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UNPLANNED OBSOLESCENCE: THE TELECOMMUNICATIONS ACT OF 1996 MEETS THE INTERNET

*John D. Podesta**

I. INTRODUCTION

Standing in the Main Reading Room of the Library of Congress on February 8, with TV cameras rolling, using a futuristic electronic pen to zap his signature across the Net, President Clinton signed the Telecommunications Act of 1996 (1996 Act or Act) into law.¹ The Act ushered in the prospect of a new world not only for the major industry players but also for the creators and consumers of the information revolution. At the signing, the President proclaimed: "Today, with the stroke of a pen, our laws will catch up with our future. We will help to create an open marketplace where competition and innovation can move as quick as light."²

That event was a long time coming. The history of this legislation reads like a Hollywood epic movie script. A decade in the making, spanning three administrations, five Congresses and a virtual revolution in the House of Representatives, the handiwork of literally thousands of industry lobbyists, the bill finally came together under the leadership of Speaker Newt Gingrich combined with the strong will and guidance of Vice President Al Gore.

Think about it, all this simply to overcome the rather sensible judgments and steady hand of one federal district court judge.³ What is this proposed new world going to be like? Has Washington, in all its collective wisdom, written the script for the next blockbuster *Star Wars* or just the next bust *Waterworld*?

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1. Telecommunications Act of 1996, 47 U.S.C.A. §§ 151-614 (West Supp. 1996).

2. President's Remarks on Signing the Telecommunications Act of 1996, 32 WEEKLY COMP. PRES. DOC. 215, 216 (Feb. 8, 1996) [hereinafter *Remarks*].

3. Judge Harold H. Greene presided over *United States v. American Tel. & Tel. Co.*, 552 F. Supp. 131 (D.D.C. 1982), *aff'd sub nom. Maryland v. United States*, 460 U.S. 1001 (1983), which orchestrated the break-up of the AT&T monopoly. As a result, all challenges and subsequent rulings on the compliance of the telecommunications industry are brought before and decided by Judge Greene. The passage of the Telecommunications Act of 1996 shifts much of the legal burden back into legislative and regulatory hands.

I would like to offer two sets of thoughts. First, I offer some recent history that gives rise to some predictions of how the new Telecommunications Act may work (or not). Second, I want to discuss why the Internet may provide a paradigm which leapfrogs the current debate. Let's start with the predictions.

First, the only certain outcome is that the Act will generate an abundance of hype and hot air from all industry segments.

Second, the murky legislative compromise contains the different and sometimes competing goals of deregulation and promoting competition. When forced to confront the difficult task of choosing between these two goals, regulators are likely to follow Congress's lead and punt, doing a little of both and thereby achieving neither.

Third, the legislation is going to reinforce the major economic trend fueling this year's presidential debate—middle class wage earners, in this case ratepayers, are likely to pay more so that the better off and better educated can better enjoy the fruits of their capital. As for the poor, like in most areas of public policy today, they will be further left out and left behind.

Fourth, for the next decade, the competitive fight over the provision of telecommunications services will be less about driving down the price to consumers and more about adding power and performance—that is, more bandwidth, functionality, etc. Those who have just junked a perfectly good two-year-old PC for one with more RAM, a bigger hard drive and faster modem, know the distinction that I'm trying to draw.

Finally, as a recent cover of *Business Week* concerning the software industry proclaimed, "The Web Changes Everything."⁴ Those with even a passing familiarity with the Communications Decency Act (CDA), commonly referred to as the Exon Amendment,⁵ know that

4. Amy Cortese, *The Software Revolution*, *Bus. Wk.*, Dec. 4, 1995.

5. On June 9, 1995, Republican Senator James Exon introduced an amendment to the Communications Decency Act (CDA), which has since been incorporated into the Telecommunications Act of 1996. 141 CONG. REC. S8087-92 (daily ed. June 9, 1995) (statement of Sen. Exon); Communications Decency Act of 1996, Pub. L. No. 104-104, §§ 501-09, 110 Stat. 56, 133-39 (1996) (to be codified in scattered sections of 47 U.S.C.). The measure seeks to combat the transmission of obscene, indecent and harassing material through telecommunications technologies. Shortly after President Clinton signed the new legislation into law, a broad coalition of privacy, free speech and consumer advocates across the country filed suit in federal district court challenging the constitutionality of several provisions of the CDA. See *ACLU v. Reno*, No. 96-963, 1996 U.S. Dist. LEXIS 1617 (E.D. Pa. Feb. 16, 1996) (consolidating ACLU and American Library Association cases challenging the CDA). A three-judge panel of the district court, sitting pursuant to the special jurisdictional provision of the CDA to consider constitutional challenges, 47 U.S.C.A. § 561(a), held that the sections of the law applying criminal penalties to the transmission of indecent communications and prohibiting sending of patently offensive messages

the Congress does not get the Net. And a lot of citizens do not get Congress, which is why they may have a few of their own thoughts about how this new information world ought to be configured.

Recent telecommunication industry history, I believe, supports these predictions. The telecommunications industries are experiencing the kind of business environment computer companies have confronted over the last twenty years,⁶ a business environment where executives have learned to cope with Moore's Law, a thesis by Gordon Moore, founder of Intel, that computing power doubles every eighteen months.⁷ This is exhilarating for some, but gut-wrenching for many. The pace of technological change from analog to digital, from wired to wireless, from snail speed to light speed, is pushing an increased pace of change in new product and service offerings and in industry structure.⁸ This is not a time for a group of industries suited to the feint-hearted or the slow-footed. Both the telephone and cable industries have responded to this new environment with market repositions and a public relations blitz that has forecast an information

through an interactive computer service to a person under 18 years of age violated the First and Fifth Amendments. *ACLU v. Reno*, 929 F. Supp. 824 (E.D. Pa. 1996). The case is on appeal to the Supreme Court of the United States. *ACLU v. Reno*, 929 F. Supp. 824 (E.D. Pa. 1996), *appeal docketed*, 65 U.S.L.W. 3295 (U.S. Sept. 30, 1996) (No. 96-511).

6. See Alan Cane, *A Program of Shake-Up and Shake-Out*, *FIN. TIMES*, Dec. 30, 1987, at 10 (describing the history of the computer industry transition and predicting continuing effects of its transitive nature).

7. *The Interminablenet: Why Is the Internet So Slow? And What Can Be Done About It?*, *ECONOMIST*, Feb. 3, 1996, at 70.

8. The passage of the Telecommunications Act has triggered a series of mergers and acquisitions in the telecommunications field. In early April, SBC Communications acquired the Pacific Telesis Group for \$17 billion, and three weeks later Bell Atlantic announced its \$22 billion merger with NYNEX, the fifth largest acquisition in American history. Mark Landler, *Two Bell Companies Agree to Merger Worth \$17 Billion*, *N.Y. TIMES*, Apr. 2, 1996, at A1; Mark Landler, *NYNEX and Bell Atlantic Reach Accord on Merger; Links 36 Million Customers*, *N.Y. TIMES*, Apr. 22, 1996, at A1; Mark Lander, *A Sticking-to-Their-Knitting Deal; Nynex and Bell Atlantic Decide They Are Truly Made for Each Other*, *N.Y. TIMES*, April 23, 1996, at D1, D8; see also Allan Sloan, *The Corporate Elephant Man; To Dance with Wolves, Bloated IBM Must Learn Smaller Steps*, *NEWSDAY*, Dec. 8, 1991, at 84 (contrasting the shortcomings of IBM, which avoided breaking into smaller components in 1982, and its difficulty surviving in the rapidly changing computer industry with the successes of AT&T and the RBOCs, which underwent separation at the same time, in remaining industry leaders in a similarly situated telecommunications industry).

