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Worth Its Weight in Copper: Is the Internet Freedom and Broadband Deployment Act Much Ado About Nothing

Bret L. Grebe

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Worth Its Weight in Copper: Is the Internet Freedom and Broadband Deployment Act Much Ado About Nothing?

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INTRODUCTION

On February 27, 2002, the U.S. House of Representatives voted strongly in favor of the Internet Freedom and Broadband Deployment Act of 2001 ("Internet Freedom Act").¹ Many predict, however, that the bill will not survive a U.S. Senate vote.² Notwithstanding the ominous predictions, an examination of this bill,

1. H.R. 1542, 107th Cong. (2001), at http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=107_cong_bills&docid=f:h1542ih.txt.pdf (on file with the North Carolina Law Review). House Bill 1542 received 273 yea votes and 157 nays. See Stephen Labaton, *Broadband Bill Advances, But Its Survival Is Doubtful*, N.Y. TIMES, Feb. 28, 2002, at C4.

2. See, e.g., *CompTel Members' Policy Angst at 'All-Time High,' But Powell Stresses Commitment to Competition*, TELECOMM. REP., Mar. 11, 2002, 2002 WL 20133341 [hereinafter *CompTel Members' Policy Angst*] (quoting FCC Chairman Michael Powell, stating that "Tauzin-Dingell is unlikely to pass"); see Labaton, *supra* note 1 (describing the legislation as having "little prospect of surviving in the Senate"); Seidenberg: *'Tauzin-Dingell' Might Not Pass Senate Until '03*, TELECOMM. REP., Mar. 18, 2002, 2002 WL 20133386 (reporting that strong opposition in the Senate makes the bill unlikely to succeed); *Tauzin Comes Under Fire for Rural Loan Tactics on Farm Bill*, TELECOMM. REP., Mar. 25, 2002, 2002 WL 20133436 [hereinafter *Tauzin Comes Under Fire*] (reporting that many members of House Energy and Commerce Committee did not believe the Senate would pass the Internet Freedom Act in its current form); Thomas E. Weber, *Politicians Are Meddling With the Net, and They Really Ought to Stop It*, WALL ST. J., Mar. 4, 2002, at B1 (reporting that the bill "isn't likely to survive a Senate vote").

popularly known as the Tauzin-Dingell bill after its primary authors, highlights some of the failures and successes of the landmark Telecommunications Act of 1996³ (“1996 Act”) and thereby suggests the direction for future policy decisions as the United States gears up for one of the next major chapters in telecommunications history—universal deployment of broadband Internet.⁴ Indeed, if money is any indicator, the sheer magnitude of lobbying expenditures spawned by the introduction of the Tauzin-Dingell bill in April 2001 suggests the importance of this chapter.⁵

The Internet Freedom Act seeks “to provide market incentives for the rapid delivery of advanced telecommunications services.”⁶ Accordingly, how could such a benignly-named and benignly-defined act arouse such a mix of political respect and rancor? Under the 1996 Act, the dominant regional Bell companies (as incumbent local exchange carriers) currently have the duty, among others, to share their networks with competing carriers.⁷ The 1996 Act further provides that the Bell companies must obtain the permission of the

3. See *infra* notes 29–35 and accompanying text.

4. See 17 F.C.C.R. 3019, 3021 (2002) (describing the widespread deployment of broadband as “the central communications policy objective of the day”). The FCC has defined broadband Internet as “advanced telecommunications capability” and “advanced services” capable of delivering last-mile upstream and downstream data transmissions of more than 200 Kbps. *Id.* at 2844, 2850. This Comment proceeds under the premise that the universal deployment of broadband Internet to U.S. homes should be a national priority. Universal deployment should not only continue to increase worker productivity, but may very well kick start equipment sales in the ailing telecommunications sector. See Amy Borrus, *Why High Tech Has Fallen off Washington’s A-List*, BUS. WEEK, Jan. 28, 2002, at 51, 51 (suggesting that new broadband applications would “trigger new sales of PCs and other gear”); see also Johnathan Burns, *Venture-Capital Community is Lobbying for the Formulation of Broadband Policy*, WALL ST. J., Mar. 27, 2002, at B5E (citing a study estimating that a nationwide broadband deployment would generate 1.2 million jobs and \$500 billion for the U.S. economy). The CEO of Cisco commented that the widespread deployment of broadband should be a “national goal” comparable to “putting a person on the moon.” Borrus, *supra*; see also Louis Uchitelle, *Job Cuts Take Heavy Toll on Telecom Industry*, N.Y. TIMES, June 29, 2002, at C1 (noting that the telecommunications industry “has accounted for more than one out of every [ten] jobs lost in the United States since the recession began in March [2001]”).

5. See Editorial, *Phone Monopolists, Again*, L.A. TIMES, Mar. 1, 2002, at B16 (citing figures by the Center for Responsive Politics that proponents and opponents of the Internet Freedom Act have distributed \$32 million in campaign contributions); see also Stephen Labaton, *Congressional Broadband Fight Intensifies*, N.Y. TIMES, Feb. 27, 2002, at C4 (estimating the broadband market value at \$150 billion per year); James B. Speta, *Handicapping the Race for the Last Mile?: A Critique of Open Access Rules for Broadband Platforms*, 17 YALE J. ON REG. 39, 41, 45 (2000) (suggesting the unmet market potential figures in the hundreds of billions of dollars).

