

PLAYERS AND STAKES

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1. Introduction

Much of the debate surrounding telephone company broadband network development in the United States revolves around potential competition with the cable television industry. Cable television already passes about 90 percent of all U.S. households, typically with a one-way analog broadband system providing the average customer with at least 30 channels of entertainment video.¹ There are other major players,² however, who stand to be affected, some significantly, depending upon how broadband networks develop. They include: broadcasters; program producers and distributors; large and small users; and regulators at the local, state, and federal levels.

The institutional and economic implications of broadband network development are enormous. A universal broadband network threatens some existing players while providing opportunities for others. At the same time, existing institutional relationships will change.

2. Local Exchange Carriers

Local Exchange Carriers (LECs) see the development and deployment of broadband networks as important to their future.³ Demand from large users for high capacity transmission, coupled with technological developments in fiber optics and digital electronics are driving telecommunications carriers to develop broadband networks.⁴ While some LECs have stated that fiber shortly will replace copper to the home for POTS (plain old telephone service), others believe that delivery of entertainment video will be necessary to justify fiber deployment. There is general agreement among LECs, however, that the ability to deliver video programming will accelerate fiber deploy-

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ment and broadband network development for residential subscribers served by today's copper network.⁵

Some LECs would prefer to remain in the transmission business, leasing broadband transport to cable operators and other video programmers. Others believe that the telephone/cable cross-ownership rule must be repealed or modified to permit the LECs to secure customers for their broadband service. The fear exists that historical enmity between the telephone and cable television industries will keep cable companies from leasing channel service even if it is more economical than building or rebuilding a separate cable system. There is also concern that cable operators will use their influence to prevent programmers from leasing capacity directly from telephone companies. Some LECs wish to "prime the pump" by guaranteeing a minimum use of any broadband network.

Other LECs want to be in the cable television business because of the large cash flow and competitive returns, far exceeding those of today's regulated telephone business.⁶ They would also like to use the revenue from video programming to defray the cost of upgrading their existing networks, making it easier to receive permission from state regulators to replace existing plant. Some of these LECs see cable television (inside or outside of their service areas) as a profitable, related line of business, to which they can bring their expertise. They are looking to diversify and invest their profits.

Some LECs have taken advantage of the ability to own and operate cable television systems outside their local service areas (out-of-region). For example, Centel, the fourth largest non-Bell telephone company — and therefore not subject to the MFJ — was for many years a major cable television multiple system operator (MSO), with about 500,000 subscribers in seven states.⁷ Pacific Telesis has bid on several out-of-region cable systems.⁸ Other Bell Regional Holding Companies (RHCs) have been reported to be interested in acquiring out-of-region cable television operations, including ones overseas.⁹

In addition to seeing such ventures as a profitable way to diversify and invest available cash, out-of-region cable television operations are coveted for other reasons. First, LECs view them as a good way to learn about the entertainment video business in the hopes that they will be allowed to enter the business within their local service areas (within-region).¹⁰ Second, having out-of-region cable operations puts LECs in a position to form strategic alliances with cable operators and programmers who might lease within-region broadband transmission even if the cross-ownership ban is not lifted. Third, as cable systems are upgraded with fiber backbone trunks,¹¹ out-of-region cable service would provide LECs — especially RHCs — with facilities capable of offering exchange telecommunications services outside their local service areas, as some RHCs do today with cellular radio services.¹²

Such competition could finally achieve the kind of local distribution marketplace envisioned at the time of the original telephone/cable television cross-ownership ban and the 1981 FCC Staff Report.¹³ LECs might be more likely than traditional cable operators to expand cable television systems into fully competitive local telecommu-

nications networks, especially for large users, because they: understand the exchange telecommunications market; have the expertise and resources to build much a network; and, most importantly, are used to dealing with state regulatory commissions.¹⁴

The implications of such out-of-region local exchange competition are enormous for the telephone industry, regulators, and the public. They may become more significant if cable systems are permitted to interconnect with local LEC switches as a result of Open Network Architecture (ONA) requirements.¹⁵ If competition from cable systems for telephone-like service develops, it will become increasingly difficult to justify keeping incumbent LECs from providing within-region video programming. Indeed, asymmetric regulation may threaten the viability of incumbent LECs.

LECs are also concerned about local competition from existing cable systems, especially as those systems deploy fiber technology.¹⁶ Of particular concern is the potential for AT&T to develop strategic alliances with cable operators, building fiber-optic systems, providing subscriber automatic number identification (ANI) for pay-per-view programming, and providing billing to customers, all in exchange for cable system transport between large business customers and AT&T's interexchange point-of-presence (POP). Some cable systems currently employ AT&T fiber technology to link-up facilities in metropolitan areas.¹⁷ Such networks could be used by the cable operators to provide extended area private line service or even intra-LATA toll service in conjunction with AT&T and other interexchange carriers. While not yet a reality, the potential for such competitive alliances is threatening to some LECs.¹⁸