Cross-industry mergers are becoming commonplace as RBOCs expand into other telecommunications markets. For example, on February 27, 1996, US West announced it would acquire Continental Cablevision, Inc., the nation's third largest cable company. Paul Farhi, *Phone Giant US West to Buy Cable TV Firm*, *WASH. POST*, Feb. 28, 1996, at C1; see also Paul Farhi, *Media Giants' Bedfellowship Raises Questions About Competition*, *WASH. POST*, Jan. 7, 1996, at H1, H9 (discussing the emerging pattern of partnerships and combinations among communications and entertainment companies).

nirvana for consumers.⁹ But, before everyone gets too excited, it is important to listen to their rhetoric today and remember what they were preaching in comparison to what they practiced just a few years ago.

II. HISTORICAL BACKGROUND: VIDEO DIALTONE

Almost before the ink was dry on the Modification of Final Judgment (MFJ) which broke up the pre-1982 Bell monopoly, the Regional Bell Operating Companies (RBOCs) had promised a world of new, enhanced, cheaper service—if only they could be relieved of the restrictions imposed by the MFJ and especially if they could control the content of what went over their wires.¹⁰ Not content with their a role as traditional common carriers, simply hauling bits and bytes over their plant and switches (a role, by the way, that recently has been remarkably profitable), they longed to become video programmers and compete, head-to-head, with the cable monopolies.

Regulatory restrictions, as well as a statutory bar, prohibited until recently local exchange carriers from providing video programming except in small, rural markets.¹¹ The FCC, faced with both a desire to

9. See, e.g., Chuck Ross & John Motavalli, *TCI Buys Stake in Microsoft Network*, INSIDE MEDIA, Dec. 14, 1994, at 1 (announcing that Tele-Communications Inc., the nation's largest cable operator, bought a major equity stake in Microsoft Network, an on-line consumer service); Jared Sandberg, *AT&T Buys Ziff's On-Line Service, Interchange, for More Than \$50 Million*, WALL ST. J., Dec. 23, 1994, at B5 (reporting AT&T's purchase of Ziff Communication Co.'s Interchange Online Network, an on-line information service); Eben Shapiro, *Time Warner Completes Turner Deal, and Focus Shifts to Cutting Costs, Debt*, WALL ST. J., Oct. 11, 1996, at 1 (reporting on Time Warner's acquisition of Turner Broadcasting and its plans to spin off most of its cable holdings); Thomas E. Weber, *MCI Matches AT&T's Internet Offer of Free Access to Long-Distance, Clients*, WALL ST. J., Mar. 19, 1996, at B3 (announcing MCI's aggressive plan to compete with AT&T's Internet services).

10. In the years following the modified final judgment, the RBOCs made a series of efforts to have the regulations amended to permit content control. "[T]he companies have been chanting almost since the day of their birth in 1984: 'Free the Bells.' Free us to manufacture, to offer long-distance lines, movies and on-line services . . ." Mike Mills, *The New Kings of Capitol Hill; Regional Bells Use Lobbying Clout to Push for New Markets*, WASH. POST, Apr. 23, 1995, at H1, H5; see Eric J. Savitz, *They've Come a Long Way and the Future Looks Bright as Well for the Baby Bells*, BARRON'S, Oct. 15, 1990, at 10, 11 (chronicling RBOC lobbying efforts and legal challenges); see also Barton Crockett, *RBHCs Pump Big Bucks Into U.K. Nets*, NETWORK WORLD, Dec. 3, 1990, at 1, 70 (explaining RBOC efforts in England to acquire expertise in content delivery in anticipation of future application within the U.S.).

11. See *In re Applications of Telephone Companies for Section 214 Certificates for Channel Facilities Furnished to Affiliated Community Antenna Television Systems*, 21 F.C.C.2d 307, 325, *recons. in part*, 22 F.C.C.2d 746 (1970), and *aff'd sub nom.*, General Tel. Co. v. United States, 449 F.2d 846 (5th Cir. 1971) (restricting local exchange carrier (LEC) video programming through regulation); 47 U.S.C. § 533(b) (1994) (restricting LEC video programming through statute). The new telecommunications legislation repeals § 613(b) of the Communications Act, which prohibited LECs from providing video programming directly to subscribers in their telephone

promote competition to the wired cable industry and a plea by the telephone companies (telcos) to enter new competitive marketplaces, struggled to construct a common carriage model that would allow the telcos to provide cable-style programming over their wires, while simultaneously encouraging a rich diversity of content providers.¹² The model was video dialtone.¹³ As originally conceived in 1987, video dialtone was intended to be an enriched version of video common carriage.¹⁴ Telcos would provide not only the underlying video transport services, but could also provide a variety of user-friendly gateway features.¹⁵ Video dialtone systems would support multiple programmers and increase the ability of public access and educational programmers to reach their audience.¹⁶

Telcos initially rushed to embrace the high-tech, new-world information common carrier model.¹⁷ Video dialtone became a rationale for accelerating the building-out of high capacity infrastructure, especially fiber optics.¹⁸ Like defense contractors with a cost-plus con-

service area. Cable Communications Policy Act of 1984, Pub. L. No. 98-549, § 613(b), 98 Stat. 2779, 2785, *repealed by* Telecommunications Act of 1996, Pub. L. No. 104-104, sec. 302(b)(1), 110 Stat. 56, 124.

12. *See In re Telephone Company—Cable Television Cross-Ownership Rules*, Sections 63.54-63.56, 2 F.C.C.R. 5092 (1987) (investigating whether cable-telco cross-ownership rules should be modified); *see also* OFFICE OF PLANS AND POLICY, FEDERAL COMMUNICATIONS COMMISSION, FCC POLICY ON CABLE OWNERSHIP (1981) (recommending continuation of the cable-telco cross-ownership ban).

13. For a description of video dialtone and examination of the FCC's video dialtone decision, see generally Terry L. Etter & Rick D. Rhodes, *Sorting Through the Vision and Vagueness of the FCC's Video Dialtone Decision*, 1 COMM.LAW CONSPECTUS 56 (1993).

14. *In re Telephone Company—Cable Television Cross-Ownership Rules*, Sections 63.54 - 63.58, 7 F.C.C.R. 300, 306 (1991) [hereinafter *First Report and Order*]. Prior to modification of the cross-ownership rules in the First and Second Report and Orders, RBOC's were not permitted to exceed a "carrier-user" relationship with video programmers. 47 C.F.R. § 63.54(b), (c) (1991), *amended by* 47 C.F.R. § 63.54(d) (1992). They were limited to common carriage provision of communications services and functions. *Id.*; *see, e.g.*, Comark Cable Fund III v. Northwestern Ind. Tel. Co., 100 F.C.C.2d 1244, 1255 (1985) (prohibiting a cable-telco affiliation where the companies entered into pole rental and other business and financial agreements with respect to construction and maintenance of cable television facilities).

15. *First Report and Order*, *supra* note 14, at 306, 319; *see also* United States v. Western Elec. Co., 673 F. Supp. 525, 603 (D.D.C. 1987) (removing the information services restriction to permit LECs to provide gateway services).

16. *See In re Telephone Company—Cable Television Cross-Ownership Rules*, Sections 63.54 - 63.58, 7 F.C.C.R. 5781, 5783 n.3 (1992) [hereinafter *Second Report and Order*] (defining the basic platform of a video dialtone system).

17. *See* Etter & Rhodes, *supra* note 13, at 67 (listing several LECs' plans to implement video dialtone networks after the FCC's video dialtone decision in July 1992); Richard A. Gershon, *Is Video Dial Tone the Future of Telephone Programming?*, TELEPHONY, Nov. 9, 1992, at 20 (examining LEC growth strategy of entering into video programming through video dialtone).

18. Rich Brown, *Bell May Roll Its Own Programming*, BROADCASTING & CABLE, Oct. 25, 1993, at 32 (stating that between 1993 and 1999, New Jersey Bell is projected to spend \$1.5 billion to upgrade its system to fiber optic cable); Dawn Bushaus, *Convergence Clairvoyance*,

tract, telcos were not shy about seeking ways to justify a higher cost structure that translated into larger profits.¹⁹ Combining the need for cable competition with the need to hotwire the country, telcos trumpeted video dialtone as the most promising means to open the video programming market. Video dialtone meant the potential of increased competition with cable, increased distribution channels for cable programmers and increased performance and service for consumers. Of course, this was offset by the specter that the telephone ratepayers would fund a major enhancement of the infrastructure that many people would never want or need.²⁰

Behind this push were predicted technological advances that could allow, for example, a telco with upgraded fiber optic and coaxial cable wiring to offer access to between three and five hundred video channels, a marked expansion from the eighty channel capacity of the analog cable systems then being used by cable companies.²¹ Telcos were well-positioned to capitalize on enhanced technologies to improve public access to interactive audio, video and data services.

