

CONVERGENCE IN COMMUNICATIONS TECHNOLOGY AND THE FIRST AMENDMENT[†]

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This panel has been asked to discuss First Amendment and privacy issues that may arise on the "information highway." Since we do not know, today, precisely what the configuration of the new communication technology will be, the discussion, of necessity, must be somewhat tentative. The present communication configuration consists of: (1) two-way communications media, including telex by wire local and long distance telephone by wire, and local and long distance wireless (so-called cellular) telephone; and (2) one-way communications media, including broadcast radio and television, using the electromagnetic spectrum, satellite radio and television, using that spectrum in a more limited way, and cable television. Each of these means of communication gives rise to different First Amendment and privacy concerns. In recent years, driven by technological developments, as well as regulatory changes, these means of communication, formerly offering distinct services, have been converging. The "information highway" is thus a handy term to describe the communication configuration that will be in place when that convergence is further along.

A one-day symposium cannot attempt a thorough discussion of all the technological developments that have been driving convergence, but several appear to be most significant. The first is digital technology, which by replacing analog technology permits machines to communicate with each other far more efficiently than in the past. The second is fiber optic-laser technology, which has enormously increased the message-carrying capacity of communication by wire. The third is the development of new devices that can more efficiently utilize the electromagnetic spectrum, and thus increase the wireless message-carrying capacity of that spectrum. These devices include cellular telephones and satellite signals.

First Amendment issues are common to all forms of communication, but the impact of the Amendment on each form varies sig-

[†] This Article was delivered at a symposium entitled *Travelling the Information Superhighway, Communications Law and Regulation in the Twenty-First Century* on November 17, 1994, at the Seton Hall University School of Law.

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nificantly. Generically, those First Amendment issues can be divided into access issues and content issues. Access issues include who may obtain the right to use the communication medium and what entity may act as the gatekeeper for such use. Content issues include who may produce and own the information being transmitted and what the content of the message may be. In the existing configurations, First Amendment access and content questions have been answered by the Supreme Court differently for two-way wire configurations than for one-way wireless configurations, and differently still for one-way cable television. Looked at as a body of First Amendment law, the cases appear somewhat incoherent. Looked at as an effort to apply First Amendment doctrine to communications configurations performing differing information purposes, there may perhaps be some coherence after all.

I. TWO-WAY WIRE COMMUNICATION

Two-way wire communication has had a long history in the United States. That history starts with Samuel Morse's invention in 1837 of the magnetic telegraph and of the code bearing his name that permitted telegraphers to utilize pulses of electric energy to send messages over copper wire. Morse's invention gave rise to the telegraph industry which first offered one-way telegraph, and later two-way telex service. The next stage of that history opened with the development, in the 1870s by Alexander Graham Bell, of analog devices whereby sound waves could produce electrical pulses that could be reproduced as sound waves. The two technologies competed for a time, but by the end of the first quarter of this century, Bell's method of communication had become dominant. By 1887, only a decade after Bell received his patent for the telephone, there were over 150,000 telephones in the United States. By 1987, there were more than 161 million telephones in the United States.¹ Few people under fifty years of age have ever received a telegraph message.²

Since the 1920s, American communication policy has reflected the almost universally accepted public policy goal of universal telephone service; a goal that for many years has been largely realized. Universal telephone service required an enormous capi-

¹ CROSSROADS ON THE INFORMATION HIGHWAY: CONVEYANCE AND DIVERSITY IN COMMUNICATIONS TECHNOLOGIES (Annual Review of the Institute for Information Studies) XVI (1995).

² The fate of telegraph technology is discussed *infra* at note 71 and accompanying text.

tal investment in local infrastructure that has never been efficiently utilized. If its local users were to pay for its full cost, therefore, they simply could not afford it. That local infrastructure could have been erected and maintained by tax revenues, as was the case in many other countries. Instead, the state governments and the federal government over the years opted for a system of cross-subsidization, in which users of other parts of the telephone wire network would subsidize the cost of erecting and operating local infrastructures.

A system of cross-subsidization for the purpose of achieving universal telephone service required two features. One was the imposition of a common-carrier obligation on the telephone industry. The other was the grant of a monopoly in certain services. Telephone service would not be universal if the service provider could pick and choose among users. Cross-subsidization of costly local service would not be possible if heavy users—mostly businesses—were free to choose among competitive services. Thus, until the breakup of the Bell System in 1984, telephone service was recognized as a so-called “natural monopoly,” in which there was no competition, fairly thorough rate regulation, and much cross-subsidization.³

The absence of competition, although necessary to achieve universal service through cross-subsidization, introduced the first First Amendment issue. While monopoly power could be used for the beneficent purpose of achieving universal service, it could also be used to cross-subsidize other activities, and thus give telephone service providers a competitive advantage over other businesses that did not enjoy monopoly power. Hence the restrictions placed upon the telephone companies engaging in other businesses. Similar restrictions were placed upon electric utilities enjoying monopoly power.

For First Amendment purposes, the most important restriction was the prohibition against telephone service providers engaging in the business of providing information. Providing information, whether in the form of news programming, entertainment programming, or market quotations, is pure speech. Pure speech cannot be totally banned by governmental regulation, or its content regulated, in the absence of a governmental interest of some signif-

³ Competition existed in the telegraph business, and the dominant telephone company was a participant in it for a time by providing service. See *supra* notes 72-73 and accompanying text.

icance.⁴ The only governmental interest that can be identified as a possible justification for restrictions upon the speech of telephone service providers is the protection of other information providers from the unfair competition that would result from cross-subsidization made possible by the telephone companies' monopoly power.⁵

If the telephone companies were to lose their monopoly power, they would lose their ability to cross-subsidize because their prices for services would, by virtue of the operation of the market, descend to a level at which cross-subsidization would not be possible. Such a development would eliminate the only theoretical justification for restrictions upon telephone company speech.⁶ It would also, of course, eliminate the source of funds for subsidizing universal service.