3. Cable Television

The cable television industry stands to lose the most from LEC broadband network development — and it is acting accordingly.¹⁹ The broadband environment of the future could mean more than one broadband wire into the home. Some cable operators may elect to lease channel capacity from LECs while others will retain their own broadband network into the home — a network that is likely to be fiber-based. But whichever way the local cable operator chooses to go, there would be competition; unless of course the franchising requirement of the Cable Act of 1984 remains in force and cities do not grant competitive cable television franchises.²⁰

A major problem for the cable television industry will be maintaining or increasing the market value of cable systems in the face of potential competition. Before the collapse of the high yield (“junk”) bond market at the end of 1989 and the threat of cable re-regulation in 1990, cable systems sold for between \$2000 and \$3000 per subscriber, up from \$900 five years earlier.²¹ There is concern, however, that widespread construction of competing cable systems (“overbuilding”), especially if telephone companies start providing cable service, may reduce the per-subscriber value of cable systems.²² One study states that de facto local monopoly franchises is one reason cable systems sell for between two and three times replacement cost when the average ratio of market price

to replacement cost for all non-financial corporations is about .81.²³ This implies that competitive entry would drive the market price of cable systems towards the replacement cost of \$800-\$1,000 per subscriber. If this were to occur, the value of cable companies would drop correspondingly, as would the value of stock of publicly traded cable companies.²⁴ Cable operators or investors, who borrowed money based on today's high multiples and an implicit low expected probability of competition, could find themselves in dire financial straits; not unlike farmers who borrowed money when land was selling for \$3,500 per acre, only to have their loans called when the price of land dropped significantly only a few years later.

Cable operators are especially concerned that if telephone companies are permitted into the cable television business, they might subsidize their cable operations from regulated rate-payer revenue and, within-region, would once again have the incentive to discriminate against competing cable operators by denying them access to telephone poles and conduits.²⁵ It is not surprising that overbuilds and potential competition are major topics among cable operators.²⁶

While opposing repeal of the telephone/cable cross-ownership rule preventing within-region LEC video programming, the cable industry is divided on whether LECs should be permitted to provide cable service outside their telephone service areas.²⁷ Many cable operators, including the largest, TCI, have said they do not oppose LEC entry into the cable television business outside their telephone service areas.²⁸

LEC out-of-region entry into cable television through the purchase of existing cable operations has two important potential advantages for the cable television industry. First, telephone company entry, especially by the seven Bell regional holding companies, would significantly increase the number of large, cash rich firms seeking to buy into the cable business. This could bid up cable system prices significantly and provide the industry with a new pool of buyers willing and able to pay premium prices when today's investors are ready to "cash out." Secondly, if telephone companies buy prosperous out-of-region cable systems at premium prices, then telephone company incentives to encourage relaxation of within-region restrictions may diminish as they seek to protect their multi-billion dollar investments. That is, as major cable television owners, telephone companies may be less likely to want to see overbuild competition from LECs which might drive the market price for cable systems down towards replacement cost. What would happen to existing institutional arrangements if a regional Bell company became a NCTA board member?²⁹ The public policy issue is whether an arrangement forestalling competition would be in the public interest.

The cable television industry may face competition even if cross-ownership restrictions remain in force. Local telephone companies are allowed to lease transmission capacity to franchised video programmers today; a franchise may not be required in all cases in the future.³⁰ The threat to cable may be even greater if broadband transport is offered on a common carrier basis, permitting any and all comers to compete for viewers. If the cross-ownership ban were lifted without common carrier access, a

tightly-restricted telephone company video programming service might be less threatening. Even better for the local cable operator would be to enter into an exclusive joint arrangement with the LEC to lease channel service on some equity sharing basis (again assuming no ownership or AT&T consent decree line-of-business restrictions). In other words, cable operators may give telephone companies incentives to limit competition in order to get cable's cooperation in building IBNs. Such a shared monopoly arrangement would not increase competition beneficial to either program producers or consumers. It would reduce the threat of publicly beneficial competition to incumbent cable operators and LECs.

For the medium term (10 to 15 years), the cable television industry is in an excellent economic and competitive position relative to LECs. Despite what some "techno-utopians" predict, cable may be around a lot longer because of its significant advantages over the telephone industry for the following reasons:

- Cable enters the competitive arena with the ability to serve more than 90 percent of U.S. homes with its broadband network; the LECs begin with virtually no homes passed.
- Cable begins with nearly two-thirds of all U.S. homes as customers; telephone companies start with virtually none.
- Cable operators can upgrade their networks to bring fiber-optic-quality signals almost to the home, thus increasing their capacity and signal quality, for only two to five percent of the cost that telephone companies will incur in bringing broadband services to their customers.³¹
- Cable operators can upgrade their systems without any of the regulatory oversight and approval that telephone companies will have to endure.
- Cable operators have long established relationships with program suppliers — including many they own³² — while telephone companies have virtually none.
- The cable industry has more than thirty years experience bundling and marketing packages of video services. Cable, after all, is a marketing-driven business. LECs have never been known for their marketing prowess.
- Before telephone companies are permitted to compete in the cable business, they will have to overcome significant regulatory and legal hurdles at the federal, state, and local levels. The BOCs will have to deal with the added problems surrounding the AT&T divestiture agreement.