COMM. WK., Feb. 7, 1994, at PNU3, PNU6 (recounting Ameritech's Project Looking Glass, a \$1 billion fiber deployment effort launched in 1992 that tripled the amount of fiber optic technology in its network).

19. See *In re Telephone Company—Cable Television Cross-Ownership Rules*, Sections 63.54-63.58, 3 F.C.C.R. 5849, 5854-55 (1988) (explaining LEC arguments for removing the cross-ownership ban and permitting them to offer expanded services). Bill Redderson, former vice-president of marketing at BellSouth explained, "The challenge is to grow the base . . . You have to make the network more and more intelligent, adding features, functionality and value for the customer." Savitz, *supra* note 10, at 26 (quoting Mr. Redderson). Author Eric Savitz comments, "In other words, find a way to boost the average customer's bill without raising the price of basic service." *Id.* Similarly, enlarging the cost structure inspired telco arguments to distribute cable television. Noting the circular justifications used by the RBOCs, another commentator has explained, "To provide advanced services, [the Baby Bells] say they need to run high-capacity, fiber-optic lines. But to justify that cost, they assert, [that] the lines must carry cable TV, too." Peter Coy, *Can Judge Greene Pacify the Baby Bells?*, BUS. WK., Apr. 29, 1991, at 92. Although resting on unsteady foundations, telco arguments to extend the cost structure were not without economic force. The technological advances allowing telcos to commingle digital media are also bringing pressure to bear upon existing pricing systems. As Nicholas Negroponte cogently observed, "[T]he entire economic model of pricing in telecommunications is about to fall apart. Today's tariffs are determined per minute, per mile, or per bit, all three of which are rapidly becoming bogus measures." NICHOLAS NEGROPONTE, *BEING DIGITAL* 77 (1995).

20. One commentator writes:

[E]xisting capacity is enough for most phone customers. Even if everyone does benefit from an upgraded network, it would still be a much sounder idea to have only users of new services pay for them. This would force the phone companies to enter hot new VDT [video dialtone] markets the old-fashioned way—through investment, rather than through milking their regulated monopolies.

Mark Lewyn, *The Phony Argument from the Baby Bells*, BUS. WK., Oct. 31, 1994, at 52.

21. Larry Stark, *HFC Networks: Interactive and Inexpensive*, TELEPHONY, June 19, 1995, at 36, 38, 42.

However, while telcos hyped video dialtone's public interest potential for open competition, cable companies began to sound like consumer advocates, warning against potential threats to the American public. First, they insisted that telcos be preempted from passing video dialtone implementation costs onto all ratepayers.²² Although refurbishing existing infrastructure to permit video dialtone capacity would affect all phone lines, many Americans would not subscribe, they said, to the expanded service. Thus, de facto cross-subsidization of the infrastructure by telephone subscribers would spread improvement costs to parties who would not receive any benefits. Real consumer advocates urged lawmakers and regulators not only to guard against cross-subsidies, but also to ensure equal access and speech diversity in light of the potential for corporate dominance of the new multimedia systems.²³ Perhaps proving that consumers really had something to fear, telcos, while eager to enter the video programming market, warned against a regulatory scheme that would limit their ability to recover their costs from subscribers, which in turn might preclude significant upgrades in services.²⁴

In the early nineties, the FCC began to seriously consider the regulatory scheme for video common carriage. Telcos would be permitted to offer common carriage services and be required to offer multiple video information providers access to their platform in a nondiscriminatory fashion.²⁵ Common carrier status freed telcos from being regulated as cable service providers.²⁶ As a result, they would not be subjected to the franchising obligations and fees of cable companies.²⁷ This regulatory decision, while creating tremendous opportunities for

22. *In re Telephone Company—Cable Television Cross-Ownership Rules*, Sections 63.54-63.58, 10 F.C.C.R. 244, 246 (1994). "The cable industry is concerned that telcos will use revenue from their regular customers to subsidize their entry into the video business The National Cable Television Association argues that despite the government's best efforts, the threat of cross-subsidy remains." Christopher Stern, *Crossownership Ban to Supreme Court; But Congress Is About to Eliminate the Cable/Telco Restriction in Telecom Bill*, BROADCASTING & CABLE, Nov. 27, 1995, at 18.

23. Comments of Center for Media Education et al., at 4-5, *In re Telephone Company-Cable Television Cross-Ownership Rule*, Sections 63.54-63.58, (FCC) (CC No. 87-266) (filed Mar. 21, 1995); see also *Second Report and Order*, *supra* note 16, at 5802-04. In implementing video dialtone, the FCC concluded that its regulatory framework should be guided by three key objectives: equal access, regulatory flexibility and ease of use. *Id.* at 5804. The FCC believed that the nondiscrimination objective of equal access would "substantially further our diversity goal by fostering a diversity of video services without regard to the control of such information." *Id.*

24. Etter & Rhodes, *supra* note 13, at 60; see *Second Report & Order*, *supra* note 16, at 5842-43 (describing telco arguments requiring additional incentives to justify developing and deploying an advanced telecommunications infrastructure).

25. *Second Report & Order*, *supra* note 16, at 5783.

26. *First Report and Order*, *supra* note 14, at 312.

27. *Id.* at 324-28.

the telcos, represented a cautious middle ground toward telco entrance into video programming distribution.

In light of public interest concerns, telcos were permitted to offer transport services, but not content services. They were limited to no more than a five percent ownership interest in any video information programmer and were prohibited from purchasing existing cable companies in their service territories to prevent them from providing video dialtone service indirectly.²⁸ Fears of inequitable repair services and inadequate connections for competitors kept the FCC from allowing telcos into video programming.²⁹ Even former Secretary of Education William Bennett, a prominent supporter of content restrictions in the publishing and entertainment industries, has warned, "Any democrat . . . has to be wary of the concentration of power When you're talking about the images, ideas, imagination and opinions of a country, more sources are better than fewer."³⁰

Those fears of anticompetitive conduct were of course well-founded. Last October for example, the *Wall Street Journal* reported on the RBOCs' stiff-arming of would-be local exchange market rivals.³¹ Uncomfortable with the prospect of similar control over the emerging telecommunications markets, the video dialtone model prohibited telcos from competing as both distributors and program providers.³² However, these regulatory limitations were hardly the subject of protest, as the telcos were pleased to be admitted into a market ripe with opportunity.

That position did not last long. Shortly after the telcos began to submit their trial video dialtone plans to the FCC for approval, they

28. *Second Report & Order*, *supra* note 16, at 5819 (ownership interest); *id.* at 5837-38 (acquisition of existing cable systems).