6. H.R. 1542, 107th Cong. § 2(b) (2001).

7. Telecommunications Act of 1996, Pub. L. No. 104-104, 110 Stat. 56, 62 (codified at 47 U.S.C. § 251(c) and as amended in scattered sections of 47 U.S.C.).

Federal Communications Commission ("FCC") to offer voice and data services outside of their respective service areas.⁸ The Internet Freedom Act would allow the Bell companies to offer high-speed data services⁹ (such as broadband Internet) outside of their service areas without FCC approval¹⁰ and further eliminate certain network sharing requirements.¹¹

Opponents fear that the Internet Freedom Act would have the undesirable effect of further entrenching the Bell companies' monopolistic position in the telecommunications market, thereby translating into less choice and higher prices for consumers.¹² Proponents view the Internet Freedom Act as a welcome, if partial, rollback of an outmoded 1996 Act.¹³ The Act, they argue, would serve as a corrective measure that merely levels the competitive playing field between the Bell companies on one side, and cable, satellite, and wireless companies, on the other.¹⁴ Indeed, these latter companies presently offer data services free of comparable regulations.¹⁵ Proponents also advocate the bill as a much needed spark to revive a bruised and battered telecom sector.¹⁶

This Comment examines the strength and validity of these and other arguments in the light of recent developments in the telecommunications industry. Part I of the Comment attempts to paint, in rather broad strokes, the historical and legislative backdrop against which the current debate over broadband deployment has

8. *Id.* § 271, 110 Stat. at 86.

9. The Act defines "high speed data service" as any service capable of transmitting data "at a rate that is generally not less than 384 kilobits per second in at least one direction." H.R. 1542, § 3(a)(3). The FCC has defined "high-speed" data services as those services capable of data transmission of more than 200 Kbps capability in at least one direction. 15 F.C.C.R. 20913, 20920 (Supp. 2000). For purposes of this Comment, the distinctions are not critical and the terms "broadband Internet," "high-speed Internet," and "fast Internet" are used interchangeably.

10. H.R. 1542, § 6(a). Restrictions for offering long-distance (interLATA) voice telephone services would remain unaffected. *Id.* § 6(b).

11. *Id.* § 4 (eliminating "unbundling" sharing requirements through an amendment to the 1934 Act). Although absent in earlier versions of the House bill, the House-approved version of H.R. 1542 preserves certain types of access of competing carriers to incumbent networks. *Id.* § 4(b) (preserving interconnection sharing requirements for high-speed data services over fiber networks).

12. See *infra* notes 128–35 and accompanying text.

13. See *infra* notes 136–38 and accompanying text.

14. *Id.*

15. FCC 02-42, Separate Statement of Commissioner Kathleen Q. Abernathy, 2–3 (noting that such Title II regulations do not apply to non-LEC broadband providers), available at http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-02-42A1.pdf.

16. See, e.g., Editorial, *Shakeout in Fiber Optics*, N.Y. TIMES, July 29, 2001, at 4(14) (discussing the woes of the telecom sector).

unfolded. Part II highlights the main provisions of the Internet Freedom Act. Part III examines the Act in the light of technological trends in the telecommunications industry. Finally, this Comment concludes that, although the Internet Freedom Act is, on the whole, meritorious legislation to the extent that it would inch the United States towards the laudable goal of universal broadband deployment, proponents and opponents alike overestimate its potential impact.

I. THE TELECOMMUNICATIONS BACKDROP

Literary buffs may associate the year 1984 with George Orwell's novel of the same name.¹⁷ Telecommunications buffs (should such category exist) likely associate that year with the breakup of the AT&T telephone dynasty¹⁸ (which had reached Orwellian proportions of its own) and the birth of the so-called Baby Bells.¹⁹ The 1984 breakup order permitted AT&T to continue offering long-distance phone service, but divvied out the relatively lucrative business of providing local phone service to seven newly-created Baby Bells, or Bell Operating Companies ("BOCs").²⁰ Since the 1984 AT&T breakup, a number of developments have occurred in the telecommunications industry that set the stage for an examination of the Internet Freedom Act.²¹

17. GEORGE ORWELL, NINETEEN EIGHTY-FOUR (Irving Howe ed., Harcourt Brace Jovanovich 1982) (1949).

18. The 1984 breakup of AT&T was actually effectuated two years earlier pursuant to the consent decree in a federal antitrust suit. *United States v. AT&T Co.*, 552 F. Supp. 131, 226 (D.D.C. 1982), *aff'd sub nom. Maryland v. United States*, 460 U.S. 1001 (1983).

19. For a more comprehensive overview of the development of the telecommunications industry, see Thomas W. Bonnett, *Is ISP-Bound Traffic Local or Interstate?*, 53 FED. COMM. L.J. 239, 253-64 (2001) (tracing one hundred years of telephone regulation in the U.S.); Stephanie N. Mehta, *Say Goodbye to AT&T*, FORTUNE, Oct. 1, 2001, at 134, 136-37 (chronicling AT&T's mission to provide universal phone service dating back to 1907); Seth Schiesel, *The AT&T Chief's Report Card*, N.Y. TIMES, Dec. 22, 2001, at C1 (describing the more recent corporate unraveling of the AT&T giant).