4. Broadcasters

Whether broadcasters stand to gain from universal broadband networks depends upon how they view their business. If they see themselves in the business of producing, selecting, and packaging television programming that attracts audiences and advertisers, then they may benefit from a universal broadband network that reaches nearly all homes.

Broadcasters are concerned that telephone companies might become competitors and put them “out of business” by using their broadband networks to enter the television business.³³ Broadcasters are especially worried about local telephone companies using their networks to deliver high-definition television (HDTV).³⁴ The cable television industry has fostered this fear³⁵ hoping to enlist broadcasters in the flight to retain the telephone/cable television cross-ownership rules.³⁶

Ever since the Commission’s “must-carry” rules requiring cable systems to carry local television stations were ruled unconstitutional,³⁷ broadcasters have been seeking guaranteed access to American homes. It should be remembered that nearly sixty percent of all U.S. homes receive their television, including local broadcast signals, over a wire rather than over the air.³⁸ Local broadcasters have expressed a desire to reach viewers through a common carrier broadband network, instead of having to rely on cable operators who are beginning to compete for local advertising revenue.³⁹ Not all broadcasters seem to understand, or want to accept that, in the telephone business, it is traditional to pay for transport; some have stated that they deserve free access to all homes.⁴⁰ Indeed, the telephone industry has been attacked by the president of the National Association of Broadcasters because a telephone industry executive suggested “that a payment of a million dollars a year might not be unreasonable for a major station in Los Angeles to pay for access to their [the telephone company’s] future gateway system.”⁴¹

Broadcasters have not yet decided whether they will benefit from LEC broadband networks, and should support LEC entry, or whether such networks should be fought because they will increase competition.⁴² One broadcaster⁴³ has stated that an incentive to convert from broadcasting to broadband transmission would be the ability to relinquish his broadcast license and get out from under public interest and content regulation, since these rules are applied only to broadcasters. (It can be reasonably assumed that he would not want his free spectrum space going to another broadcaster.) This raises an important question: at what point, if ever, will enough people be able to receive television over a wire that it will be possible to reclaim some of the spectrum currently used for television broadcasting? How would such spectrum “reclamation” affect the development and deployment of high-definition television?

Will local television broadcasters be better off with LECs or cable operators managing the multichannel fiber networks that are predicted to dominate video distribution in the not so distant future?⁴⁴ Put another way, are local broadcasters better off if the multichannel broadband distribution network is owned and/or controlled by a traditional common carrier or by a cable operator with no carrier obligations?

5. Program Producers and Distributors

Program producers and distributors benefit from being able to choose between multiple distribution channels and are thus interested in the possibility of universal broadband networks. At present, they have limited outlets for distribution of their programming directly to home viewers: television networks; individual television stations through the program syndication market; cable networks; and, for some kinds of programming, video rental and sales outlets. If producers or distributors want to create their own networks they must either enroll several hundred television stations, (as ABC, CBS, NBC and Fox Television do today) or convince cable operators to carry their network. In the future, direct broadcast satellite (DBS) may provide an alternative distribution medium,⁴⁵ but today the options are limited. A universal broadband network would give producers direct access to viewers and permit them to market movies, series, and other programming, without having to go through intermediaries — something the major Hollywood studios have not been able to do on a wide scale since the Department of Justice forced them to sell their theaters in 1948.⁴⁶ As a result, Hollywood studios and other producers are beginning to envision the potential gain which might be derived from a common carrier broadband network.

Producers and distributors will not benefit if LEC out-of-region acquisition of cable systems reduces, or does not increase, competition. Trading one de facto monopoly for another will not provide program distributors with alternative means of reaching consumers. Indeed, if the result reduces the likelihood of within-region competition, producers and distributors will be worse off because “the mere potential for [LEC broadband network] entry can presumably have very salutary effects in forcing incumbent suppliers to behave in a competitive fashion.”⁴⁷

It should be clear that deployment of universal broadband networks will not only affect individual players but will upset existing institutional arrangements in the video marketplace. Who buys programming from whom, how revenue is generated, and where revenue flows, will be likely to change. If broadband fiber networks are ever deployed, the video world may never be the same.

6. Telecommunications Users

Telecommunications users, whether residential consumers or large businesses, have an important stake in the development of IBNs. Even before new broadband services are developed, all users will benefit to the extent that IBN deployment increases the quality of existing service through the introduction of optical and digital transmission technology. For example, all data communications users, including residential and corporate computer users, will benefit from the widespread deployment of fiber optic technology associated with IBNs.