When the American Telephone & Telegraph Company in 1984 entered into a consent decree that required a divorce between long distance services and local services, the interrelated problems of cross-subsidization and universal service had to be addressed. Local service still required large capital investment in underutilized infrastructure if universal service was to continue. That problem was addressed in two ways.

First, after the breakup of the Bell System, local service providers, commonly called Baby Bells, were permitted to retain some monopolies in inter-exchange long distance service. In the industry, this is referred to as Inter Lata service; service between a switching station in Newark and one in Paterson, for example. These "short long distance" monopolies were geographically limited, but still large enough that they could be a source of funds for cross-subsidization of local networks. Second, the Baby Bells were permitted to charge "long long distance" providers a connection charge for access to the local networks. This entry toll, like the Inter Lata revenue, was also a source of funds for cross-subsidization. Thus, there remained at least a theoretical justification for prohibiting the Baby Bells from entering the information-generation business.

The 1984 consent decree treated the "long long distance" tele-

⁴ The recognized levels are strict, intermediate, or rational basis scrutiny.

⁵ In this context cross-subsidization includes not only the potential for using monopoly derived revenues as a source of capital to support the production of information, but also the potential for giving preferred access to the telephone companies' products on their communications networks.

⁶ Loss of monopoly power might not eliminate the need for imposing common carrier obligations on the telephone companies, although a case might be made for permitting any business subject to effective competition to choose its own customers.

phone business differently. Outside the geographic areas reserved for the Baby Bells, open competition was the rule. Because competition was the rule, cross-subsidization was, at least theoretically, not a problem. Thus, a major railroad could and did go into the long distance telephone business without effective protest from its railroad competitors that profits from the long distance business of the Sprint long distance network would permit it to compete unfairly in the railroad business. AT&T, on the other hand, still held monopoly power, because it had for so long enjoyed a legal monopoly, and thus was far ahead of its fledgling long distance competitors. The decree therefore limited the businesses in which AT&T could engage, including some businesses involving the production of information. Here, again, any justification for limiting AT&T's speech depended solely upon the potential for cross-subsidization, and would disappear when new long distance competitors could offer effective competition.

In the Cable Communication Policy Act of 1984, Congress for the first time subjected the cable television industry to Federal Communications Commission oversight.⁷ One provision of that Act made it unlawful for any telephone common carrier to provide video programming to subscribers in its telephone service area.⁸ Existing fiber optic telephone technology is as capable of providing such service as is the coaxial cable technology used by most cable television system operators. The 1984 prohibition merely carried forward a prohibition imposed by the Commission on telephone companies by regulation in 1970.⁹ Obviously, this longstanding prohibition on the messages a telephone company could *transmit* presented a First Amendment issue at least as significant as the prohibition against telephone companies engaging in the *generation* of information.

In December of 1992, the Chesapeake and Potomac Telephone Company of Virginia, a Bell Atlantic subsidiary, filed a suit challenging on First Amendment grounds the validity of the prohibition against its transmission of video programming.¹⁰ The tele-

⁷ See *infra* notes 51-56 and accompanying text for a discussion of the Cable Communication Policy Act of 1984.

⁸ 47 U.S.C.A. § 553(b)(1) & (2) (1991 & Supp. 1995).

⁹ See *In re Applications of Telephone Companies for Section 214 Certificates for Channel Facilities Furnished to Affiliated Community Antenna Television Systems* (Final Report and Order), 21 F.C.C.2d 307 (1970), *recons. in part*, 22 F.C.C.2d 746 (1970), *aff'd sub nom* General Telephone Co. of the Southwest v. United States, 449 F.2d 846, 850 (5th Cir. 1971).

¹⁰ *Chesapeake & Potomac Telephone Company v. United States*, 830 F. Supp. 909,

phone companies had lost the lobbying battle when Congress in 1984 codified the Commission's 1970 prohibition. They made no progress on the legislative front in seeking repeal. By 1992, however, the Commission was having second thoughts, and in August of 1992 it recommended to Congress that the prohibition in the 1984 Act should be eliminated because the risk of anticompetitive conduct by telephone companies in connection with the direct provision of video programming was attenuated by the enormous growth of the cable industry.¹¹

Relying on *Renton v. Playtime Theatres, Inc.*,¹² and *City of Cincinnati v. Discovery Network, Inc.*,¹³ cases in which the Supreme Court blurred the distinction between content based and content neutral regulations—the United States District Court for the Eastern District of Virginia rejected Chesapeake and Potomac's contention that the prohibition must undergo strict scrutiny.¹⁴ The court held, however, that the flat ban on telephone company transmission of video programming did not survive intermediate level scrutiny, because many less restrictive means were available to the government to achieve its asserted significant interest, i.e., the preservation of diversity of ownership of media outlets.¹⁵ In November of 1994, the United States Court of Appeals for the Fourth Circuit affirmed the district court.¹⁶ The United States and the National Cable Television Association, Incorporated (NCTA), relying on cases dealing with FCC regulation of the broadcast industry,¹⁷ urged the Court of Appeals to apply only minimal scrutiny to the prohibition against telephone companies transmitting video programming. The Court of Appeals rejected that argument, confining the broadcast industry cases to that uniquely situated industry.¹⁸ As had the district court, the Court of Appeals applied

910-11 (E.D. Va. 1993), *aff'd*, 42 F.3d 181 (4th Cir. 1994), *cert. granted*, 115 S. Ct. 2608 (1995).

¹¹ Telephone Company - Cable Television Cross-Ownership Rules 7 F.C.C.R. 5781, 5847 (1992) (2d report & order).

¹² 475 U.S. 41 (1986).

¹³ 113 S. Ct. 1505 (1993).

¹⁴ Section 502(b) distinguishes between visual images of limited content and video programming comparable to that provided by broadcast television stations in 1984. The court reasoned that while this was a content distinction, the statute was aimed at secondary effects of the transmission rather than at its content. *Chesapeake & Potomac Telephone Co.*, 830 F. Supp. at 926.

