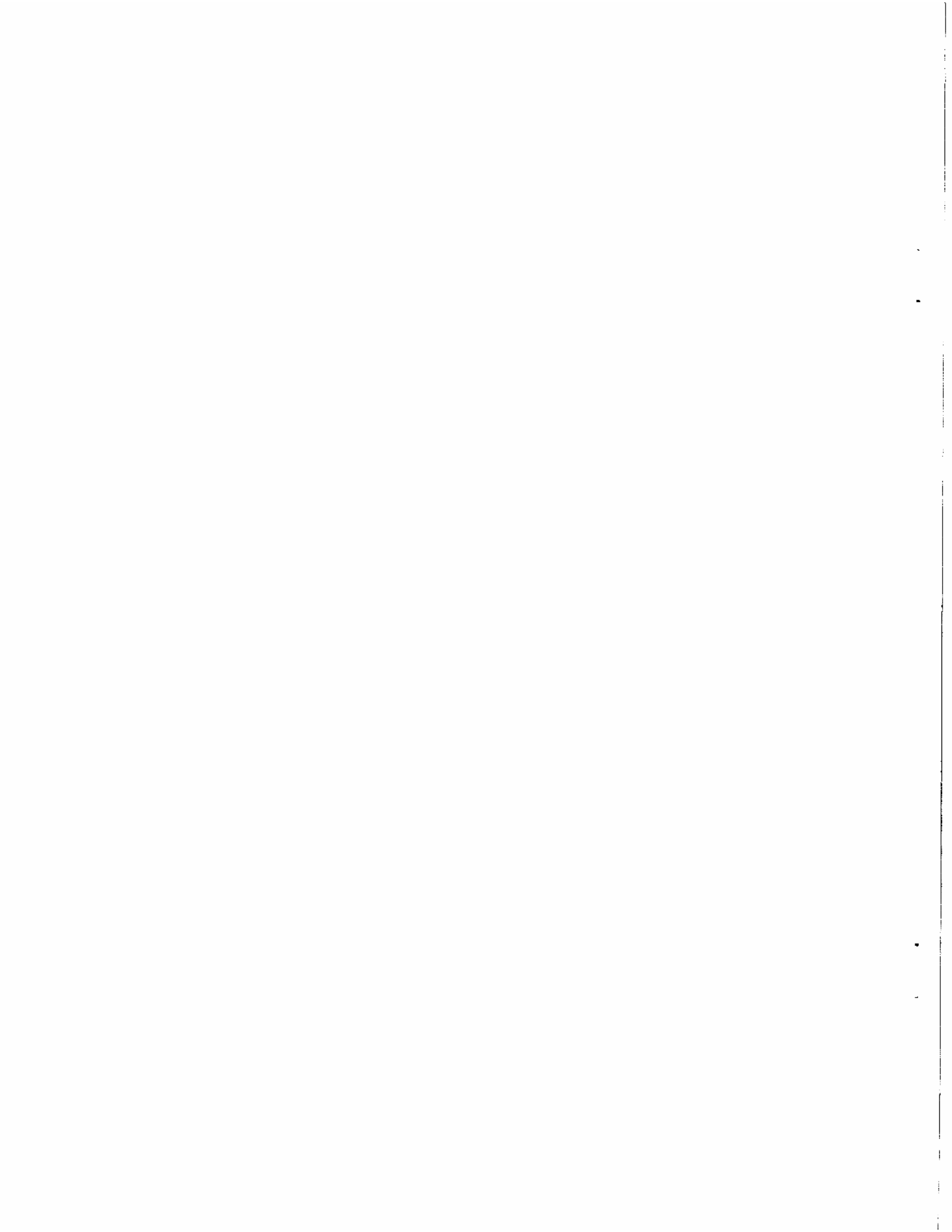
<sup>132</sup>"Proposal of Microband Corporation of America for the Creation of Urban Over-the-Air "wireless cable" Networks Capable of Providing Premium Television and Other Broadband and Narrowband Communication Services," Vol. 1, Before the Federal Communications Commission in Docket Nos. 80-112 and 80-113, February 1982, pp. 39-40.

<sup>133</sup>Id.

<sup>134</sup>Id. p. 41.

<sup>135</sup>Id. pp. 30-33.