20. In professional and popular literature, the Baby Bells are also referred to as the "Bell companies," regional Bell operating companies ("RBOCs"), Bell operating companies ("BOCs"), or incumbent local exchange carriers ("ILECs"). Notwithstanding the alliterative ring to the term "Baby Bells," with a few exceptions, this Comment refers to the Baby Bells by the more technical appellation of BOCs. See 47 U.S.C. § 153(4) (2000) (defining the original Bell companies and their successors as "Bell Operating Companies"). The popular media sometimes refers to AT&T as "Ma Bell." See, e.g., Thomas G. Donlan, *The New Ma Bell: Verizon Is Staking its Claim as the New "Old Reliable" for Widow-and-orphan Investors*, BARRON'S, Sept. 3, 2001, at 17, 17 (employing the "Ma Bell" nickname in the title).

21. These developments naturally interrelate, but for conceptual clarity, they are presented below separately and not necessarily in their chronological order of development.

A. *The Internet Leads the Technology Boom*

With the introduction of the Internet in mainstream America in the early 1990s, the proverbial “last mile”—that stretch of copper wires which brings phone service into most of the nation’s homes and is owned and controlled by the BOCs—assumed a new gleam.²² Indeed, never has copper shined so golden. The Internet generated an exuberant optimism that characterized the later years of the 1990s as reflected on Wall Street by the meteoric rise in the value of technology stocks.²³ The investment frenzy meanwhile helped fuel the development of alternative technologies such as wireless, cable, satellite, and fiber-optics communications.²⁴

B. *The Baby Bells Grow Up*

Since 1984, the original regional BOCs either have grown into veritable telecommunications giants themselves or have been swallowed by their brethren. Of the original seven BOCs, only four remain: Verizon Communications, Inc.; SBC Communications, Inc.; BellSouth Corp.; and Qwest Communications International, Inc.²⁵ In terms of market capitalization, both Verizon and SBC are twice the size of AT&T—still the largest U.S. long-distance provider.²⁶ Indeed,

22. See Speta, *supra* note 5, at 45 (describing the “last mile”).

23. Gretchen Morgenson, *Deals Within Telecom Deals*, N.Y. TIMES, Aug. 25, 2002, at 3(1) (employing terms such as “telecommunications mania” and “telecom gold rush”); *That Falling Feeling*, ECONOMIST, Mar. 7, 2001, at 59 (describing the boom and bust of the U.S. technology sector as “[l]ike all good cartoon characters, the world’s biggest technology companies kept running obliviously in mid-air long after the economic ground fell away beneath them”); Uchitelle, *supra* note 4 (describing telecommunications companies as “[h]aving wildly overexpanded in the 1990’s”).

24. See Morgenson, *supra* note 23 (suggesting that telecommunications executives committed billions of dollars of company finances to invest in communications networks based on projected demand).

25. Carl M. Cannon, *Note To Feds: Lead, Follow, or Get Out of the Way*, FORBES ASAP (Sept. 10, 2001), at <http://www.forbes.com/asap/2001/0910/056.html> (on file with the North Carolina Law Review).

26. Charles Haddad, *The Bells Aren’t Ringing: Economic and Telecom Woes Show up on Their Bottom Lines*, BUS. WK., Nov. 12, 2001, at 118, 118. The largest of all the remaining Baby Bells, Verizon, is the progeny of the 1997 merger between Bell Atlantic and Nynex and the 2000 merger of Bell Atlantic and GTE. Donlan, *supra* note 20; see also Jayson Blair, *Verizon Seeks Advantage Over Smaller Competitors*, N.Y. TIMES, Dec. 15, 2001, at D3 (reporting that Verizon operates more than 128.5 million phones lines in its multi-state service area). SBC is the second largest Bell. Simon Romero, *BellSouth’s Down-Home Strategy; Local Telephone Service Has Become a Haven For Cautious Company*, N.Y. TIMES, Sept. 3, 2001, at C1. Bell South, serving nine states, currently is the third biggest Bell. *Id.* Qwest became a Baby Bell upon its purchase of U.S. West, the local Bell for fourteen Western states. Barnaby J. Feder, *Qwest Moves to Shore Up Its Finances*, N.Y. TIMES, Feb. 15, 2002, at C1. Qwest controls one of the nation’s largest

AT&T receives frequent mention as a potential takeover target for the Baby Bells.²⁷ Not surprisingly, policymakers, lawmakers, and consumer watchdogs continue to view the BOCs as monopolies which should be subject to some degree of regulation or monitoring.²⁸

C. *Telecommunications Act of 1996*

Concerned with the BOCs' continued dominance of the local phone service market and their near-monopolistic control of the "last mile," Congress passed the Telecommunications Act of 1996.²⁹ The 1996 Act sets forth a long and complex set of rules and regulations aimed at promoting competition, reducing regulation, and encouraging the development of new technologies in the telecom sector.³⁰

Various provisions of the 1996 Act sparked what might be dubbed the "copper rush"³¹ of the 1990s. Under the 1996 Act, BOCs (as incumbent local exchange carriers) must share their networks with competing local exchange carriers ("CLECs").³² BOCs must also offer telecommunications services for resale to CLECs at wholesale rates.³³ Eyeing the apparent advantages of such piggyback provisions, start-ups thereafter raced into the fray hoping to make a buck or two by providing telecom services better and cheaper than their less nimble competitors.³⁴ By one report, the number of competing

fiber-optics network and is the fourth largest long-distance provider in the U.S. Simon Romero, *Qwest to Cut 4,000 Jobs And Reduce Its Expenses*, N.Y. TIMES, Sept. 11, 2001, at C6.