29. Etter & Rhodes, *supra* note 13, at 60. The authors cite one example in which the Georgia Public Utilities Commission found BellSouth to have unnecessarily delayed provision of a voice-messaging service until it was ready to establish its own competing service. *Id.*

30. Farhi, *supra* note 8, at H1, H9.

31. Leslie Cauley, *Calls Waiting: Rivals Are Hung Up on Baby Bells' Control over Local Market*, WALL ST. J., Oct. 24, 1995, at A1. RBOC efforts range from the severe to the sophomoric. For example, in a Justice Department complaint, LCI International claimed that US West shut off service to 4,000 of its customers and informed inquiring customers that LCI was out-of-business, causing 24% of LCI's customers to cancel their service. *Id.* at A6. Tactics employed by Ameritech against would-be rival US Signal included a proposal to the FCC requesting that Ameritech be permitted to charge rivals \$20.37 per month plus \$.082 cents per call for customers who wanted to switch to competitors without undergoing a phone number change. *Id.* Bell Atlantic employed less sophisticated means to forestall competition. While working on equipment housed in space rented from Bell Atlantic, MFS Communications employees were denied use of a restroom because FCC regulations did not require it. *Id.*

32. See *Second Report and Order*, *supra* note 16, at 5806-12 (outlining the two-tiered video dialtone model).

began to abandon their self-proclaimed vision as twenty-first century distribution providers. Instead, telco lobbyists pushed for additional entry into the market for video information programming and equipment services.³³ They began to create joint ventures with other telcos and with entertainment giants like Disney and Time Warner to expand their market access, to combine their resources and to position themselves as content providers.³⁴ At the same time, they initiated a series of lawsuits seeking access into the content programming market as a First Amendment right.³⁵ Finally, they persuaded many regulators to relieve them of the burden of rate-of-return regulation in favor of price caps.³⁶

Successful with First Amendment challenges in court and successful in seeking price cap rules from regulators, the local exchange carriers' (LECs) enthusiasm to build multiprogrammer platforms and to serve solely as a value-added transport service quickly waned. Abandoning their multiple programmer approach, BOC after BOC decided that they really would rather be cable companies, and simply dropped plans to provide video dialtone service.³⁷ The era of multiprogrammer platforms seemed over. Faced with this history and still wanting to find some way to encourage multiprogrammer platforms, Congress chose the carrot instead of the stick. Stating that it intended to encourage competition, Congress in the 1996 Act gave LECs the option of entering the video content market as wireless operators under a

33. Mills, *supra* note 10, at H1.

34. For example, Ameritech, BellSouth and SBC Communications formed a programming and packaging alliance with Disney. Fred Dawson, *Ameritech Corp. Lays Out Deliberate VDT Strategy*, MULTICHANNEL NEWS, Nov. 14, 1994, at 1. The alliance allows the RBOCs to package analog and video-on-demand services, to develop content and marketing services, and to establish a technical platform. *Id.* Bell Atlantic, NYNEX and Pacific Bell have fashioned a similar venture with Hollywood's Creative Artists Agency. *Id.* By forming alliances with large entertainment companies like Disney and CAA, RBOCs are assured full access to video programming. *Id.*

35. *See, e.g.*, *US West, Inc. v. United States*, 48 F.3d 1092 (9th Cir. 1994); *Chesapeake & Potomac Tel. Co. v. United States*, 42 F.3d 181 (4th 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).

36. *See In re Policy and Rules Concerning Rates for Dominant Carriers*, 5 F.C.C.R. 6786 (1990), *on recons.*, 6 F.C.C.R. 2637 (1991) (implementing price cap regulation for interstate services of LECs).

37. For example, in July, 1995, Ameritech abandoned its video dialtone plans and moved to a cable model. Shira McCarthy, *Ameritech Switches Network Plans*, TELEPHONY, July 3, 1995, at 6. It has been further reported that numerous telcos are currently evaluating other options, including the buying of cable franchises and becoming local cable television operators. Shira McCarthy, *Regulations Imperil Video Dialtone*, TELEPHONY, May 8, 1995, at 7, 16.

newly deregulated regime, as cable operators, or under a newly highly deregulated scheme called "open video systems" (OVS).³⁸

III. OPEN VIDEO SYSTEMS

Under the new Act, OVS operators are relieved of the regulatory requirements imposed on common carriers under Title II of the Communications Act and relieved of many of the regulatory requirements cable operators face.³⁹ In exchange for this reduced regulatory burden, OVS operators are obliged to provide carriage to nonaffiliated programmers, conditioned on fair and reasonable rates and conditions; where programmer demand for carriage exceeds supply, an OVS operator cannot control more than one-third of the system channel capacity.⁴⁰

In authorizing OVS, Congress was attempting to create an attractive alternative to spur telephone companies to enter the video marketplace. But, in doing so, Congress seems to have chosen a model that does not merely seek head-to-head intersystem competition with the cable industry, but is intended to further public interest goals. Congress intended OVS to provide greater diversity of programming, increased consumer choice, lower consumer rates and increased investment in high-end infrastructure through the vehicle of an "open" multiprogrammer platform, thus creating a video programming delivery market that operates in the public interest.⁴¹ Congress has offered telephone companies relief from some regulatory requirements in exchange for providing intrasystem competition and proper support for and allocation of channels for schools and universities, churches, non-profit entities and local governments.⁴² Congress clearly intended to use this model as a means of fostering a system that would provide the public with the benefits of programming diversity that ought to flow from a platform open to unaffiliated programmers seeking to reach consumers.

Having offered telephone companies the "quid" of reduced regulation, Congress delegated to the Federal Communications Commission the difficult task of setting forth the "quo" of responsibilities that telephone companies will have to meet to prevent improper subsidization,

38. 47 U.S.C.A. §§ 571-73.

39. *Id.* § 573(c).

40. *Id.* § 573(a).

41. H.R. CONF. REP. NO. 458, 104th Cong., 2d Sess. 175-79 (1996), *reprinted in* 1996 U.S.C.C.A.N. 124, 188-92.

42. See Chris McConnell, *Open Video Systems Open to Debate*, BROADCASTING & CABLE, Apr. 8, 1996, at 18 (noting the FCC's proposal to apply must-carry and public, educational and governmental channel rules to OVS providers).

preserve rights of carriage for educational, governmental and other nonprofit groups and prevent non-affiliated programmers from being denied carriage improperly through unfair rates or conditions. The Act required the Commission to complete the regulatory framework for OVS, including resolving any petitions for reconsideration, within six months of enactment.⁴³ The FCC responded by implementing a lightning-fast notice and comment process,⁴⁴ which had to resolve a host of complex questions including the following:

- What is an “open video system” since there is no definition in the Act?
- Can cable operators and wireless cable operators convert to the OVS model?
- How can the FCC implement a certification process that gives OVS operators a right to a decision that they are in compliance with FCC rules within ten days of submission?
- What safeguards, including structural safeguards, are appropriate to prevent telephone companies from cross-subsidizing OVS buildouts?
- Can market-based mechanisms ensure rates, access and allocation of channels that are fair, reasonable and not unjustly discriminatory?
- What rules are necessary to ensure that OVS platforms provide the same access and support to public education and governmental entities as cable operators?
- Can OVS operators be required to provide discounted rates to not-for-profit programmers to ensure diversity of programming in the video marketplace?

In answering these questions, regulators faced a Hobson’s choice. If they regulate to protect the interests of consumers and unaffiliated programmers, LECs will abandon OVS in favor of cable or wireless cable. If they fail to guard against LEC abuses in the name of encouraging competition, OVS will breed unfair competition. This, in the long run, will result in less competition.

The responses to the FCC’s Notice of Proposed Rulemaking highlight the dilemma faced by the Commission and the failure of Congress to embrace a strategy of favoring entry by LECs into the marketplace through a multiprogrammer platform. The comments of local exchange carriers demand that the Commission “minimize rules and maximize flexibility” and “not attempt to second-guess the good faith business judgment of telephone companies” or else the carriers

43. 47 U.S.C.A. § 653(c)(2)(A).