Residential and small business users may have the most to gain if rapid IBN development and deployment leads to new services unavailable or difficult to provide over

today's narrowband network. Residential users could be the first to see significant benefits if IBN deployment leads to a more competitive video marketplace with greater program choice at a wider range of prices. Small business users, and some residential users, will also benefit should IBN deployment result in new broadband and narrowband services otherwise available only to users who own expensive terminal equipment. All users of IBN, and especially small users, will lose out if regulatory constraints retard IBN deployment and thus make it difficult to develop and discover whether there is demand for new services.

Large users like government agencies, universities, and hospitals also stand to gain from IBN deployment. New fiber optic digital broadband networks will permit faster, ubiquitous connectivity for "dial-up" high-speed data and video communications, with applications ranging from computer aided design and manufacturing to video conferencing. However, large users are less dependent on future public IBNs for their advanced telecommunications needs. The largest corporations and government agencies have access to private satellite and fiber optic networks as well as sophisticated terminal equipment that can meet their telecommunications needs even if IBNs do not develop. Residential and small business users, on the other hand, have few alternatives.

All users, especially residential and small business may be worse off if IBNs are deployed but are not permitted to stimulate new services and customers. Under traditional rate-base rate-of-return regulation, if LECs incur large costs that cannot be recovered directly from IBN users because of a lack of new services or customers for those services, traditional rate payers may find themselves paying higher rates for existing services. If unrecovered costs compel higher rates, it is not clear which users will bear the brunt. While it will be politically more difficult to increase residential and small business rates, large users have alternative telecommunications options if their rates increase too much. This undesirable result may be less of a problem in the future, however, as states and the FCC shift from traditional rate-of-return to incentive-based regulatory regimes.⁴⁸

7. Regulators

Some of the greatest effects of IBN development will be felt by regulators at the federal, state, and local levels. State and federal telecommunications common carrier regulators will be forced to reexamine some of the fundamental ways they have done business for at least forty years. Local cable regulators may find that they no longer have the ability to control entry of video programmers through the local franchising process.⁴⁹ Depending upon how regulatory issues are resolved, regulators will gain or lose power and influence as authority shifts among jurisdictions.

The FCC will have to adjust its regulation of channel service⁵⁰ in light of IBNs. The Commission will have to adapt or replace its tariffing and cost allocations procedures in an IBN environment where existing methods of determining relative use will be

difficult, if not impossible, to apply to customer-controlled, dynamically expanding and contracting services. In addition, the Commission will have to examine its preemption of channel service when “cable service” or “video programming” may be only one of many services using IBNs to reach customers. The Commission also will have to concern itself with how very large LEC investments might affect interstate revenue requirements. If IBNs result in a total restructuring of the telecommunications industry and bring about local loop competition, federal policy makers may be able to deregulate interstate access.⁵¹ In the meantime, the Commission will have to find new methods of fulfilling its statutory responsibilities, including working more closely with the states.

State regulators are faced with many of the same issues as the FCC in an IBN environment. In addition to having to develop new accounting, costing, and pricing methods — including looking for alternatives to traditional rate-base rate-of-return — the states will have to consider carrier requests to replace existing copper plant with fiber integrated networks costing billions of dollars. Some states may have concerns about burdening residential ratepayers with costs for services they will not want and will not use. Other states, or the same ones at a later point in time, may be concerned that their regulated carriers are not deploying IBNs fast enough, or are deploying them in inequitable ways. They may be asked to redefine universal service to include access to IBNs. States may be confronted with increased local loop competition if local cable systems are acquired by out-of-region telephone companies, especially regional Bell companies. State regulators may be asked to certificate competing local telephone companies and/or confront the possibility that exclusive local telephone franchises are no longer sustainable. If competition over local distribution grows in this fashion, concern will grow about the possible loss of traditional subsidies for local residential rates. Because these issues involve many traditional telephone regulatory questions, state telephone regulators may try to take on the authority for overseeing local cable franchises currently exercised by the cities.

Municipal cable franchising authorities may find their power circumscribed. First, their ability to franchise cable services may be limited if the courts find that franchises for video programming delivered over common carrier networks are unconstitutional. While they may retain the right to franchise traditional cable television systems, their ability to do so, and to obtain the kinds of concessions received in the past, may no longer be possible in the face of potentially competitive unfranchised services.⁵² Secondly, if out-of-region LEC cable system acquisition results in significant local distribution competition, states may reassign cable franchising to state regulatory authorities.

The perceived importance of cities to the outcome of the telephone/cable television cross-ownership debate has led to unaccustomed attention being paid to local regulators by the telephone and cable television industries.⁵³ Telephone interests point to increasing local competition in video distribution. Cable operators argue that cities will lose control and be eliminated from the decision-making process. For their part, many cities want to regain leverage over local cable operators and they see increased competition as one way of achieving that goal.⁵⁴ Whether local video distribution is

provided by a LEC or a cable company,⁵⁵ cities want to retain their franchising authority. It is unlikely they will give it up without a fight;⁵⁶ but then again, they might not have a choice. Cities may play a pivotal role in determining whether telephone/cable television restrictions are modified.