27. See, e.g., Schiesel, *supra* note 19 (discussing the recent difficulties and subsequent maneuvers of AT&T).

28. See Labaton, *supra* note 1.

29. Telecommunications Act of 1996, Pub. L. No. 104-104, 110 Stat. 56 (1996) (codified at 47 U.S.C. § 251(c) and as amended in scattered sections of 47 U.S.C.). Specifically, Congress enacted the 1996 Act "[t]o promote competition and reduce regulation in order to secure lower prices and higher quality services for American telecommunications consumers and encourage the rapid deployment of new telecommunications technologies." *Id.*

30. Note that many of the provisions of the 1996 Act actually constitute amendments to the 1934 Act, the historical predecessor to the 1996 Act. See 47 U.S.C. §§ 151-615 (2000 & Supp. 2002); Communications Act of 1934, Pub. L. No. 73-416, 48 Stat. 1064.

31. The term "copper rush" is the author's.

32. See 47 U.S.C. § 251(c)(2)-(3) (describing duties of interconnection and the unbundling of network elements).

33. See 47 U.S.C. § 251(c)(4).

34. Stephen P. Pizzo, *Why Is Broadband So Narrow?*, FORBES, Sept. 10, 2001, at 50; see also Simon Romero, *Telecommunications Industry Too Devastated Even for Vultures*, N.Y. TIMES, Dec. 17, 2001, at C20 (describing the explosion of investment in the telecom field following passage of the 1996 Act).

carriers increased nearly threefold, from 78 to 230, following passage of the 1996 Act.³⁵

The 1996 Act features a carrot-and-stick mechanism designed to encourage BOCs to open their networks to competitors and to enforce the baseline duties imposed by the 1996 Act. The carrot—the 1996 Act rewards BOC state subsidiaries that succeed in opening their networks to the competition by allowing those subsidiaries to compete in the long-distance market within their respective service areas.³⁶ The stick—the 1996 Act also authorizes the FCC to impose fines on parties that are delinquent in fulfilling duties imposed by the 1996 Act.³⁷ The 1996 Act, however, limits the FCC in terms of the number and size of the penalties that it may levy upon the BOCs for non-compliance.³⁸ Indeed, although the Baby Bells have paid millions of dollars in penalties annually, such fines represent only a small fraction of their revenue, leading competing carriers to complain that the 1996 Act contains too much carrot and not enough stick.³⁹

35. Romero, *supra* note 34.

36. See 47 U.S.C. § 271 (outlining fourteen requirements that a BOC must satisfy to offer long-distance services within its respective service area). In January 2000, Verizon was the first of the Bells to get the green light to compete in its in-state (New York) long-distance market. Neil Weinberg & Scott Woolley, *Telecomeback*, FORBES, Jan. 21, 2002, at 80, 83. Today, BOCs in at least nine states—comprising more than a quarter of the U.S. population—have received such permission, *id.*, and the rate at which BOCs are allowed to enter their respective long-distance markets will likely increase. Steve Rosenbush, *The Long Morning After*, BUS. WK., Jan. 14, 2002, at 102, 102 (predicting a more laissez-faire approach under FCC Chairman Michael Powell, a Bush appointee); see also Steve Rosenbush, *AT&T and BellSouth Talk Merger*, BUS. WEEK, Oct. 8, 2001, at 10, 10 (“The current FCC is also more receptive to industry consolidation.”); Scott Woolley, *A Call for Help*, FORBES, Sept. 17, 2001, at 114, 115 (describing the new FCC chairman as the “antiregulator regulator”). The FCC itself recently has faced pressure to deregulate from the United States Court of Appeals for the District of Columbia Circuit. See, e.g., *Fox Television Stations, Inc. v. F.C.C.*, 280 F.3d 1027, 1043–44 (D.C. Cir. 2002), *modified by* *Fox Television Stations, Inc. v. F.C.C.*, 293 F.3d 537 (D.C. Cir. 2002) (concluding that FCC’s decision to retain a national television station ownership rule was arbitrary and capricious); see also, Stephen Labaton, *Impatient Court Presses the F.C.C. to Deregulate*, N.Y. TIMES, Feb. 25, 2002, at C2 (“Impatient with the slow pace of deregulation and unfulfilled promises of the Telecommunications Act of 1996, the court has repeatedly shown disdain for the justifications for decades-old rules that had been offered by the appointees of the Clinton administration.”).

37. 47 U.S.C. § 501–03 (2000) (defining statutory penalties and forfeiture provisions).

38. See 47 U.S.C. § 503(b); see also Cannon, *supra* note 25 (reporting that the FCC levied \$370 million in fines in 2000 against the BOCs for uncooperative tactics).

39. See Stephen Labaton, *Telecommunications: Lament but Little Repair*, N.Y. TIMES, July 31, 2002, at C1 (reporting that the hundreds of millions of dollars paid out by the Baby Bells represent only a small fraction of their revenue); see also *CompTel Members’ Policy Angst*, *supra* note 2 (quoting FCC Chairman Michael Powell that the FCC’s current fines merely represent a “cost of doing business” for the BOCs).