44. On March 11, 1996 the FCC issued its Notice of Proposed Rulemaking requesting comment on issues concerning the implementation of the OVS provisions of the Act. 61 Fed. Reg. 10,496 (1996). Filed comments were due no later than April 1, and reply comments were due no later than April 11. *Id.*

will simply abandon OVS for the traditional cable model.⁴⁵ Cable industry comments stress eliminating potential regulatory advantages OVS operators have over cable competitors⁴⁶ and suggest that the FCC “impose and strictly enforce a letter perfect” requirement for OVS certification.⁴⁷ Representatives of the public interest community warn the Commission that without an effective regulatory framework—including requirements that video programming be delivered through a fully separated subsidiary, that LECs comply with strict cost allocation procedures, that the Commission adopt market tests to ensure fair rates and access, that not-for-profit programmers receive discounted rates to promote diversity and that operators’ buildout capacity to meet demand—that OVS will “simply become ‘cable-lite,’” and a single programmer, the telephone company, will control the vast percentage of channel capacity while simultaneously receiving the benefit of reduced regulation.⁴⁸ This debate is little more than a recycling of the arguments made during the FCC’s video dialtone proceedings. Without a clear preference for an “open” system, Congress merely recreated the same old industry conflicts in a new forum. As one Capitol Hill attorney who helped draft the legislation recently admitted, “It’s not entirely clear that we knew what we were doing.”⁴⁹

IV. LOCAL LOOP COMPETITION

While Congress failed to embrace a clear vision in the video marketplace, the same cannot be said with regard to the provision of local exchange service. There the policy goal is straightforward—dismantle the local telephone monopolies, through interconnection and unbundling of the local loop and promoting real competition in the local telephone market.⁵⁰ The Telecommunications Act brings a number of rigorous directives to bear to achieve these goals. In addition to obli-

45. Comments of Bell Atlantic at iv, 6, *In re* Implementation of Section 302 of the Telecommunications Act of 1996 (FCC) (CS No. 96-46).

46. Comments and Petition for Reconsideration of the National Cable Television Association, Inc. at 2-3, *In re* Implementation of Section 302 of the Telecommunications Act of 1996 (FCC) (CS No. 96-46).

47. Comments of Tele-Communications, Inc. at 2, *In re* Implementation of Section 302 of the Telecommunications Act of 1996 (FCC) (CS No. 96-46).

48. Comments of Alliance for Community Media at 3-4, *In re* Implementation of Section 302 of the Telecommunications Act of 1996 (FCC) (CS No. 96-46) [hereinafter *Comments of Alliance*]; see also *Open Video Rules Watched Closely, Telcos Hail OVS as Successor to Burdensome Video Dialtone*, INTERACTIVE VIDEO NEWS, Apr. 15, 1996 (expressing concern that OVS will become simply “cable-lite”).

49. Chris Nolan, *Is Everybody Happy?*, CABLEVISION, Apr. 29, 1996, at 86.

50. 47 U.S.C.A. §§ 251-61 (delineating provisions to introduce competition into the local telephone service market).

gating every carrier to interconnect with the facilities and equipment of other carriers, provisions in the Act place a series of requirements on incumbent local exchange carriers designed to open the local market to competition. LECs must:

1. Allow resale of telecommunications services, priced at wholesale.⁵¹
2. Provide number portability, limited to same location, to the extent technically feasible.⁵²
3. Provide dialing parity to competing providers of exchange and toll service.⁵³
4. Provide access to poles, ducts, rights-of-way.⁵⁴
5. Enter into reciprocal compensation arrangements.⁵⁵
6. Negotiate interconnection agreements in good faith.⁵⁶
7. Provide to other carriers interconnection with the network at any technically feasible point.⁵⁷
8. Offer unbundled "network elements" at any technically feasible point.⁵⁸
9. Offer for resale at wholesale rates any telecommunications service offered by the LEC to subscribers who are not carriers.⁵⁹
10. Provide notice of changes that affect interconnection and interoperability of networks.⁶⁰
11. Allow collocation of equipment of interconnecting carriers.⁶¹

Illinois has been at the forefront of states trying to bring competition into local telephone service.⁶² However, the results of Illinois' initiative suggest that government's good intentions can be easily thwarted when met with a big stall from the dominant monopoly. Using tactics ranging from failing to facilitate collocation of equipment, to withholding detailed right-of-way maps, to charging excessive fees to implement number portability, Illinois Bell, like other BOCs, has forestalled competition thus far.⁶³ Unlike Illinois, however, most state regulators have failed thus far to even put in place the ground rules

51. *Id.* § 251(b)(1).

52. *Id.* § 251(b)(2).

53. *Id.* § 251(b)(3).

54. *Id.* § 251(b)(4).

55. *Id.* § 251(b)(5).

56. *Id.* § 251(c)(1).

57. *Id.* § 251(c)(2)(B).

58. *Id.* § 251(c)(3).

59. *Id.* § 251(c)(4)(A).

60. *Id.* § 251(c)(5).

61. *Id.* § 251(c)(6).

62. See Cauley, *supra* note 31, at A1 (reporting that Ameritech was the first RBOC to embrace opening up the local market); Richard Ringer, *Ameritech Will Accept Competition; Phone Move in Illinois May Spur Deregulation*, N.Y. TIMES, Feb.9, 1995, at D4 (providing a brief history of Illinois regulatory efforts).

63. Cauley, *supra* note 31, at A1, A6.

for local competition. A recent report by the FCC Common Carrier Bureau found that competition for local exchange services was occurring in only seven states, although fifteen others had established regulatory framework for local competition.⁶⁴ The combination of the LEC capacity to slow walk the competition process in practice and congressionally imposed deadlines to complete the deregulatory process, has driven most potential competitors in the local exchange market to limit, or at least delay, committing wired local loop alternatives.⁶⁵

The most promising infrastructure alternative to the LEC monopoly on local exchange services once looked to be the fiber-coaxial hybrid network architecture pushed by the cable industry.⁶⁶ Indeed, the Dingell-Brooks Bill, which passed the House in the last Congress, rather specifically embraced this two-wire vision as a national goal.⁶⁷ But, the uncertainty of practical interconnection, combined with the major drain of revenue from the cable industry that resulted from the 1992 Cable Act, has forced the industry to slow implementation of that system.⁶⁸

For example, Sprint Telecommunications Venture (STV), the joint venture between Sprint, TCI, Cox and Comcast, which originally sought to upgrade cable systems to provide competitive voice grade telephony, has refocused its strategy almost completely to providing stand-alone PCS service.⁶⁹ The alliance's name recently changed to Sprint Spectrum, reflecting this wireless focus.⁷⁰ Similarly, less than a month after the 1996 Act was passed, Continental Cable deciding it would rather switch than fight, announced its merger with US West.⁷¹

64. *Telephony*, COMM. DAILY, Apr. 11, 1996, at 6.

65. See James Flanigan, *AT&T Breakup II*, L.A. TIMES, Sept. 21, 1995, at D1 (explaining the significance of AT&T's acquisition of McCaw Cellular and focus on wireless entry into the local telephone market through a break-up subsidiary); see also Cindy Skrzycki, *MCI Unveils Wireless Service Plan; FCC Urged to Award License to Consortium*, WASH. POST, July 30, 1993, at D1 (reporting that MCI has a similar wireless plan to capture personal communications services market share including local telephone markets).

66. Pradeep Gupta & Dilip Limaye, *Cable's Fiber/Coax Network Is Answer for Utilities*, MULTICHANNEL NEWS, Mar. 21, 1994, at 49; *Time Warner Joins TCG As Cable Operators Pursue Telephony*, FCC REP., Dec. 15, 1993.

67. H.R. 3626, 103d Cong., 2d Sess. (1994).

68. See David Lieberman, *TCI Shifts Battle from Phone Rivals to Satellite*, USA TODAY, Oct. 28, 1996, at 6B (reporting that TCI is trial testing whether providing telephone service via cable is financially viable).

69. Mark Landler, *An Aerial Assault on the Wired Nation; Airwaves Are Ammunition of Choice Against Phone and Cable Targets*, N.Y. TIMES, Feb. 26, 1996, at D1, D5.

70. *Id.*; Mike Mills, *Sprint Promotes LeMay; Alliance Name Change Heralds Wireless Focus*, WASH. POST, Feb. 23, 1996, at B3.