8. Conclusions

It should be clear that development and deployment of integrated broadband networks will put traditional institutional relationships and arrangements under enormous pressure. The question for policy makers is how to promote the public interest by permitting new institutional arrangements to develop that will result in the best technological solutions and deployment of new services. The alternative is allowing players to "game the process," that is, to use the regulatory, policy, and political processes to thwart potential competitors. This may result in less competition and few, if any, benefits for customers, be they consumers or information service providers.

Notes

This chapter is based upon R. Pepper, *Through the Looking Glass: Integrated Broadband Networks, Regulatory Policy and Institutional Change*, OPP Working Paper #24, Federal Communications Commission, 4 FCC Rcd 1306 (1988). (*Through the Looking Glass*, cites are to para.). The views expressed in this chapter and in the working paper are the author's alone and do not necessarily reflect those of the Federal Communications Commission or any of its Commissioners or staff.

1. 89% of cable subscribers are served by cable systems with 30 or more channels; and about 24% of subscribers can receive 54 or more channels. "Cable Television Developments," National Cable Television Association, Washington, D.C., October 1990, at 15-A.

2. The term "player" is used instead of "stakeholder" because the latter term identifies the neutral third party entrusted with the stakes of bettors (or disputed property) while a bet (or dispute) is being resolved. Therefore, stakeholders do not have an interest in, or a stake in the outcome of a bet or dispute. *Webster's Ninth New Collegiate Dictionary* (Springfield, Ma.: Merriam-Webster Inc., 1986), at 1147.

3. See, e.g., S.B. Weinstein, "Telecommunications in the coming decades," *IEEE Spectrum*, November 1987, at 62; D. Gilhooly, "The Politics of Broadband," *Telecommunications* (International Edition), June 1988; "Cable Cross-ownership, Fiber-to-Home-Race with Cable TV Firms Dominate USTA Discussion"; "Telcos Told Freedom to Provide Cable Programming Important to Support Fiber Deployment," *Telecommunications Reports*, October 17, 1988, at 10-13; and Comments of Ameritech (at 5), BellSouth (at 4-5), Southwestern Bell Telephone (at 8-9), in response to Further Notice of Inquiry and Notice of Proposed Rulemaking in CC Docket No. 87-266, *Telephone Company/Cable Television Cross-ownership Rules*, sections 63.54-63.58, 3 FCC Rcd 5849 (1988) (Telephone/Cable Cross-ownership).

4. See, *Through the Looking Glass*, at 10-11.
5. See, e.g., comments of BellSouth and Southwestern Bell Telephone in Telephone/Cable Cross-ownership; and L. Jaffee, "Telcos' Presence Conspicuous at Telecom Convention," *Multichannel News*, October 3, 1988, at 84.
6. High returns may not be maintained, as the cost of buying new systems increases. As one banker put it: "Clearly, at these high prices the returns are no longer the 25% and 30% returns that one could have looked forward to in the past." "The state of M&A today," *Cablevision*, May 23, 1988, at 53. Likewise, future returns might not be as high if LEC entry is through construction of competing systems rather than acquisition of existing operations.
7. Centel Corporation Comments in *Telephone/Cable Cross-ownership*.
8. See, e.g., "PacTel had its eye on Storer," *Broadcasting*, May 9, 1988, at 53; L. Landro, "Two More Firms Are Likely Bidders for Cable Systems," *Wall Street Journal*, June 6, 1988, at 26; "Utility buys Rogers's cable for \$1.2 billion," *Broadcasting*, August 15, 1988, at 37; J.A. Lopez and R.B. Smith, "Pacific Telesis Agrees to Buy Cable TV Stake," *Wall Street Journal* April 21, 1989, at A3; and "PacBell Is Emphatic on Cable TV," *Communications Week*, May 29, 1989, at 10. See also, "Lee Cox: The industry's most feared man tells why PacTel wants in cable," *Cablevision*, August 15, 1988, at 46.
9. See, e.g., P. Krasilovsky, "Telcos go abroad to build cable systems," *Electronic Media*, December 10, 1990, at 60.
10. As discussed below, out-of-region cable television investment, if large enough, may change incentives for LECs to push for repealing existing regulatory barriers to within-region entry.
11. See, *Through the Looking Glass*, at 12-14.
12. The MFJ does not prohibit the BOCs from offering exchange telecommunications outside their regions. The trial court waived what it believed to be such a restriction with regard to cellular radio telephony. On appeal, the Court of Appeals went further and ruled that no such limitation existed, thus eliminating the need for waivers. *United States v. Western Elec. Co., Inc.*, 797 F.2d 1082 (D.C. Cir. 1986). See also, L. Hays and M. L. Carnevale, "Regional Phone Firms Bend Rules and Invade Each Other's Territory," *Wall Street Journal*, March 9, 1988, at 1.
13. "FCC Policy on Cable Ownership, A Staff Report," Office of Plans and Policy (OPP Report), Federal Communications, November 1981, at 160-61, 176-77. For a discussion of policy issues surrounding cable television local distribution competition in a pre-Cable Act of 1984 environment, see R. Pepper, "Competition in Local Distribution: The Cable Television Industry," in *Understanding New Media: Trends and Issues in Electronic Distribution of Information*, edited by B.M. Compaine (Cambridge, Ma: Ballinger Publishing, Co., 1984), at 147-194.
14. Two major reasons cable television operators have not more fully exploited their opportunities in local telecommunications are regulatory barriers created by state commissions at the behest of local telephone carriers, and the fear of becoming regulated at the state level. See, e.g., *Cox Cable Communications, Inc.*, 102 FCC 2d 110 (1985), *petitions for recon, dismissed as moot and vacated*, 1 FCC Rcd 561 (1986). Related to the second point, a cable operator's local cable television operations might be at risk if its telecommunications services resulted in classification