D. Reciprocal Compensation Agreements

The 1996 Act imposes a duty on all local exchange carriers “to interconnect directly or indirectly with the facilities and equipment of other telecommunications carriers.”⁴⁰ The 1996 Act further requires carriers to establish reciprocal compensation agreements for intercarrier calls.⁴¹ Issues surrounding the interpretation and enforcement of these reciprocal compensation agreements, however, have proven among the most contentious, and litigious, issues under the 1996 Act.⁴² Such compensation arrangements (usually between an incumbent carrier and a competing carrier within the same service area) may be created through voluntary negotiations⁴³—with the assistance of mediation if necessary⁴⁴—or, if voluntary negotiations fail, through compulsory arbitration.⁴⁵ Under many reciprocal compensation arrangements, each carrier agrees to pay the other carrier a per-call fee for intrastate (local) calls that “terminate” on the other carrier’s switching network.⁴⁶ Such reciprocal compensation agreements work most efficiently when the carriers’ clients make roughly the same number of outgoing calls as the number of incoming calls received. Payment disputes arose with increasing frequency, however, as CLECs attracted more and more Internet Service Providers (“ISPs”) as clients.⁴⁷ Incoming calls to ISPs far outnumber their outgoing calls.⁴⁸ The high rate of ISP-bound calls thus generated a significant source of income for the CLECs, and over time BOCs refused to compensate CLECs for such ISP-bound calls. BOCs claimed, among other things, that such calls were not intrastate (local) calls at all, but rather interstate calls, and therefore not subject to compensation under the reciprocal compensation agreements.⁴⁹

40. 47 U.S.C. § 251(a)(1).

41. § 251(a)(5). Interconnection agreements are subject to the approval of state public utility commissions. § 252(b)(1).

42. See, e.g., *Verizon Md., Inc. v. Public Service Comm’n of Md.*, 122 S. Ct. 1753, 1761 (2002) (involving the enforceability of a reciprocal compensation agreement between the incumbent carrier in Maryland and a competing carrier).

43. 47 U.S.C. § 252(a)(1).

44. § 252(a)(2).

45. § 252(b)(1).

46. See Ernest H. Chen, *Telecom Act of 1996: Reciprocal Compensation*: Bell Atlantic Telephone Cos. v. Federal Communications Commission, 16 BERKELEY TECH. L.J. 369, 371–72 (2001) (describing the evolution of reciprocal compensation payment patterns).

47. *Id.*

48. *Id.*

49. See, e.g., *Bell Atl. Md., Inc. v. MCI Worldcom, Inc.*, 240 F.3d 279, 285 (4th Cir. 2001), *vacated by* 122 S. Ct. 1753 (2002) (describing the different positions of the parties on this issue); *Bellsouth Telecomm., Inc. v. N.C. Utilities Comm.*, 240 F.3d 270, 274 (4th Cir.

The issue is more than a question of semantics, as the winners stand to take millions of dollars of disputed charges sitting in escrow accounts across the nation.⁵⁰ In search of relief, the parties pursued several avenues such as petitioning the FCC for favorable declaratory rulings, lobbying Congress for legislative changes, and filing their respective complaints with state public utility commissions.⁵¹ In early 1999, the FCC issued a ruling that ISP-bound calls should be treated as non-local for purposes of reciprocal compensation agreements.⁵² At the same time, the FCC indicated that parties to an interconnection agreement “may reasonably have agreed, for the purposes of determining whether reciprocal compensation should apply to ISP-bound traffic, that such traffic should be treated in the same manner as local traffic.”⁵³ The FCC further concluded that “[w]here parties have agreed to include this traffic within their . . . interconnection agreements, they are bound by those agreements, as interpreted and enforced by the state commissions.”⁵⁴ In effect, the FCC concluded that a state commission’s interpretation of an interconnection agreement could override the FCC’s baseline determination to treat ISP-bound calls as non-local. Although later vacated and remanded, the ruling set the stage for the next round of legal melee as both BOCs and CLECs challenged the FCC order, albeit for different reasons.⁵⁵

Foremost among disputes was the debate as to whether federal district courts had jurisdiction to decide whether a state public utility

2001), *vacated and remanded* by 122 S. Ct. 2287 (2002); *see also* Chen, *supra* note 46, at 373 (noting that many incumbent carriers refused payment on grounds that “ISP-bound traffic terminates at distant out-of-state websites” while competing carriers argued “that ISP-bound traffic terminates locally at the ISPs’ facilities”).

50. *See, e.g., Bell Atl. Md.*, 240 F.3d at 285 (noting the unanimity of the view that the issue “involves substantial sums of money”).

51. *Id.*

52. *In re* Implementation of the Local Competition Provisions in the Telecommunications Act of 1996, Inter-Carrier Compensation for ISP-Bound Traffic, 14 F.C.C.R. 3689 (Feb. 26, 1999), *vacated and remanded* by *Bell Atl. Tel. Cos. v. FCC*, 206 F.3d 1, 7 (D.C. Cir. 2000) (vacating on the ground that the FCC did “not satisfactorily [explain] why an ISP is not, for purposes of reciprocal compensation, simply a communications-intensive business end user selling a product to other consumer and business end-users”) (internal quotation marks and citations omitted). *See generally* Chen, *supra* note 46, at 378–88 (analyzing the FCC ruling in light of the *Bell Atlantic Tel. Cos.* decision and arguing that the FCC should reverse its decision on remand).