71. Paul Farhi, *Phone Giant U.S. West To Buy Cable TV Firm*, WASH. POST, Feb. 28, 1996, at C1.

The 1996 Act does at least open the possibility of competition in the wired world through a route other than wireless or a huge capital investment in stringing new fiber or upgrading existing cable systems. Namely, the Act requires LECs to provide service at a wholesale price for the purpose of resale.⁷² Remember, that is how MCI got a foothold in the long-distance market.⁷³ Providing a long-distance, wireless Internet access and a resold local land line services package may be the most viable option for AT&T and MCI to enter the local exchange market as they seek to fend off the RBOC's entry into long distance. That strategy, if successfully implemented, could put significant downward pressure on the price of telecommunications services. That strategy, though, can only be successful if there is diligent implementation of the Act's mandate to resell by federal and state regulators.⁷⁴

V. EFFECT ON CONSUMERS

Will this predicted competition help consumers? There is no evidence of competitive fear in the RBOCs' recent proposal to the FCC to raise local phone bills by about ten dollars over the next several years.⁷⁵ The telcos argue that the increases would be counteracted by decreasing costs for other services; but, Congress intended to reduce overall consumer costs, not to grant leeway for creative rate adjustment. Balanced against the potential for competition, with all its attendant practical difficulty, is the potential for inappropriate cross-subsidies, which are practically impossible to police.⁷⁶ The LECs have every reason to allocate as much cost as they can to monopoly services

72. 47 U.S.C.A. § 251(c)(4)(a).

73. The FCC awarded MCI a \$1.8 billion judgment and held that AT&T was required to offer bulk capacity on its circuits for resale to third party carriers in 1981. As a result, resale common carriers were born, providing geographically-restricted service through lines leased from AT&T. Guy de Jonquieres, *Explosion of Competition in U.S. Long-Distance Service*, *FIN. TIMES*, Oct. 24, 1983, at § 3, VI.

74. The FCC's efforts to implement the Act, encourage competition and remove barriers to entry hit a roadblock recently when the United States Court of Appeals for the Eighth Circuit issued an order staying the pricing provisions the Commission adopted in its local competition order. See *Iowa Utilities Bd. v. FCC*, Nos. 96-3321, 96-3406, 96-3436, 96-3414, 96-3416, 96-3410, 96-3430, 96-3418, 96-3424, 1996 WL 589204 (8th Cir. Oct. 15, 1996) (staying certain provisions of *In re Implementation of the Local Competition Provisions in the Telecommunications Act of 1996*, (FCC 96-325), (Aug. 29, 1996)).

75. Mike Mills, *Phone Firms Seek Higher Local Rates; Average Bill Would Rise \$10 Month to Subsidize Service*, *WASH. POST*, May 7, 1996, at A1.

76. Cross-subsidization occurs when a firm shifts the costs of production in a competitive market into production in a market where it maintains a monopoly. Thus, LECs have an economic incentive to assign costs of their other businesses to their local telephone exchange business. This practice would be especially difficult to detect where monopoly and competitive services share distribution facilities.

to subsidize competitive ventures. Using ratepayer money and under the guise of building intracompany communications, the RBOC's have already built interLATA facilities capable of handling most, if not all, of today's in-region long-distance traffic.⁷⁷ Prior to the passage of the Act, they filed court challenges to the FCC's streamlined Section 214 procedure for building stand alone cable systems.⁷⁸ Those challenges were based on flimsy First Amendment arguments, but the Section 214 proceeding, however streamlined, was just about the only protection against improper cross-subsidization. Whether the LECs choose OVS, stand-alone cable or wireless cable as their means to enter the video programming business, without diligent policing to ensure against cross-subsidies, ratepayers are likely to pay the price and bear the risk.

Those at the bottom of the economic ladder are likely to be particularly hurt since they both can least afford to absorb the cost and are least likely to receive the benefit of high end competitive services. To add insult to injury to the country's poor, Congress deleted the relatively strong antiredlining provisions in both the House and Senate bills in favor of general antidiscrimination language with no clear enforcement mechanism.⁷⁹ Even the much ballyhooed Snow-Rockefeller universal service provisions,⁸⁰ which are intended to provide low-cost service to schools, libraries and rural health facilities, are likely to benefit more upscale citizens, since you need something to plug into the low-cost jack even if the jack is available.⁸¹ The Congress that passed Snow-Rockefeller with one hand made significant cuts in the

77. DANIEL L. BRENNER, *LAW AND REGULATION OF COMMON CARRIERS IN THE COMMUNICATIONS INDUSTRY* 13 (2d ed. 1996); see Bill Pietrucha, *MCI Claims Regional Bells Have Charged Inflated Access Fees*, NEWSBYTES, July 22, 1996 (reporting that RBOCs have been building excess infrastructure since divestiture in anticipation of being allowed to enter the long-distance and video markets and these networks have been financed by charging ratepayers inflated access charges).

78. See, e.g., *Ameritech Operating Cos. v. FCC*, No. 95-1441, (D.C. Cir. filed Aug. 25, 1995).

79. Redlining refers to the practice of drawing the boundaries of video service provision to exclude communities based on certain socio-economic features. The House bill contained provisions prohibiting video platform discrimination on the basis of ethnicity, race or income. H.R. 1555, 104th Cong., 1st Sess. § 653(b)(1)(G) (1995). The Senate bill contained provisions prohibiting common carrier service discrimination on the basis of rural location or income. S. 652, 104th Cong., 1st Sess. § 253A(a) (1995) (enacted). However, the final Act contains only general universal service principles on which regulators are "to base policies for the preservation and advancement of universal service." 47 U.S.C.A. § 254(b).

80. 47 U.S.C.A. § 254.

81. The Federal-State Joint Board on Universal Service set up to make recommendations to the FCC on implementation did recommend greater discounts for economically disadvantaged schools as part of its universal service recommendations. *In re Federal-State Joint Board on Universal Service* (FCC) (CC No. 96-45) (Nov. 7, 1996), at 226.

Technology in the Schools program with the other.⁸² It is hard to see how financially strapped local governments can pick up that slack.

VI. THE INTERNET PARADIGM

If this review of the legislation seems overly negative or pessimistic, I would offer this consolation: technology, and especially the Internet, is about to sweep past this legislation and make it obsolete. Once again, Congress has legislated with all eyes firmly fixed on the rear view mirror. The battles fought in this legislation were conceived of and framed prior to the phenomenal growth in the Net and especially the advent of the World Wide Web, the graphical subnetwork on the Internet. As *Business Week* noted: "The Web Changes Everything."⁸³

When the President signed Senate Bill 652 into law, he said the following: "Today our world is being remade yet again by an information revolution, changing the way we work, the way we live, the way we relate to each other. Already the revolution is so profound that it is changing the dominant economic model of the age."⁸⁴ But Congress conceptualized the Net as little more than something that arrives at your e-mail box in a plain brown wrapper.⁸⁵ Congress failed to appreciate the power of the Net, the power to enable individuals, the power to democratize, the power to create new publishers and broadband producers, the power to narrowcast and create small but viable audiences, and the power to be interactive. All of these powers were lost on legislators who simply had never been to cyberspace. What is more, Congress failed to understand the potential of the Net to deconstruct the existing industry structure. Aside from hooking up schools and libraries, and with the rather major exception of censorship, Congress simply legislated as if the Net were not there.

More attuned to what is really going on in the world, Wall Street has understood that the Net is where the action is. Promising a world that is richer than movies on demand, or even 500 channels of video programmed by some mind-numbing mass media company, investors

82. See Emergency Supplemental Appropriations, Pub. L. No. 104-19, 109 Stat. 194, 216-17 (1995) (rescinding funds previously made available under Public Law 103-333 to the Department of Education for school reforms and various education programs).

83. Cortese, *supra* note 4.

84. *Remarks, supra* note 2, at 216.

85. Congress's attempt at Internet content regulation through the Communications Decency Act illustrates the difficulty members have in both conceptualizing and governing Internet communications. See *supra* note 5 and accompanying text (describing the Exon Amendment).

have rushed into Net stock.⁸⁶ Not just a phenomenon confined to hot startups like Netscape, all of the major software industry players are betting that the Net will revolutionize how we work, how we play, how we create and how we communicate. Even mighty Microsoft, having been slow to catch the Net wave, has recently reorganized its company to focus on Internet-based networked computing.⁸⁷ IBM's Lotus, the leader in intranetworking software, suffered a blow recently when it lost its alliance with AT&T, and is rushing to stay relevant in an era where software applets are available on the Net.⁸⁸ Oracle is betting that a \$500 Net appliance will finally shake the Microsoft/Intel grip on the PC market.⁸⁹

What does this mean to the traditional telecommunications industry? Everything. A good deal of the growth in revenues in the traditional telephone business has been the unexpected (unexpected to the LECs, that is) surge of two- and three-line households.⁹⁰ That's not just a lot of pre-teenagers ordering their first Princess phones. That's America plugging in and getting on-line.