as a telephone company and the application of the telephone/cable television cross-ownership rules.

15. Open Network Architecture is an anti-discrimination requirement in the FCC's *Third Computer Inquiry* specifying that the BOCs design their basic network facilities and services to permit all users of the basic network to interconnect to specific functions and interfaces on an unbundled and "equal access" basis. See *Amendment of Sections 64.702 of the Commission's Rules and Regulations*, CC Docket 85- 229, *Phase I Report and Order*, IOU FCC 2d at 1064, para. 21U (1986) and *Computer III Remand Proceedings*, CC Docket 90-368, *Report and Order* (Released December 17, 1990), at para. 3.

16. See, e.g., "Warner Cable Notifies PSC of Plans to Offer Two-way Voice Transmission in Milwaukee," *Telecommunications Reports*, June 13, 1988, at 20; "Telcos Wary Over Cable's Wanting to Offer Telephone Service," *Communications Daily*, July 7, 1988, at 3, (reporting that Warner Cable's application to the Wisconsin PSC was withdrawn as a mistake).

17. K. Clayton, "Centel, Continental Take the Fiber Plunge," *Multichannel News*, May 9, 1988, at 12; "AT&T Files '800 Information Forwarding-1' Service for Pay-per-view Cable Industry," *Telecommunications Reports*, May 9, 1988, at 24.

18. The question for regulators is whether such competition will provide an opportunity to relax regulation in favor of competition, or whether they will feel compelled to expand regulation to protect competitors. See, e.g., N.W. Cornell, D. Kelley, and P.R. Greenhalgh, "Social Objectives and Competition in Common Carrier Communications: Incompatible or Inseparable?" Federal Communications Commission, Office of Plans and Policy Working Paper No. 1, April 1980, at 47-50.

19. See, e.g., "NTCA votes 15% dues surcharge to fund telco fight," *Broadcasting*, October 3, 1988, at 29; "Telcos, fiber top Eastern Show agenda," *Broadcasting*, September 5, 1988, at 40.

20. See, *Through the Looking Glass* at 39-US. See also, Competition, Rate Deregulation and the Commission's Policies Relating to the Provision of Cable Television Service, MM Docket No. 89-600, *Report to Congress*, 5 FCC Rcd U962 (1990), (Cable Report to Congress), at para. 131.

21. See, e.g., J. F. Siler, "A \$420 Million Cable TV Deal Is Set," *New York Times*, June 24, 1988, at 24 (\$2,000/subscriber); "Cablevision Industries buys Idometco for \$720 million," *Cablevision*, June 6, 1988, at 21 (\$2,315/subscriber); S. Sugawara, "Partnership Buying Area Cable Systems," *Washington Post*, June 1, 1988, at C3 (\$2,700/subscriber); "Cablevision Buying Viacom Cable Systems and 5% of S/MC," *Communications Daily*, August 17, 1988, at 1 (\$2,750/subscriber); G. Fabrikant, "Prices Continue to Soar for Cable Acquisitions," *New York Times*, June 27, 1988, at D8 (estimates as high as \$3,000/subscriber for smaller systems); "\$3,500 a sub?" *Cablevision*, September 26, 1988, at 11.

22. See generally "The state of M&A today," *Cablevision*, May 23, 1988, at 49; *Cablevision*, June 6, 1988, at 56; M. Seale, "Overbuild Threat Looms Large, Cable Lawyers Agree," *Multichannel News*, October 3, 1988, at 19.

23. For an extended discussion of the meaning of a high ratio of market price to replacement cost ("q ratio"), see the study submitted with USTA Comments in Telephone/Cable Cross-ownership,

"Opening The Broadband Gateway: The Need for Telephone Company Entry Into the Video Services Marketplace," Shooshan and Jackson Inc., October 1987 (discussing the q ratio and its application to the cable television industry); Reply Comments of Tele-Communications, Inc. (TCI), December 16, 1987 (critiquing the Shooshan and Jackson study for its application of the q ratio and the conclusions it drew about cable television's market power); and "Opening the Broadband Gateway: The Need for Telephone Company Entry Into the Video Services Marketplace; Rebuttal to Reply Comments of TeleCommunications, Inc.," January 20, 1988 (a response to TCI's critique in which Shooshan and Jackson, while rejecting them as incorrect, nevertheless applied TCI's suggested numbers and still arrived at a q ratio nearly twice that of the rest of the non-financial community; Rebuttal at 15). See also, Comments of the United States Telephone Association filed March 1, 1990 in MM Docket No. 89-600, Appendix 5, "Tobin's q and the Cable Industry's Marketpower," by Paul W. MacAvoy; and L. Jaffee, "Analysts: Rising System Prices Make Overbuilds More Attractive," *Multichannel News*, October 26, 1987, at 3.