53. 14 F.C.C.R. at 3703–04.

54. 14 F.C.C.R. at 3703.

55. *See* Chen, *supra* note 46, at 376. Incumbent carriers opposed the part of the FCC determination that reorganized state commissions’ interpretation and enforcement powers. *Id.* Competing carriers opposed the part of the FCC determination that treated ISP-bound calls as non-local for purposes of reciprocal compensation agreements. *Id.*

commission order requiring reciprocal compensation for Internet calls violated federal law. Although the Supreme Court recently resolved this dispute in favor of granting jurisdiction to federal district courts,⁵⁶ a final resolution of the interconnection agreement disputes remains elusive.

E. *The Telecommunications Industry Goes Bust*

What goes up must come down. The first public signs of weakness in the technology sector appeared in early 2000; by early 2002, upwards of two trillion dollars in market value had evaporated from the technology sector.⁵⁷ News of fallen telecom giants has become all too commonplace.⁵⁸ Among the biggest losers in the industry were companies like Global Crossing, which invested billions of dollars to build fiber optic networks to carry voice and data traffic across land and sea.⁵⁹ Not only have many of these companies since filed for bankruptcy, but the spot market for trading bandwidth on these fiber networks has collapsed, leaving many surviving companies teetering on the brink of insolvency with a trickle of the revenue stream originally forecasted.⁶⁰ The Baby Bells, meanwhile, have as a

56. See *Verizon Md., Inc. v. Public Service Comm'n of Md.*, 122 S. Ct. 1753, 1761 (2002) (holding that federal district courts have jurisdiction under 28 U.S.C. § 1331 to decide whether the order of a state public utility commission requiring reciprocal compensation for Internet calls violates federal law).

57. Simon Romero, *Telecommunications Outlook: First the Bad News, Then the Bad News*, N.Y. TIMES, June 18, 2002, at C6; see Gretchen Morgenson, *Telecom, Tangled in Its Own Web*, N.Y. TIMES, Mar. 24, 2002, at 3(1) (citing a figure of \$1.4 trillion).

58. See, e.g., Labaton, *supra* note 36 (reporting bankruptcy filings of WorldCom, Global Crossing, and Adelphia Communications, a cable service provider); Morgenson, *supra* note 57 (reporting bankruptcy filings of several telecoms including 360 Networks, PSINet, and Net2000 Communications); Romero, *supra* note 57 (reporting bankruptcy filing of XO Communications, an "established" fiber optic carrier).

59. The bankruptcy filing of Global Crossing represented one of the largest filings ever for a telecom company. Simon Romero, *S.E.C. Scrutinizing Another Company*, N.Y. TIMES, Feb. 9, 2002, at A1. Global Crossing spent five years and \$15 billion constructing a fiber optic network that was to span 100,000 miles and twenty-seven countries. Simon Romero, *5 Years and \$15 Billion Later, A Fiber Optic Venture Fails*, N.Y. TIMES, Jan. 29, 2002, at A1. As of filing for bankruptcy, the company had amassed debts of more than \$12 billion. *Id.*

60. *Global Crossing's Bankruptcy: Survival of the Slowest*, ECONOMIST, Feb. 2, 2002, at 59 (describing the precipitous drop in the price of leasing fiber optic lines and concurrent increase in capacity); Eric J. Savitz, *Wave Theory: Will the Ripple in Technology Spending Turn Into a Swell?*, BARRON'S, Jan. 21, 2002, at 15 (reporting on the industry-wide drop in sales of telecommunications equipment attendant to the fiber glut); see also Simon Romero & Seth Schiesel, *The Fiber Optic Fantasy Slips Away*, N.Y. TIMES, Feb. 17, 2002, at 3(1) ("[R]arely in economic history have so many people with so much money got it so wrong.").

whole weathered the economic storm better than most in the telecommunications industry.⁶¹

In light of the apparent continued dominance of BOCs and the seemingly steady erosion of competition,⁶² many commentators believe the 1996 Act has not lived up to its expectations.⁶³ The BOCs currently control roughly the same percentage of the local phone service market as they did when the 1996 Act was passed. In 1996, the BOCs controlled approximately 95% of the overall local phone market;⁶⁴ today, the BOCs maintain a similar share of residential local lines and approximately 91% of the overall market.⁶⁵ Although nine out of ten households can choose a competing carrier for their local

61. Romero, *supra* note 57 (citing a study naming three out of the four BOCs as among the few companies in the telecommunications industry that “are relatively free from the risk of toppling into insolvency”); Weinberg & Woolley, *supra* note 36, at 82 (describing the BOCs as the bedrock of the telecom industry in 21st century whose “millions of local phone lines—copper, twisted and terribly antiquated—have proven far more resilient and impenetrable to rivals than anyone had ever imagined”).

The BOCs have not remained completely immune to the economic woes of the telecom industry. See, e.g., Feder, *supra* note 26 (reporting on investor concerns over Qwest’s heavy borrowing and accounting practices to build an advanced network and that Qwest’s shares have dropped by 80% in the last year); Labaton, *supra* note 36 (reporting Qwest announcement that “it had exaggerated revenue and understated costs over the last three years”).