¹⁵ *Chesapeake and Potomac Telephone Co.*, 830 F. Supp. at 931.

¹⁶ *Chesapeake & Potomac Telephone Co.*, 42 F.3d at 203.

¹⁷ See generally *Red Lion Broadcasting Co. v. FCC*, 395 U.S. 367 (1969); *FCC v. National Citizens Committee for Broadcasting*, 436 U.S. 775 (1978).

¹⁸ *Chesapeake & Potomac Telephone Co.*, 42 F.3d at 192.

intermediate level scrutiny. Treating the exclusion of local telephone carriers from the video transmission business as content neutral, the court found that Section 552(b) advanced the significant government interests of preventing cross-subsidization by monopoly profits and of preventing access discrimination.¹⁹ Nevertheless, it held that the statute was unconstitutional, in that total prohibition against transmitting video programming was not narrowly tailored to the advancement of those interests.²⁰ First, the court noted that pole access discrimination was adequately addressed by the Pole Attachment Act.²¹ Thus, the only government interest actually advanced by Section 552(b) was that of cross subsidization of video program transmission from monopoly profits derived from other local services. The court pointed out that "Congress could simply limit the telephone companies' editorial control over video programming to a fixed percentage of the channels available; the telephone companies would be required to lease the balance of the channels on a common carrier basis, without regard to content."²²

The Court of Appeals' application of intermediate level scrutiny to Section 552(b), and its consequent invalidation of the section, are consistent with the Supreme Court's treatment of the Cable Act's "must carry" provisions in *Turner Broadcasting System, Inc. v. FCC*.²³ Since the decision in the Fourth Circuit in favor of *Chesapeake & Potomac*, other courts have reached similar results in favor of other Baby Bells.²⁴ None of the Section 552(b) cases have yet wended their way to the Supreme Court. In light of the majority's analysis in *Turner Broadcasting*, and given the FCC's position that the Section 552(b) prohibition is unnecessary, it seems unlikely that these holdings will be overturned.

The classification as content neutral of the prohibition on carrying video programming while permitting the carriage of other visual images in both *Chesapeake & Potomac* and *Turner Broadcasting* is problematical. What may be occurring is a recognition that the conventional First Amendment classifications are not especially

¹⁹ *Id.* at 198.

²⁰ *Id.* at 202.

²¹ The Pole Attachment Act, Pub. L. No. 95-234, 92 Stat. 35, 476 U.S.C.A. § 224(b)(1) (1978).

²² *Chesapeake & Potomac Telephone Co.*, 42 F.3d at 202.

²³ 114 S. Ct. 2445, 2449 (1994).

²⁴ See *U.S. West, Inc. v. United States*, 48 F.3d 1092 (9th Cir. 1994); *BellSouth Corp. v. United States*, 868 F. Supp. 1335 (N.D. Ala. 1994); *Ameritech Corp. v. United States*, 867 F. Supp. 721 (N.D. Ill. 1994).

well suited for dealing with the unique situation of the two-way wire communication technology, and that new doctrine must be devised. That new doctrine may be a rearticulation of the "secondary effects" analysis that surfaced in *Renton v. Playtime Theatres, Inc.*,²⁵ as a refinement of the approach first advanced in *Young v. American Mini Theatres*.²⁶ In both *Young* and in *Renton*, the Court upheld land-use regulation aimed at sexually oriented but not obscene expression, not because of disapproval of that kind of expression, but because of the adverse secondary effects concentration of businesses specializing in such expression had on the ambience of neighborhoods. These cases recognize that in some circumstances it is not realistically possible to disregard content when fashioning communication policy, and that the compelling government interest-least restrictive means test which is ordinarily applied to content regulation is too inflexible.

Whether or not one agrees that Section 552(b) and the must-carry provisions are really content neutral, the outcomes in *Chesapeake & Potomac* and *Turner Broadcasting* suggest that intermediate scrutiny is sufficiently protective both of First Amendment interests and of the significant government interest in preventing abuse of monopoly power by the local exchange telephone companies that still have such power.

II. ONE-WAY WIRELESS COMMUNICATION

The history of one-way wireless communication in the United States presents a sharp contrast with the telephone industry. Marconi's recognition in 1894 of the message carrying capacity of the electromagnetic spectrum led first to its exploitation as a means for communicating with ships at sea by use of Morse Code; a use continued for safety reasons by the United States Coast Guard until 1995.²⁷ Soon his invention extended to voice communication as well, and by 1925 ten percent of all American households owned radios.²⁸ Unlike wire communication, however, the use of the electromagnetic spectrum, like the use of the high seas, absent regula-

²⁵ 475 U.S. 41 (1986).

²⁶ 427 U.S. 50 (1976).

²⁷ The Coast Guard ceased Morse Code monitoring on April 1, 1995. See Frank D. Roylance, *Dot and Dash No More For Ships on the Seas*, BALT. SUN, April 1, 1995, at 1A; *Reliance on Satellites Leads Coast Guard to Pull Plug on Telegraph*, DALLAS MORNING NEWS, April 2, 1995, at 7A.

²⁸ Jorge Reina Schement, *Divergence Amid Convergence: The Evolving Information Environment of the Home*, in CROSSROADS ON THE INFORMATION HIGHWAY: CONVERGENCE AND DIVERSITY IN COMMUNICATIONS TECHNOLOGIES 146 (1995).

tion, was open to anyone owning a transmitter. By 1927, it was clear that the electromagnetic spectrum would not remain useful as a medium of communication unless specific broadcast frequencies could be allocated among users. It was also clear that broadcasting, unlike the telephone industry, was not a capital-intensive business. No expensive local networks need be built. Radio receivers could be built relatively inexpensively even by hobbyists. Broadcasting devices, when compared to telephone exchanges, cost very little. Their real value lay in their use of a part of the electromagnetic spectrum, and the decision made by Congress in 1927 was to license such use without cost to the users. Until the recent decision to auction off newly available frequencies for cellular communication, the United States has never, as in other countries, imposed either receiver-user fees, or transmitter fees.²⁹

Since the electromagnetic spectrum is pervasive, and receivers for electromagnetic signals inexpensive, there was never an issue of cross-subsidization of consumers in the broadcast industry. Moreover, the big cost at the production end of that industry was not the erection and maintenance of broadcast facilities, but rather the cost of production of information. Congress might have, but chose not to treat broadcasters as public utility common carriers, the facilities of which were open to any information generator on a first-come, first-served, or an auction basis. The owners of these facilities were to be granted monopoly power over a limited electromagnetic frequency, and a decision might have been made that they should not be able to subsidize their information generating business, or any other business, from the revenues derived by exploiting that monopoly.