24. There is some evidence that fear of telephone company competition may have contributed to the drop in the price of shares of at least one MSO. One Wall Street analyst has stated that he finds it "incredible that [the threat of telephone company competition] would scare investors to the point that they would value cable subscribers in the stock market at \$1,200 each, or about half their private market value." See V.M. Kahn, "TCI stock skids, off 33% from high," *Cablevision*, August 29, 1988, at 54.

25. See, e.g., Comments of National Cable Television Association, Cablevision Systems Corp, and Time, Inc. in *Telephone/Cable Cross-ownership*.

26. See, e.g., T. P. Southwick, "Cable Industry Faces Increased Threat of Overbuilds," *Multichannel News*, September 21, 1987, at 20; "Computing the overbuild equation," *Broadcasting*, October 26, 1987, at 48; R. Berman, "Making the case against overbuilds," *Cablevision*, January 4, 1988, at 24; L. Haugstead, "Overbuilds, Regulation Seen as Ops' Top Threats," *Multichannel News*, February 22, 1988, at 16; T. Kerver, "Overbuilds Scaring Buyers," *Cable Television Business*, June 1, 1988, at 44; M. Seale, "Overbuild Threat Looms Large, Cable Lawyers Agree," *Multichannel News*, October 3, 1988, at 19.

27. See, e.g., "Cable wrestles with possible Pactel entry into business," *Broadcasting*, July 4, 1988, at 32-34.

28. "TCI's Malone Endorses Limited RHC Entry Into Cable," *Communications Daily*, May 12, 1988, at 2; and "Cable TV Operator Tells Markey He Welcomes out-of Area Telephone Company Competition," *Telecommunications Reports*, May 16, 1988, at 20. An example of such an arrangement is non-Bell LEC and National Cable Television Association member Centel.

29. Centel, at the time a member of both the NCTA and USTA, split with the rest of the telephone industry and sided with the cable television industry supporting retention of the cross-ownership rule in its Comments to the Commission in *Telephone/Cable Cross-ownership*.

30. See, e.g., *Through the Looking Glass*, at 40-43.

31. See, *Through the Looking Glass*, at 9 et seq.

32. See, e.g., Cable Report to Congress, at Appendix G.

33. "Fritts warns broadcasters: The telcos are coming," *Broadcasting*, September 12, 1988, at 27; "Telco Entry No Benefit to Consumers, NAB Tells Senate," National Association of Broadcasters, *TV Today*, July 30, 1990, at 3; "Fritts Charges NTIA with Telco Bias," *Broadcasting*, August 27, 1990, at 1; and "TN Broadcasters Join Suit Against Telco," National Association of Broadcasters, *TV Today*, December 24, 1990, at 3.

34. NAB president Eddie Fritts has stated: "Telco entry into HDTV poses a double threat to broadcasters by offering both a new delivery mechanism, fiber optic cable, and improved HDTV pictures." L. Stein, "Fritts frets over telcos in cable," *Cablevision*, September 26, 1988, at 12.

35. See, e.g., "Telcos and fiber the hot topics in Atlanta," *Broadcasting*, September 12, 1988, at 33 (statements made by cable industry representatives at cable television convention).

36. See, e.g., "Mooney sees cable and broadcasting fighting telcos together," *Broadcasting*, September 19, 1988, at 46; "Telco tête-a-tête," , October 17, 1988, at 6.

37. *Quincy Cable TV, Inc. v. FCC*, 768 F.2d 1434 (D.C. Cir. 1985), cert. denied sub. nom. *National Association of Broadcasters v. Quincy Cable TV, Inc.*, 106 S. Ct. 2889 (1986); *Century Communications Corp. v. FCC*, 835 F.2d 292 (D.C. Cir. 1987), clarified, 837 F.2d 517 (D.C. Cir. 1988).

38. "Cable Television Developments," National Cable Television Association, October 1990 (citing A.C. Nielsen Co.), at 1-A. In addition to receiving television signals over a wire, a majority of cable homes own a VCR ("Study Shows VCR Usage At Average 7 Hours Per Week," *Variety*, March 16, 1988, at 73) and an undetermined number have "A/B" switches permitting them to watch local broadcast stations directly over the air.

39. See, e.g., Reply Comments and Request for Further Notice of Inquiry, Association of Independent Television Stations, Inc. (INTV), in *Telephone/Cable Cross-ownership*. See also, "NAB board votes to oppose telcos in cable programming, ownership," *Variety*, July 5, 1989, at 48.