What do Americans find when they get there? A lot that is cool. A lot that is new. And a lot that is really slow. There are two reasons why the Internet is slow. First, the rather anarchic nature of the Net itself, with no central command, makes the Net's routing system inefficient at times. "Host contacted: waiting to connect" has replaced the blinking 12:00 on VCRs as the electronic symbol people hate the most. The Net techno-town hall is going to have to solve that problem, perhaps with some adjustments to the copyright law.⁹¹ Second,

86. See *The Internet Grows on the Stock Market, and Vice Versa; Web Software Firms Share Offer Is Hit*, WASH. POST, Apr. 3, 1996, at G1 (describing the soaring prices of initial public offerings of Internet-related stock).

87. John Markoff, *Microsoft Sets a Revamping to Gain Edge on the Internet*, N.Y. TIMES, Feb. 20, 1996, at D1.

88. Laurence Zuckerman, *AT&T Plans to Discontinue Network Notes*, N.Y. TIMES, Feb. 29, 1996, at D4. The alliance has since been restored, though in a reworked fashion. Laurence Zuckerman, *AT&T and IBM Notes Alliance Is on Again*, N.Y. TIMES, Mar. 20, 1996, at D1.

89. Peter H. Lewis, *Doubts About the Fantasy of a \$500 'Network PC'*, N.Y. TIMES, Nov. 27, 1995, at D3.

90. Mark Landler, *Multiple Family Phone Lines, A Postwar U.S. Trend*, N.Y. TIMES, Dec. 26, 1995, at A1. In 1995, the percentage of households with more than one telephone line doubled to 16%—the largest single-year increase in new residential phone lines since the end of World War II. *Id.* The information superhighway segment is propelling this increase in demand. *Id.* at D2. Some predict that by the year 2000, as many as half the nation's households will have two or more phone lines. *Id.* at A1.

91. The technical nature of the World Wide Web involves the creation of copies for purposes of storing and forwarding information to its end user. Cyberspace Law Institute, *Copyright Law on the Internet: The Special Problem of Caching and Copyright Protection* (Draft) (1995), available on the Internet at <http://www.ll.georgetown.edu/lc/cli.html>. Certain techniques such as "caching" of Web pages (temporarily storing the page on a hard drive to enhance performance)

and more significant, is the Net's inability to move bits at a high enough rate—a problem of lack of bandwidth. Moving graphics, as opposed to text, audio files, and especially video files, requires the transport of huge amounts of data.⁹² That problem is going to be solved by telecommunications transport companies.

Competition is going to fix the bandwidth problem. The cable industry is promising a cable modem fifty times faster than high-end telephone modems currently available for PCs.⁹³ The telephone industry, which for a long time ignored ISDN, and then priced it out of the consumer market, are now trying to counter cable modems with new compression technologies like ADSL/HDSL that promise delivery of full motion video over the copper plant.⁹⁴

raise questions about copyright liability, which are currently being considered Congress. *Id.*; see INFORMATION INFRASTRUCTURE TASK FORCE, INTELLECTUAL PROPERTY AND THE NATIONAL INFORMATION INFRASTRUCTURE: THE REPORT OF THE WORKING GROUP ON INTELLECTUAL PROPERTY RIGHTS (1995); H.R. 2441, 104th Cong., 2d Sess. (1996); S. 1284, 104th Cong., 2d Sess. (1996). For a cogent analysis of proposed changes to copyright law, see David G. Post, Controlling Cybercopies; LEGAL TIMES, Apr. 8, 1996, at 39.

92. See Loring I. Wirbel, *Communications Design*, ELEC. ENGINEERING TIMES, March 4, 1996, at 45 ("Everyone agrees that analog modems . . . will be increasingly inadequate to handle access to Web pages with rich graphics But there is no single, clear evolutionary path to wideband and broadband service").

93. See Reinhardt Krause, *Cable Modems Push into Set-Top Turf*, ELEC. NEWS, Dec. 4, 1995, at 1, 86. Reporting on developments at the Anaheim Western Cable Show showcasing cable modems for PCs, Krause writes:

Most cable modems deployed for testing thus far have operated at about 10 Mbps, but second- and third-generation units moving into deployment next year will offer data speeds up to 30 Mbps. In comparison, leading-edge telephone modems operate at 28.8 Kbps over copper wiring; ISDN lines, which convert analog to digital, operate up to 128 Kbps.

Id.

94. Don McCullough, a product-line manager for Broadband Technologies, Inc., noted that "even ADSL could be seen as [a] quick-strike effort[] by phone companies to get something deployed soon, before . . . cable modems are out there [T]elcos . . . have to move . . . to challenge the cable industry on both Internet access and digital video. In some senses, it would be good if the cable industry bloodies the telephone companies with cable modems to a certain extent, so that they do not become complacent with first-generation ISDN or DSL architectures." Wirbel, *supra* note 92, at 51; Brian Santo, *Group Forming to Spread ADSL Gospel*, ELEC. ENGINEERING TIMES, Aug. 29, 1994, at 18 ("ADSL can be an important interim solution for phone companies, allowing them to battle their cable competitors until they can install their own switched, high-bandwidth networks."); see Edmund L. Andrews, *Steep Hurdles to Web Shortcut; Rapid-Access Computer Lines Are Stumbling over High Prices*, N.Y. TIMES, Mar. 25, 1996, at D1 (describing RBOC pricing and provision of ISDN services); Alan G. Hutcheson, *HDSL Turns Copper Cable into a Buried Treasure*, TELEPHONY, Dec. 14, 1992, at 34 (discussing the reasons behind deployment of HDSL technology by LECs); Bart Stuck, *The Local Loop Adapts for New Roles*, BUS. COMM. REV., Oct. 1995, at 55, 56 (describing LECs' use of HDSL and ADSL compression technologies to upgrade their copper network access facilities to carry higher-bit-rate traffic).

George Gilder has written persuasively about yet another technology model.⁹⁵ Building on the work of Paul Green at IBM Watson Labs, Gilder predicts that the future is in all fiber networks.⁹⁶ He has dubbed this the “dumb and dark” network.⁹⁷ Built on the infrastructure of existing dark fiber (fiber already laid but not utilized) in the long-distance network and dumb “switchless” routing, he hypothesizes that the cost-reductions of moving bits will follow the same exponential performance curves experienced in computing power and memory.⁹⁸

Whichever technological solution wins out, the result will almost surely be a telecommunications infrastructure in which the cost of moving bits will be driven down to the point that it becomes cheap or perhaps virtually free to the consumer. An infrastructure based on low cost, high capacity transport makes possible a network architecture that resembles the World Wide Web more than existing cable systems or planned OVS platforms.⁹⁹ Intelligence will be at the fringe of the network rather than being controlled by the conduit providers. Customers will be able to seek out and download entertainment, information, and applications from thousands of sources rather than from a preselected menu of channels. The chokehold on programming by conduit providers, including broadcasters, will be over. Value will be added by people with navigation tools and, most importantly, by people who have something to say, draw, compile, print, or produce.

Whether Congress, in passing the Telecommunications Act of 1996, intended it or not, the market will drive the infrastructure towards something resembling the Open Data Network vision embraced by the National Research Council.¹⁰⁰ That vision included four network characteristics: universal connectivity, competitive access for all information providers, open standards for network interconnection, and a

95. George Gilder, *Into the Fibersphere*, FORBES ASAP, Dec. 7, 1992, at 111.

96. *Id.* at 112, 114-15.

97. *Id.* at 117.