Instead, Congress opted to permit broadcasters to be both information generators and gatekeepers with respect to information generated by others, subject to a vague requirement that the licensed facilities be operated in the public interest. This public interest standard evolved mainly from Federal Communications Commission rulemaking and adjudicative proceedings, into regulation of the content of speech generated by the broadcast industry. The two most striking content regulations are the Commission's fairness doctrine, upheld in *Red Lion Broadcasting Co. v. F.C.C.*,³⁰ but currently not enforced by the Commission, and its prohibition on broadcast of indecent but not obscene speech during hours

²⁹ Omnibus Budget Reconciliation Act of 1993, Pub. L. No. 103-66, 107 Stat. 312, 47 U.S.C. § 921 (1993).

³⁰ 395 U.S. 367, 375 (1969).

when children may be listening, upheld in *F.C.C. v. Pacific Foundation*.³¹ These decisions are irreconcilable with conventional First Amendment caselaw on content regulation outside the broadcast industry.³² The court has distinguished the conventional content regulation caselaw by stressing, in *Red Lion*, the scarcity of free licenses for use of electromagnetic frequencies for communication, and in *Pacific Foundation* the pervasivity of that spectrum and thus its ready availability to children with access to receivers.

In addition to these content issues, the scheme of broadcast regulation adopted by Congress in 1927 has also raised access issues. The text and legislative histories of the 1927 and 1934 Communications Acts are reasonably unambiguous on the point that broadcasters are not common carriers. In 1973, the Democratic National Committee was rebuffed by a divided Supreme Court in its attempt to establish that broadcast facilities were, by virtue of their exclusive licenses from the government, public forums obliged to accept editorial advertisements.³³ Congress reacted to the Court's decision by amending the Communications Act of 1934 to create a new affirmative right of access to the broadcast media for individual candidates for federal elective office.³⁴ In *CBS, Inc. v. Federal Communications Commission*,³⁵ a divided court rejected broadcasters' claims that the statutory grant of access rights, by intruding upon their editorial judgment, violated the First Amendment. This holding cannot be reconciled with First Amendment caselaw applicable to the print or entertainment product business. The majority relied upon the "scarce free license" rationale of *Red Lion*, while reiterating that the court has never approved a general right of access to the media.³⁶

While broadcast licenses do have monopoly power over a single frequency in a limited geographic area, all broadcasters are subject to competition in that area by broadcasters on other frequencies. Thus the fear of cross-subsidization leading to unfair competition as a justification for restrictions on broadcasters' information generation activities, discussed in connection with the telephone industry, is unavailable, at least with respect to individual licensees. The establishment of networks, however, owning multiple licenses and contracting with others licensees to supply them

³¹ 438 U.S. 726 (1978).

³² See, e.g., *Miami Herald Publishing Co. v. Tornillo*, 418 U.S. 241 (1974).

³³ *CBS v. Democratic National Committee*, 412 U.S. 94, 132 (1973).

³⁴ Pub. L. No. 92-225, 86 Stat. 4, 47 U.S.C.A. § 312(a) (7) (1991).

³⁵ 453 U.S. 367 (1981).

³⁶ *Id.* at 396.

with programming, does raise the specter of monopoly power, and thus of cross-subsidization. Limitations on multiple ownership of broadcast stations, and on contractual relationships with licensees in the same geographic market, both of which have been imposed,³⁷ seem to me to be standard antitrust remedies posing no serious First Amendment issues. Limitations on network information generation, such as the controversial anti-syndication rules,³⁸ are more problematical, but perhaps sustainable in the interest of competition, so long as networks have sufficient monopoly power to engage in cross-subsidization of their program producing activities to the detriment of other information producers.

III. ONE-WAY WIRE COMMUNICATION

The history of one-way wire communication, or cable television, is considerably shorter than that of the telephone and broadcast industries, and quite different from both. The industry started quite modestly in 1950 as community antenna television (CATV), conceived originally as a means for bringing broadcast signals to receivers separated from line-of-sight television signals by intervening mountains or other obstructions. It soon became evident that these systems, operated initially pursuant to local franchises to string wire in public rights of way, could by using microwave relays also transmit to subscribers the signals of distant stations well beyond the range of signals by local broadcasters. Such transmission had the effect of subjecting the programming presented by local broadcasters to competition from often superior programming presented by broadcasters in more lucrative markets. Moreover, since CATV franchise holders were not by the terms of most franchises common carriers, they were free to decide which signals to carry on their limited channel cable systems. Thus they had a strong incentive to carry those signals presenting the most marketable programming. The presence on a CATV system of signals from distant stations and the absence of a local signal put local broadcasters at a competitive disadvantage in competing for advertising revenue on which their survival depended. The broadcast industry therefore sought relief from the Federal Communications Commission.

In 1959, the Commission held that because CATV systems were neither common carriers nor broadcasters, they were not sub-

³⁷ 47 U.S.C. § 310 (1991).