40. See, e.g., INTV Comments in *Telephone/Cable Cross-ownership*, at 19; and remarks of Preston R. Padden, President, Association of Independent Television Stations, before the Federal Communications Bar Association, Washington, D.C., June 22, 1988. The goal that broadcast television licensees receive free access over telephone networks may be very difficult to achieve. It may be difficult for regulators — especially at the state level — to accept policies in which residential telephone subscribers, in effect, would be required to subsidize broadcasting companies.

41. L. Jaffee, "NAB's Fritts Concerned over Telcos," *Multichannel News*, September 12, 1988, at 51.

42. For example, INTV's Preston Padden was quoted as stating, "the number one issue of our time is deciding whether to fight, fight, fight against telco entry or, perhaps bowing to the inevitable, whether we should work out a strategic alliance." "Fritts warns broadcasters: The telcos are coming," *Broadcasting*, September 12, 1988, at 27. See also, "INTV board ponders telco entry," *Broadcasting*, October 10, 1988, at 40; "NAB backs TV promotion, hears update on telco-cable ownership study," *Broadcasting*, November 7, 1988, at 34.

43. This broadcasting group president expressed the thought at a "not for attribution" industry roundtable.

44. See, e.g., C. Ross, "The Ph.D from T.C.I.," *Inside Media*, December 19, 1990, at 1.
45. See, e.g., Cable Report to Congress, at para. 104.
46. *United States v. Paramount Pictures, Inc.*, 334 U.S. 131 (1948). Some of the major Hollywood studios have recently received approval from the Department of Justice to own theaters. See, e.g., A.L. Yarrow, "The Studios' Move on Theaters," *New York Times*, December 25, 1988, at D1; W. Tusher, "WB, PAR Closer To Theater Marriage," *Variety*, August 10, 1988, at 3.
47. J.R. Haring, "A Universal Broadband Infrastructure for the U.S.," paper presented at MIT/Bellcore Industry Forum, Broadband Networks: Competition and the Video Marketplace, Salt Lake City, Utah, April 8, 1988.
48. See, e.g., *Second Report and Order* in CC Docket No. 87-313, *Policy and Rules Concerning Rates for Dominant Carriers*, 5 FCC Rcd 6786 (1990).
49. For a discussion of franchise requirements for video programmers leasing common carrier transport from local exchange carriers, see, *Through the Looking Glass*, at 39 et seq.
50. "Channel service" is a common carrier service offered by LECs under FCC authority in which transmission facilities and/or services are provided to cable television systems. See, e.g., 47 CFR 63.55.
51. Other technological developments that may increase local competition include personal communications networks (PCNs). See, e.g., Notice of Inquiry in CC Docket No. 90-314, *Amendment of the Commission's Rules to Establish New Personal Communications Services*, 5 FCC Rcd 3995 (1990).
52. There are strong policy reasons to limit local franchising authority. The FCC has recommended that Congress limit local cable franchises to "appropriate governmental interests such as establishing requirements concerning public health and safety, repair and good condition of public rights-of-way, and the posting of an appropriate construction bond." Report to Congress at para. 141.
53. See, e.g., L. Jaffee, "Cable Ops Court NATOA," *Multichannel News*, October 3, 1988.; Lat 1; L. Jaffee, "Telcos' Presence Conspicuous at Telcom Convention," *Multichannel News*, October 3, 1988, at 14; "NATOA sees cable grip slipping," *Broadcasting*, October 3, 1988, at 60 (descriptions of the "bizarre backdrop" at the recent annual conference of the National Association of Telecommunications Officers and Advisors where representatives of both the cable and telephone industries were vying for the cities' attention and support).
54. See, e.g., D. Halonen, "Mayors support phone bid," *Electronic Media*, June 26, 1989, at 39 and "Mayors ask Congress to let telcos into cable," *Broadcasting*, June 26, 1989, at 55.
55. The National League of Cities' Transportation and Communications Steering Committee recently voted to support repeal of the telephone/cable cross-ownership restrictions subject to continued "local control" and safeguards against cross-subsidization and discriminatory access. See, J. Aversa, "League of Cities Panel Backs Telcos," *Multichannel News*, October 24, 1988, at 5; "Cities want changes in Cable Act," *Broadcasting*, October 24, 1988, at 34.

56. See, e.g., L. Jaffee, "League of Cities Plans Updating Cable Policy," *Multichannel News*, October 3, 1988, at 10; and "Cities fighting back to keep franchising power," *Broadcasting*, October 3, 1988, at 63. See also, "NTIA Says Municipal Franchising of Cable Deserves Public Interest," *Communications Daily*, June 16, 1988, at 1; J. Averse, "U.S. Agency Raps Franchising, Urges Greater Role for Telcos," *Multichannel News*, June 20, 1988, at 44; and "Differing points of view on NTIA's study," *Broadcasting*, June 20, 1988, at 38 (response of National League of Cities to NTIA Report calling for an end to franchising for LEC-delivered video services).