62. Romero, *supra* note 57 (reporting on the bankruptcies of several CLECs); see also Pizzo, *supra* note 34 (reporting that the regional Bells furiously fought the 1996 Act, sending the CLECs out of business); Romero, *supra* note 34 (reporting that at least twenty-seven companies with liabilities of more than \$100 million filed for bankruptcy between 1996 and 2001).

63. Bonnett, *supra* note 19, at 247 (noting disappointment among consumer advocates with the lack of progress in the cable and television markets since the passage of the 1996 Act); Stephen Labaton, *Slew of Supreme Court Cases to Focus on ‘96 Telecom Law*, N.Y. TIMES, Oct. 1, 2001, at C8 (“More than five years after supporters of the law said it would revolutionize competition in the telephone industry, local markets are still dominated by four regional Bell companies.”). For a particularly critical view of the FCC’s handling of the 1996 Act, see Daniel E. Troy, *Advice to the New President on the FCC and Communications Policy*, 24 HARV. J.L. & PUB. POL’Y 503, 505 (2001) (recommending, among other things, that the FCC take a hands-off approach to the Internet). A former solicitor general in the Clinton administration calls the 1996 Act “the single most poorly drafted statute ever enacted by Congress.” Labaton, *supra* (quoting from an interview with Seth P. Waxman). See generally Michael T. Osborne, *The Unfinished Business of Breaking Up “Ma Bell”: Implementing Local Telephone Competition in the Twenty-First Century*, 7 RICH. J.L. & TECH. 4 (2000) at <http://law.richmond.edu/JOLT/v7i1/notes1.html> (describing regulatory and court developments following the passage of the 1996 Act) (on file with the North Carolina Law Review).

64. Editorial, *Fair Local Phone Rates*, N.Y. TIMES, Jan. 24, 2002, at A26 (valuing the local phone service market at \$110 billion).

65. *FCC Reports 16% Growth in CLECs’ Market Share*, TELECOMM. REP., Mar. 4, 2002, 2002 WL 20133265 (citing an FCC report that CLECs served 9% of U.S. phone lines in 2001, an increase of 16% from 2000, and 5.5% of residential and small-business phone lines).

service,⁶⁶ competition has clearly suffered to the extent that many CLECs have not survived the collapse of the telecommunications industry.⁶⁷ The proliferation of competitors that marked the years immediately following passage of the 1996 Act stands in stark contrast to the bankruptcies and consolidations of more recent days.⁶⁸ Many commentators blame the upstarts' reversal of fortune on the market-wide excesses of the 1990s.⁶⁹ The CLECs, however, place much of the blame squarely on the BOCs which, they argue, thwarted the 1996 Act through uncooperative technical implementation,⁷⁰ unfair pricing methods,⁷¹ restrictive access policies,⁷² and litigation delay tactics.⁷³

66. *Id.*

67. *See supra* notes 57–62.

68. *See No End in Sight*, *ECONOMIST* (LONDON), May 4, 2002, at 59 (suggesting that such “painful rationalization” in the way of consolidation in the telecom industry may be necessary before the market improves); Editorial, *Protecting Media Diversity*, *N.Y. TIMES*, Feb. 23, 2002, at A14 (reporting on recent FCC and court rulings liberalizing media ownership rules and recommending new rules that would prohibit dominant media companies from discriminating against competitors); Brent Schlender, *The Tech Wasteland*, *FORTUNE*, Oct. 29, 2001, at 88, 90 (citing the numerous bankruptcy of upstart telecoms and the declining number of players in the local telephone and cable television markets).

69. *See supra* notes 23–24 and accompanying text.

70. *See, e.g.*, Cannon, *supra* note 25; Katie Hafner, *Digitally Disenfranchised; Bell Companies Are Blamed For the Slow Start Of a Fast Internet Service*, *N.Y. TIMES*, Aug. 6, 2001, at C1 (referring to accusations of heel-dragging); Yuki Noguchi, *Small Telecom Firms Step Up Fight Against Bill*, *WASH. POST*, Nov. 27, 2001, at E5 (citing competitor complaints that the Bells have “stymied access to their networks by delaying the provisioning of networks and failing to meet performance standards for delivering wholesale network services”); Eve Tahmincioglu, *A Phone Upstart, Still Annoying the Giants*, *N.Y. TIMES*, Nov. 4, 2001, at 3(6) (describing the struggle of Z-Tel Technologies, an upstart telephone carrier trying to gain a larger share of the local phone service market nationwide).

71. *See, e.g.*, *Court Orders Agency to Reconsider SBC Decision*, *N.Y. TIMES*, Jan. 1, 2002, at C2 (discussing a United States Court of Appeals case involving allegations that SBC charges competitors too much to access its network). Many pricing disputes boil down to the question of which accounting method should be used by ILECs to calculate how much it can charge competitors for access to its network. CLECs prefer a forward-looking method based on replacement costs, while ILECs prefer a backward-looking method based on incurred costs (which tend to be higher). *See Verizon Communications, Inc. v. F.C.C.*, 122 S. Ct. 1646, 1647 (2002) (holding that the FCC can require state commissions to set the rates charged by BOCs for access to its network on a forward-looking basis untied to the BOC investment).