³⁸ 47 C.F.R. §§ 73.659, 73.660 (1993).

ject to its regulation.³⁹ Instead, the Commission sought new legislative authority. Although such legislation was introduced, it was not enacted. In 1960, the Commission, in order to protect local broadcasters, utilized its authority over common carrier microwave facilities to curtail transmission of distant signals to CATV systems.⁴⁰ Finally, in 1962, the Commission changed its position on legislative authority to regulate CATV, and in a rulemaking proceeding subjected those systems to two rules, both of which are under conventional First Amendment doctrine problematical.

The first, a "must carry" provision, required that a CATV system transmit to their subscribers the signal of any broadcaster into whose geographic service area they brought a competing signal. The second, a "can't carry" provision, forbade duplicate programming of local stations for 15 days before and after a local broadcast.⁴¹ Thus, the Commission moved quite intrusively into what in other contexts would be regarded as editorial judgment protected by the First Amendment. In *United States v. Southwestern Cable Company*,⁴² the Supreme Court, without addressing any First Amendment issues, held that the Commission's regulatory authority over local broadcasters sufficed to permit regulation of CATV systems as well. The governmental interest at stake was its interest in maintaining the economic viability of local broadcasters. This, presumably, justified a restraint upon what would otherwise be the protected editorial judgment of the cable system operator. That interest justified both access (must carry) and content (can't carry) regulation. The First Amendment issues presented by such access and content cable regulations were not addressed by the Supreme Court until this year, in *Turner Broadcasting System, Inc. v. FCC*,⁴³ clearly not definitively.⁴⁴

Meanwhile, the cable industry was undergoing an enormous transformation, thanks in large part to another type of cross-subsidization. Recall that telephone companies, in order to deliver universal service, were required to make massive investments in local infrastructure; particularly underground conduits and above-

³⁹ See CATV and TV Repeater Services, 26 F.C.C.R. 403, 441 (1959).

⁴⁰ See *Carter Mountain Transmission Corp.*, 32 F.C.C.R. 459, *aff'd*, 321 F.2d 359 (D.C. Cir. 1963).

⁴¹ First Report and Order, 38 F.C.C. 683, 713, 719-30 (1962).

⁴² 392 U.S. 157 (1968).

⁴³ 114 S. Ct. 2445 (1994).

⁴⁴ The Court held, in *Los Angeles v. Preferred Communications Inc.*, 476 U.S. 488, 495 (1994), that the business of furnishing information by cable implicated the First Amendment.

ground telephone poles. Electric utilities had the same local infrastructure problems. Both were generally forbidden from engaging in other businesses because of their monopolies over their respective services and the consequent fear of misuse of monopoly-derived revenues. Usually, if not universally, the local telephone company and the local electric utility company shared the cost of erecting poles or building underground conduits on an equal basis.

Cable system operators faced the same capital investment problems with respect to their necessary local infrastructures. It was not in the public interest to encourage the erection of a second set of poles. Instead the cable system operators arranged to rent space on the poles owned by the telephone and electric companies, and many state regulatory agencies required such rental. In 1977, Congress enacted the Pole Attachment Act,⁴⁵ conferring on the Federal Communications Commission authority to fix rates for pole attachments. These rates would be

“just and reasonable if it assures a utility the recovery of not less than the additional cost of providing pole attachments, nor more than an amount determined by multiplying the percentage of the total usable space, or the percentage of the total duct or conduit capacity, which is occupied by the pole attachment by the sum of the operating expenses and actual capital costs of the utility attributable to the entire pole, duct, conduit, or right of way.”⁴⁶

The effect of the statute was that the electric and telephone utilities, and eventually their rate payers, had to pay for the complete cost of their investment in local infrastructure, less the revenue obtained from cable system operators, while the contribution of the cable system operators to that cost was limited to a share determined by the percentage of the space they occupied on the pole. The Pole Attachment Act was sustained against a takings clause challenge in *FCC v. Florida Power Corp.*⁴⁷ Thus the cable industry received an enormous capital subsidy, paid for by telephone and electric utility rate payers. One may question whether the cable industry could have achieved its present level of service, which in some areas is close to universal service, without this cross-subsidization any more than universal telephone service could have been achieved without cross-subsidization. The more interesting ques-

⁴⁵ Pub. L. No. 95-234, 92 Stat. 33, as amended, 47 U.S.C. § 224 (1995).

⁴⁶ 47 U.S.C. § 224(d)(1) (1995).

⁴⁷ 480 U.S. 245, 254 (1987).

tion is whether with their subsidized system in place cable operators should now be able to convert it to two-way wire communication, thereby eliminating the local monopolies that presently subsidize universal telephone service.

Although the Supreme Court had in *Southwestern Cable*⁴⁸ upheld the authority of the Federal Communications Commission to impose "must carry" and "can't carry" regulations on the cable industry, its rationale was that these regulations were protective of its jurisdiction over broadcasters. Armed only with this limited affirmation of its authority, the Commission in 1972 proposed rules requiring all cable operators to design their systems to include at least 20 channels, and to dedicate 4 of these for without-charge public, educational, local government, and leased access users, with one channel assigned to each on a first-come, first-nondiscriminatory basis.⁴⁹ The rules as finally adopted enjoined cable operators from exercising any control over the content of access channels, except that they must exclude lottery information and commercial matters, and adopt rules prohibiting the transmission of obscene and indecent materials on access channels. In adopting the regulations the Commission rejected a First Amendment challenge to them.

As in *Southwestern Cable*, the Supreme Court decided the case without deciding whether the Commission's intrusive limitations on the cable system operators' editorial judgment was consistent with the First Amendment. In *FCC v. Midwest Video Corp.*,⁵⁰ the Court held that the Commission lacked statutory authority to impose what amounted to common carriers status on the system operators. Thus, while the Commission could impose must-carry and can't-carry regulations in order to assure the viability of its broadcast licensees, regulation of other aspects of the cable business was left in the hands of local municipalities having state law powers to grant or withhold franchises.

In the Cable Communications Policy Act of 1984,⁵¹ Congress finally recognized the need for some national regulation of the rapidly growing cable industry. Since, however, state and local regulation had, both before and after the *Midwest Video* decision, filled in a regulatory vacuum, the 1984 Act permitted the continuance of local regulation in many respects, including some raising First

⁴⁸ See 392 U.S. 157 (1968).