98. *Id.* at 114. According to Gilder, “Just as the old IC [integrated circuit] made transistor power virtually free, the new IC—the all-optical network—will make communications power virtually free.” *Id.* at 114. And by making communications power (i.e., bandwidth) nearly free, the all-optical network or fibersphere will revolutionize the environment of all information industries and technologies. *Id.* at 125.

99. See Stewart Alsop, *WebTV's Integration of Television and the Web Is Clever and Priced Right*, INFOWORLD, July 15, 1996, at 102 (describing WebTV, a low cost, consumer electronic device that integrates television viewing and Web surfing); *Webbed*, ECONOMIST, Jan. 20, 1996, at 82, 83 (discussing the broad potential that WebTV will have as transmission speeds improve).

100. NRENAISSANCE COMMITTEE, NATIONAL RESEARCH COUNCIL, REALIZING THE INFORMATION FUTURE: THE INTERNET AND BEYOND 3-4 (1994) [hereinafter INFORMATION FUTURE].

network open to change, i.e., open to new applications and new technologies.¹⁰¹

The revolution has just begun. AT&T's offering of highly discounted Net access through a flat rate for unlimited monthly use, as well as free access for those who use it less than five hours per month,¹⁰² was met with a similar offer by MCI.¹⁰³ This is certain to accelerate the need for more bandwidth. These companies' vision makes possible constant on-line access at a reasonable price. And that is only the beginning. On-line, all-the-time means an open door to many time-sensitive Net uses, including instant e-mail and news updates. Some software companies, like PointCast, plan to offer the equivalent of screen savers that act as newspapers undergoing continuous updates throughout the day.¹⁰⁴

What is going to happen to the traditional carriers in this environment? Just as the 1980s was a pretty good decade for the mainframe computer industry, the next ten years promise to be pretty good years for the carriers. Through megamergers¹⁰⁵ and favorable regulatory action,¹⁰⁶ local exchange carriers are fighting to keep a strong hold on their local markets and resulting profits. Local exchange carriers will no doubt use what means they have to convince regulators that they should resist the irresistible tide that is likely to deconstruct their industry. For example, in the wake of the AT&T Internet access announcement, the Regional Bell Operating Companies have threatened to seek FCC approval of a new modem tax.¹⁰⁷ Currently, FCC regulations prohibit local telephone companies from assessing a

101. *Id.* The proposed network will require an appropriate architecture. The Committee envisions a four-level layered system: The first level is the bit-level or *bearer service* realized out of the lines, switches and elements of networking technology; the second level is the *transport* level which can transform the bearer service into the infrastructure needed for higher level applications; the third level is the *middleware* or commonly used Internet functions; and the last level is the *applications* through which users interact directly. *Id.* at 5. The Committee believes that such a structure would permit fair and open competition between providers at each of the layers. *Id.*

102. Kara Swisher, *AT&T to Begin Offering Access to the Internet; Company Faces Wide Range of Competitors*, WASH. POST, Feb. 28, 1996, at C3; John Markoff, *Bell Companies Assail AT&T's Internet Plan*, N.Y. TIMES, Feb 29, 1996, at D1, D5.

103. Mike Mills, *MCI Offers Customers Free Internet Access; Plan Is Virtually Identical to AT&T's*, WASH. POST., Mar. 19, 1996, at C1.

104. Markoff, *supra* note 102, at D5.

105. See *supra* note 8 (describing several recent mergers).

106. Many state regulators have created local obstacles to open competition in local phone service. For example, state law in Texas protects its local RBOC, Southwestern Bell, from AT&T, Sprint, and MCI by prohibiting the use of RBOC lines by any company with over 6% of the long distance market. Albert R. Karr, *Texas Defies Washington in Phone Deregulation, Protecting Its Local Bell Against Giant Rivals*, WALL ST. J., May 2, 1996, at A16.

107. Markoff, *supra* note 102, at D5.

fee for computer modem connections.¹⁰⁸ In response to the AT&T plan and others that are sure to follow, the telcos are crying foul. What happened to their lucrative access charges? Added to the LECs threats are maneuvers by existing providers to stop the Net from serving as a platform for long-distance voice calls. America's Carriers Telecommunications Association (ACTA), an association of small long-distance carriers, has filed a petition with the FCC seeking regulation of voice calls on the Net.¹⁰⁹

How the FCC handles these issues, along with the ability of the Commission and state regulators to implement the interconnection mandate of the 1996 Act, will determine the speed at which the telephone, cable, and Internet-based networks converge into an open data network.¹¹⁰ The force of technology means that the inevitability of this convergence is not really in question, but the pace of convergence still rests with federal and state regulators. In grappling with the blizzard of issues contained in the eighty-plus rulemakings the FCC is mandated to undertake by the 1996 Act and the hundreds more going on before state public utility commissions, it will be easy for regulators to become snowblind. A few simple markers ought to help guide the way.

First, regulators need to know what they are regulating. What regulatory paradigm are they adopting? Congress chose both deregulation and competition as its goals. When those goals come in conflict, one must be paramount. To realize the information future, an open network and competition must be the foremost goal. In the near term, that will mean that regulators may have to defer some deregulatory actions and create strong enforcement mechanisms to police against cross-subsidization and anti-competitive practices by the local exchange monopoly.¹¹¹ Second, regulators need to understand the

108. This telco attempt is really nothing new. The RBOCs have been trying, since the original FCC ruling in 1983, to gain permission to charge computer connections in line with voice users. The FCC refused to grant telco requests in 1987 and 1989, partly because of significant consumer protest, but their decision a third time is far from a foregone conclusion. The FCC plans to consider access charge reform as part of its ongoing implementation of the local competition provisions of the 1996 Act. *In re* Implementation of the Local Competition Provisions in the Telecommunications Act of 1996, First Report and Order, (FCC) (CC No. 96-98) (Aug. 8, 1996), at 9.

109. Petition for Declaratory Ruling, Special Relief, and Institution of Rulemaking, *In re* The Provision of Interstate & International Interexchange Telecommunications Service Via the Internet by Non-Tariffed, Uncertified Entities (FCC) (R.M. No. 8775).

110. INFORMATION FUTURE, *supra* note 100, at 34-36.

111. *Comments of Alliance*, *supra* note 48, at 2-3.

Net.¹¹² The Net is a world of abundance, not scarcity. Intelligence is distributed to the outer edge, not controlled by the Central Planning Committee. If one thinks of every bulletin board operator as a potential television programmer, the Net is a world of 15,000 channels of television on demand, not 150 preprogrammed offerings.¹¹³

Third, regulators must explicitly embrace the goal of providing more, and cheaper, bandwidth to the home. Regulators will face this decision directly by approving the pricing of ISDN offerings, deciding whether to regulate Internet phone service, approving the buildout of fiber networks and, more indirectly, by adopting regulations to make OVS platforms truly open, certificating cable companies to provide phone service and including high-end Internet services in the definition of universal service. In making each of these decisions, regulators need to adopt a supply-side philosophy—make the transport of bits cheap and fast, and new applications and consumer demand will follow.

VII. CONCLUSION

If regulators can keep their eyes on the goal of creating a fast, universal, open data network, they can help make obsolete the cable-telco squabbles that fueled a good part of the drive for the 1996 Act, the provisions of the law that resulted, and indeed, their own roles in setting the rules. The result would be a free market that valued content more than control. That would be a great public service.

112. Complete comprehension by regulators is absolutely critical. Regulators should take note of the comprehensive exploration of the Internet undertaken by the court in *ACLU v. Reno*. The court in *Reno* devoted 121 independently-numbered paragraphs in its Findings of Fact to discussing at length how the Internet works and how cyberspace is used before eventually holding unconstitutional two CDA provisions. *ACLU v. Reno*, 929 F. Supp. 824, 830-49 (E.D. Pa. 1996) (unanimous three-judge panel).

113. As Nicholas NegroponTE has observed, Web TV will not only permit the cooking enthusiast the option of tuning into Joyce Chen or Julia Child, depending on tonight's menu, but also will permit a Greek-American to select the Greek regional channel covering her hometown. NEGROPONTE, *supra* note 19, at 175-76.