<sup>136</sup>A. Pollack, "CBS Requests Approval For 5 Pay-TV Systems," New York Times, August 4, 1982, p. D1; L. Huffman, "CBS Plans Multichannel MDS System, May Buy Into Ohio Pay Sports Net," Multichannel News, August 9,



and CBS Launch Home Banking Videotex Experiment," Communications Daily, February 2, 1983, p. 3.

<sup>146</sup>N. Kleinfield, "CBS Plans to Test Teletext on Coast," New York Times, November 14, 1980, p. D4; D. Kaufman, "CBS & NBC Set Teletext Services Soon," Variety, June 30, 1982, p. 38.

<sup>147</sup>L. Landro, "CBS Plans Foray Into Pay-TV Services That Vie With Cable," Wall Street Journal, August 4, 1982, p. 27; see also note 98.

<sup>148</sup>See supra, n. 126.

<sup>149</sup>L. Huffman, "Direct Broadcast Satellites Get the Green Light From FCC," Multichannel News, June 28, 1982, p. 1.

<sup>150</sup>"Coming Together: The difference between cable and TV stations are narrowing as mutually beneficial programming arrangements are being invented," Broadcasting, March 22, 1982, p. 15.

<sup>151</sup>"Broadcaster Programs Cable Systems' Channels," Multichannel News, March 22, 1982, p. 41.

<sup>152</sup>"Cable Offers New Opportunities for Radio Stations," Broadcasting, April 12, 1982, pp. 74-75.

<sup>153</sup>D. Shribman, "Public Radio in Venture to Transmit Data Text," New York Times, April 20, 1982, p. D1; R. Shaffer, "Public Broadcasting Sees New Technology Producing Revenue," Wall Street Journal, June 23, 1982, p. 32; "NPR Announces Joint Venture With Dataspeed Inc. to Form Nationwide, Portable Paging and Information Service," Communications Daily, November 10, 1982, p. 3.

<sup>154</sup>"4 Establish Venture for Paging Service," New York Times, July 29, 1982, p. D4.

<sup>155</sup>Amendment of Parts 2 and 73 of The Commission's Rules Concerning Use of the Subsidiary Communications Authorizations, BC Docket No. 82-536; see also, R. Shaffer, "New Rule May Let FM Radio Offer paging, Electronic Mail," Wall Street Journal, August 6, 1982, p. 17.

<sup>156</sup>P. Hirsch, "FM Radio-Based Local Nets Advocated," Computerworld, December 7, 1981, p. 67.

<sup>157</sup>Comments of American Telephone and Telegraph Company in BC Docket No. 82-536 (filed December 17, 1982) at p. 2.

<sup>158</sup>Cable Television 1981, (New York: Donaldson, Lufkin & Jenrette, 1981), p. 8; 1979 data from FCC data while 1982 data are an estimate by Donaldson, Lufkin & Jenrette.

<sup>159</sup>"AT&T Is Allowed to Send Programs for TV by Satellite," Wall Street Journal, September 28, 1981, p. 20.

<sup>160</sup>K. Lane, "Cable Security," CableVision, August 30, 1982, p. 65.

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<sup>173</sup>State of New Jersey Department of Energy, Board of Public Utilities, Office of Cable Television Docket No. 8111C-6837 (PRN 1982-2) 14 N.J.R. 198 (1982).

<sup>174</sup>Nebraska Public Service Commission, Notice of Public Hearing, Released January 6, 1983, and Nebraska Public Service Commission Order to Cease and Desist, entered, April 19, 1983.

<sup>175</sup>"Another Dozen Organizations File Comments With Dist. Court on AT&T's Divestiture Plan," Communications Daily, February 17, 1983, pp. 2-3; "Access Plan May Produce 'Civil War' Between State & Federal Regulators," Communications Daily, November 15, 1982, p. 2; and "States Want 'Provider of Last Resort' Authority for Phones and Wiring," Communications Daily, December 20, 1982, p. 3.

<sup>176</sup>"Telecommunications Officials Give Views on Future of Local Phone Service," Communications Daily, February 4, 1983, pp. 3-4.

<sup>177</sup>See, for example, S. 66, Sec. 607(c), supra, n.16.

<sup>178</sup>Community Communications Co., Inc. v. City of Boulder, Colorado, 455 U.S. 40 (1982); see supra, n. 70.

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