⁴⁹ See Cable Television Report and Order, 36 F.C.C.2d 143 (1972).

⁵⁰ 440 U.S. 689, 709 (1979).

⁵¹ 47 U.S.C.A. §§ 521-559 (1991 & Supp. 1995).

Amendment issues. One provision authorized local franchising authorities to require that the franchisee set aside, for public, educational and government access, a segment of its channel capacity.⁵² The Act also required that cable systems set aside a percentage of their capacity for leased access commercial use.⁵³ Not only was the system operator's editorial judgment about access thus subject to limitations, but the 1984 Cable Act also provided that the operator could not exercise any editorial control over video programming provided over access channels.⁵⁴ The 1984 Cable Act did authorize franchising authorities to permit system operators to exclude from access services that "are obscene or otherwise unprotected by the Constitution of the United States."⁵⁵ This provision only covered sexually explicit materials satisfying the *Roth-Miller* test for obscenity.⁵⁶ Soon some fairly offensive material began to appear on some access channels, and as the cable industry grew it began to match the broadcast industry in pervasivity, and thus availability to children. Pervasivity, as aforementioned, was decisive, for First Amendment purposes, in *Pacifica Foundation*.

In the Cable Consumer Protection and Competition Act of 1992,⁵⁷ Congress revisited cable regulation. It continued the must-carry requirement and imposed a requirement that local television broadcasters be guaranteed the same channel position they occupy in the broadcast spectrum.⁵⁸ It continued the authority of local franchising authorities to require public, educational, and governmental channels.⁵⁹ It continued the requirement for leased access.⁶⁰ And most significantly, Congress addressed the *Pacifica Foundation* issue by directing the Commission to adopt regulations: (1) restricting access of children to indecent materials on leased channels, and (2) in contrast with the 1984 Cable Act, permitting cable operators to prohibit, on public, educational, and governmental channels, programming containing "obscene material, sexually explicit conduct, or materials soliciting or promoting unlawful conduct."⁶¹

⁵² 47 U.S.C.A. § 531 (1991).

⁵³ 47 U.S.C.A. § 532 (1991).

⁵⁴ 47 U.S.C.A. § 532(c)(2) (1991).

⁵⁵ 47 U.S.C.A. § 544(d)(1) (1991).

⁵⁶ See *Roth v. United States*, 354 U.S. 476 (1957); *Miller v. California*, 413 U.S. 15 (1973).

⁵⁷ Pub. L. No. 102-385, 106 Stat. 1460 (1992).

⁵⁸ *Id.*, § 4(a), 106 Stat. 1471; 106 Stat. 1472; 47 U.S.C. § 534 (a) & (b) (1995).

⁵⁹ *Id.*, § 5, 106 Stat. 1477, 46 U.S.C. § 535 (1995).

⁶⁰ *Id.*, § 9, 106 Stat. 1477, 47 U.S.C. § 532(a) (1995).

⁶¹ *Id.*, § 10, 106 Stat. 1477, 47 U.S.C. § 532(h) (1991).

As noted earlier, a First Amendment challenge to the must-carry requirements was considered by the Supreme Court this year. The issue framed by the parties was whether strict scrutiny applicable to content-based regulations of speech or of the press should apply, or whether the lax standard applied to the broadcast medium in *Red Lion* should apply, or whether some intermediate level should apply such as that applicable to content-neutral time, place, and manner regulations. By a 5 - 4 vote, the Court categorized the must-carry requirement as a content-neutral regulation subject to intermediate scrutiny. The case was remanded for the development of a record that would disclose whether the content-neutral time, place, and manner test had been met.⁶² All the Justices agreed that the must-carry (and inferentially the public, educational and governmental) regulations reflected a congressional intention of promoting localism, and hence diversity, in programming. The majority characterized this preference as content-neutral, while the dissenters insisted that such a preference assumed that there was a content difference between locally originated programming and that originated elsewhere. Since Justice Blackmun, who was in the majority, has since left the Court, the majority's somewhat questionable characterization may not be stable.

IV. SATELLITE COMMUNICATION

The history of satellite communication is even shorter than that of cable television. It starts with the national shock that occurred when the Soviet Union put sputniks in orbit. That shock produced the National Aeronautics and Space Act of 1958.⁶³ While communication was not the primary focus of the legislation, the House Report on it, discussing potential economic benefits that might accrue from the creation of the National Aeronautics and Space Administration (NASA) noted the communications potential of each satellite.⁶⁴ While factors other than improved communication gave the primary impetus to the movement to create

⁶² Content-neutral regulations survive First Amendment scrutiny if they are narrowly tailored to serve significant (not compelling) government interests and leave open alternative channels of communication. *Ward v. Rock Against Racism*, 491 U.S. 781, 791 (1989).

⁶³ Pub. L. No. 85-5682, 72 Stat. 426, 42 U.S.C.A. § 2451 (1995).

⁶⁴ Other testimony demonstrated that the extension of presently known communication techniques and the use of automatic tape recorders would enable a mere six satellites to carry the entire long-distance mail load of the world, with delivery made on a matter of minutes to any place on earth. H. REP. NO. 770 on the National Aeronautics & Space Act of 1958, 1958 U.S. Cong. & Admin. News 3160, 3163.

NASA, the potential for earth satellite use for that purpose was known from the start of the space program.

That potential moved closer to realization when Congress passed the Communications Satellite Act of 1962.⁶⁵ That Act resulted from initiatives by the Executive Branch in negotiations with other nations, looking toward the establishment of new international communications services utilizing satellites. In July of 1961, President Kennedy proposed private ownership and operation of the United States' portion of such a global system.⁶⁶ A proposal to this effect was submitted to Congress in February of 1962 and enacted on August 31 of that year.

The Communications Satellite Act authorized the creation of a for-profit corporation that would be the American participant in the contemplated international satellite communications system. While the initial focus was on international communication, Congress expressly provided for the possibility of domestic services, and for the creation of additional communications satellites.⁶⁷ The for-profit corporation was to be a communications common carrier providing nondiscriminatory access to the system by all authorized users. It was authorized to purchase satellite launching services from NASA.⁶⁸ Thus, the communications potential of the space program, noted in the House report on the National Aeronautics and Space Act⁶⁹ was realized. In 1964, an Executive Agreement was signed by the United States and ten other nations, forming the International Telecommunications Satellite Consortium (Intelstat) which assumed ownership of the system built by Comstat.⁷⁰ Comstat became the United States' representative to Intelstat and the only United States entity having direct access to Intelstat's satellite system.

In the early 1960s, international communication to and from the United States, other than through the postal service, took two forms; two-way voice communication, in which the American Telephone and Telegraph Company (AT&T) enjoyed a monopoly, and non-voice or record service communication, provided by what the industry commonly referred to as International Record Carriers

⁶⁵ Pub. L. No. 87-621, 76 Stat. 419, 47 U.S.C.A. § 701 (1988).

⁶⁶ The President's policy is quoted in S. REP. NO. 1584 on the Communications Satellite Act of 1962, in 1962 U.S. Cong. and Admin. News at 2269.

⁶⁷ Pub. L. No. 87-621, 76 Stat. 419, 47 U.S.C.A. § 701 (1988).

⁶⁸ *Id.*, § 305(a), 47 U.S.C. § 735(b)(3), 4.

⁶⁹ See *supra* note 64.

⁷⁰ Agreement Establishing Interim Arrangements for a Global Communications Satellite System, Aug. 20, 1964, 15 U.S.T. 1705.

(IRCs). The IRCs offered one-way telegraph and two-way telex services. Telex service permits teletypewriters to communicate with each other. The IRCs were in turn divided into those offering international and those offering domestic record service. That artificial division occurred because of two unrelated events in the early 1940s. First, in 1942, as a security measure, the Board of War Communications ordered the cessation of all point-to-point radio telegraph circuits in the United States.⁷¹ Of three domestic IRCs, two, ITT World Communications (ITT) and RCA Global Communications, Inc. (RCA) relied for domestic record service on high-frequency point-to-point radio transmissions. The third, Western Union International, Inc. (WU), a much older telegraph company, relied on land lines. WU obtained a dominant position in domestic record service when in 1943 Congress created an antitrust exemption approving WU's acquisition of the ailing Postal Telegraph and Cable Corporation.⁷² As a condition of that approval, WU was required to divest itself of all international operations. The result was a peculiar industry structure in which WU had participated in the delivery in the United States of all international record service traffic, outside five gateway cities in which ITT, RCA and one other international IRC carrier were permitted to operate. Initially, WU's wholly domestic record service traffic was subject to competition from AT&T, which offered a TWX service competitive with WU's telex service. Both services permitted teletypewriters to communicate with each other. In 1970 WU acquired AT&T's telex business and thus became virtually the sole domestic provider of record service, and the sole provider of such service, outside the five gateway cities, on the domestic portion of an international record service communication link.

After World War II, AT&T and RCA were unable to resume high-frequency radio-telegraph service within the United States because the frequencies they had utilized for such services had been reassigned by the FCC for other uses.⁷³ Thus for record service the development of a satellite communications system suggested the possibility of a restoration of competition in the domestic sector, as well as an increase in competition in the international sector.

Subsequent developments in the satellite communication industry produced competition not only for record service, domesti-

⁷¹ The Defense Communication Board, later renamed the Board of War Communications, was created by Executive Order No. 8546, 5 Fed. Reg. 3817 (1940). See Board Orders No. 888A, 7 Fed. Reg. 4183 & 5089 (1942).

⁷² Pub. L. No. 104-16, 47 U.S.C. § 222 (1995).

⁷³ See Press Wireless, Inc., 11 F.C.C. 633, 636-38 (1946).

cally and internationally, but in other communication services as well.⁷⁴ Eventually the Commission construed the Satellite Act so as to permit it to license, transmit, and receive earth stations to non-common carriers. In *TRT Telecommunications Corp. v. FCC*,⁷⁵ the Court of Appeals for the District of Columbia Circuit confirmed this construction. The effect was that private networks such as news organizations and television networks could bypass long distance telephone carriers, and they soon did. Thus, satellite communication became an effective form of competition for a significant part of the long distance telephone market, both domestically and internationally.

More recently, the Commission has introduced satellite competition to the cable industry as well, by authorizing the sale of small antennas to individual users capable of serving as ground stations for receipt by satellite transmissions. For this relatively new service, two licensees, Direct TV and Prime Star, have already signed up close to two million customers. The future of this technology is at present a matter of speculation. Clearly, however, the potential of satellite communication has already far exceeded the expectations of the Congress that enacted the Act in 1962.

V. CONVERGENCE

The Baby Bells still service, by copper wire, low-fidelity analog voice-communication devices. The cable operators still service the low-definition analog television receivers that were originally developed for the broadcast industry. These relatively primitive interfaces with the ultimate user conceal, however, the enormous technological changes that have occurred in recent years as a result of developments in silicon integrated circuits and in photonic technology. While voice transmission at the beginning and end of a telephone conversation is still converted from and to an analog signal, that signal is within the telephone system converted to a digital mode, capable of digital compression, and transmitted by laser devices over fiberoptic networks. While television signals, whether received by broadcast or over cable, are still analog, network transmissions to local broadcasters or to cable systems are similarly

⁷⁴ See, e.g., *Western Union Telegraph Co. v. FCC*, 665 F.2d 1112 (D.C. Cir. 1981); *Western Union Telegraph Co. v. FCC*, 665 F.2d 1126 (D.C. Cir. 1981) (affirming FCC decision to allow competition between Western Union and other record carriers); *ITT World Communications, Inc. v. FCC*, 725 F.2d 732 (D.C. Cir. 1984) (affirming FCC decision to permit Constat to sell satellite services directly to the public rather than to common carriers).

⁷⁵ 876 F.2d 134 (D.C. Cir. 1989).

digitalized.⁷⁶ A limited exception to reliance on analog user interface devices is Direct TV, which transmits a digital signal to a small antenna that translates that signal to analog modes at the point of reception. Obviously, it is technically feasible to eliminate analog technology entirely. Moreover, the quality of the resulting voice or picture transmission would be superior to that presently available if that were to come about. And as the rapid development of personal computers has demonstrated, these digital devices are apt to be less expensive, ultimately, than those they replace.

Ideally, national communication policy should recognize that all communication, whether by wire or in the electromagnetic spectrum, should be entirely digital. The technological developments described above have, for all purposes except regulatory, eliminated the distinction between broadcast, wire and satellite transmission. All rely at some point in the chain of communication upon the transmission of compressed digital signals. Thus, from a technological standpoint, all transmitters of communication signals are potential competitors. Some messages, video pictures for example, require so much digitalized information that they require a wider bandwidth. Other messages, black and white print or voice for example, require a much narrower bandwidth. Fiberoptic transmission affords the greatest bandwidth. Transmissions in the electromagnetic spectrum occupy as much frequency space as the Commission licenses for use. It might make technological sense to require that uses that demand wideband capability be confined to fiberoptic systems, and that the electromagnetic spectrum be reserved for narrow band uses, thereby increasing its message-carrying potential.

If more of the electronic spectrum were to be reserved for plain old telephone service, the need for maintaining a capital intensive wired local plant for the provision of that service might be eliminated. In recent years we have seen that trend in the development of mobile cellular telephone service. Moreover, while each cell in a mobile cellular system occupies a defined piece of the electromagnetic spectrum, there are enough spaces available so that there is competition in the provision of such service.

The 103rd Congress struggled unsuccessfully to produce a communications regulatory climate more rationally related to technological developments. Two bills in the House of Representatives

⁷⁶ See John E. Midwinter, *Convergence of Telecommunications, Cable and Computers in the 21st Century: a Personal View of Technology*, in CROSSROADS ON THE INFORMATION HIGHWAY: CONVERGENCE AND DIVERSITY IN COMMUNICATIONS TECHNOLOGIES (1995).

were consolidated in H.R. 3626, the Antitrust and Communications Reform Act of 1994⁷⁷. The Senate considered two bills: S. 1822, The Communications Act of 1994, and S. 2195, the National Public Telecommunications Infrastructure Act of 1994. S. 1822 reached the Senate floor, but lobbying efforts, especially by the local telephone exchange operating companies, succeeded in preventing its passage. S. 2195, directed at narrower issues, died in the Senate Commerce Committee.

In a regime of effective competition at all levels, many present restrictions upon the speech of participants in the communication industry would be irreconcilable with First Amendment doctrine. The most significant of the present restrictions are those upon the activities of the regional Bell operating companies imposed by the modified final decree. H.R. 3626 would have removed those restrictions and as a *quid pro quo* would have introduced competition at the local exchange level. That required attention to the problem of subsidizing universal service. Both S. 1822 and H.R. 3626 addressed the universal service problem by the creation of a fund to subsidize such service to which all carriers would contribute. The Senate bill also provided that if more than one carrier served a locality, one would be designated as a carrier of last resort, and would be subsidized from the fund.

In the 104th Congress, the same lobbying battle among segments of the communications industry continues, and as this is written, the outcome is uncertain. It seems likely, however, that many extant restraints on the local exchange carriers, the long distance carriers, and the cable companies will be legislated out of existence. Moreover, it is possible that limitations on television network ownership of multiple local broadcasters will be relaxed.

VI. CONVERGENCE AND THE FIRST AMENDMENT

If effective competition exists at the local exchange level for the delivery of digital signals, there would seem to be no substantial governmental interest sufficient to justify many restrictions upon the information activities of the telephone companies, the cable companies or the networks. Even in the present regulatory climate the scarcity rationale for the *Red Lion* justification of the fairness doctrine is completely attenuated. "Must carry" and "can't carry" rules applicable to cable system operators would be hard to justify if those operators were subject to effective local competition.

⁷⁷ See Rept. 103-559, on the Antitrust and Communications Reform Act of 1994.

Those rules were originally designed to protect locally originating broadcasting from competition from more distant signals. With competition in the delivery of signals, the First Amendment should permit no more protection than that afforded by the marketplace of ideas.

Content regulation aimed at protecting the public, and especially children, from obscene or indecent materials requires a different approach than mere reliance on competition. But even with respect to this type of content regulation, the technological convergence noted above must be taken into account. The pervasivity rationale of *Pacifica Foundation* is as readily available for signals delivered by wire or satellite as for signals delivered by broadcast. *Pacifica Foundation* may not be the last word on content regulation of broadcast speech, and *Sable Communication* may not be the last word on speech delivered by wire.

VII. CONCLUSION

The "information highway" is a shorthand expression for the technological changes in communication that have occurred as a result of developments in silicon integrated circuits and photonic technology. Those developments took place in a fragmented communication industry in part as a result of a series of historical legislative reactions to much more primitive technological developments. The legislative landscape is littered with regulations that are obsolete for present day technology. Each participant has enjoyed the benefits of an industry niche created by regulation. Those regulatory fiefdoms have fenced others out from engaging in activities that would otherwise be protected by the First Amendment. Regardless of technology, however, whether old or new, the constitutional constant that must guide legislators and judges reviewing legislation is that a free marketplace of ideas is our paramount political axiom. Restrictions on participation in that marketplace can only be justified by significant government interests that cannot be achieved by other means. Technological change must be taken into account in deciding whether restrictions on such participation are necessary. It seems likely that most governmental interests would be sufficiently advanced by a regulatory regime of competition. Thus, most restrictions on the information generation and transmission activities of participants in the communications industry should fall.