72. Hafner, *supra* note 70 (referring to the numerous complaints lodged against ILECs by independent DSL providers); *see also* Simon Romero, *Rivals Worry About Access as Verizon Seeks Buffer*, *N.Y. TIMES*, Oct. 12, 2001, at C5 (reporting on claims of Verizon's competitors that Verizon took advantage of the events of September 11 to restrict access to its local facilities). Relief for the CLECs may be in the making. In an unprecedented move, the New York State Public Service Commission recently ordered Verizon to lower the rates it charges CLECs to lease lines on its network. Simon Romero,

F. Subscriptions to Broadband Internet Stagnate

Another goal of the 1996 Act—the widespread deployment of new technologies⁷⁴—has enjoyed mixed success. To the Act's credit, the long-distance phone market developed into a highly competitive industry,⁷⁵ and an impressive consumer market for wireless and satellite communications has developed in the Act's wake.⁷⁶ But the United States no longer leads the Internet revolution in terms of bringing the Internet to homes.⁷⁷ Domestic deployment of high-speed technology has proceeded at a disappointing pace—less than one-fifth of American homes presently subscribe to high-speed Internet.⁷⁸

Fair Local Phone Rates, Editorial, N.Y. TIMES, Jan. 24, 2002, at A26. Also, a federal appeals court ordered the FCC to reconsider its decision to allow SBC to enter the long-distance market in Kansas and Oklahoma. *Sprint Communications Co., L.P. v. F.C.C.*, 274 F.3d 549, 555 (D.C. Cir. 2001); see also *Court Orders Agency to Reconsider SBC Decision*, *supra* note 71 (reporting the background of the case).

73. See, e.g., *Call Waiting*, ECONOMIST, Jan. 10, 1998, at 57, 57 (describing the legal tactics of GTE which filed federal-court claims against the state regulatory commissions “in nearly all of the [twenty-nine] states in which it operates”); Labaton, *supra* note 63 (describing the state of uncertainty in the telecom industry after more than five years of litigation over the implementation of FCC regulations ordered by the 1996 Act); Stephanie N. Mehta, *How to Get Broadband Moving Again*, FORTUNE, Dec. 10, 2001, at 207, 208 (“[T]he process has been bogged down in lobbying, litigation, and posturing by the Bells, the long-distance carriers, the cable operators, and Internet players . . .”); Pizzo, *supra* note 34, at 50 (stating that “from the start, the regional Bells fought a furious rearguard action against the 1996 law”).

74. Telecommunications Act of 1996, Pub. L. No. 104-104, 110 Stat. 56, pmbl. (1996).

75. *A Matter of Choice—The Future of the Company*, ECONOMIST, Dec. 22, 2001, at 74 (noting that the top five companies in the long-distance telephony industry held a significantly smaller share of worldwide sales in 1998 than a decade earlier). If Verizon's foray into the long-distance market is any indication, competition, at least in the short run, will only increase as more states permit the BOCs to compete. Within six months of entering the Massachusetts long-distance market, Verizon captured nearly one-fifth of the market. Daniel Kruger, *Bell Bug*, FORBES, Nov. 26, 2001, at 226. The convenience of one fewer bill to pay likely contributes to the drive to switch.

76. See, e.g., *Verizon Plows Ahead with InterLATA Petitions*, TELECOMM. REP., Mar. 18, 2002, 2002 WL 20133400 (discussing the “sharp increase in the use of wireless communications” and its effects on landline-based telecoms).

77. South Korea apparently leads the race to universal deployment of broadband Internet—roughly half of all South Koreans subscribe to broadband Internet services. Don Kirk, *In Korea, Broadband Is Part of the Culture*, N.Y. TIMES, Oct. 29, 2001, at C3. By comparison, only 11% of U.S. households subscribe to high-speed Internet. Borrus, *supra* note 4, at 51.

78. By the end of 2001, only an estimated 11 million U.S. homes enjoyed broadband Internet connections. Roger O. Crockett, E-Biz, *Beware of Optimists: Don't Base Your Business Decisions on Overly Upbeat Market Research*, BUS. WK. E. BIZ., Feb. 18, 2002, at 5 (blaming the slow pace of broadband penetration in part on the \$50 price tag); Shelley Emling, *Tech Sector Lobbyists Pushing Broadband*, ATLANTA J. & CONST., Feb. 10, 2002, at 1P (“[W]hile nearly 80 percent of the country's homes already have access to broadband service via satellite, cable television or telephone digital subscriber lines, only about 10 percent of households have signed up.”).

Early discussion on broadband deployment focused on the *technical* hurdles. Because only a limited amount of data can be moved along the copper wires that constitute a substantial portion the nation's phone network, it has always been clear that alternative technologies would have to be developed to support faster Internet connections.⁷⁹ Two technologies—digital subscriber lines (“DSL”) and cable—currently dominate the household high-speed Internet market.⁸⁰ DSL service combines various hardware and software technologies which enhance the phone network to allow greater data flow.⁸¹ DSL's share of the broadband market, however, trails that of the cable companies, which pipe data through the same coaxial cables that bring cable television to millions of homes.⁸²

The slow start of DSL can be attributed in large part to the technical hurdles of implementing a new technology on a century-old network of copper wiring.⁸³ Some commentators, however, point toward the 1996 Act itself as a major impediment to the deployment of broadband.⁸⁴ Predictably, the loudest of these critics are the BOCs, the main providers of DSL services.⁸⁵ The BOCs complain that the regulatory rules that require them to lease their networks to competitors at reduced rates artificially drive their costs up, making it

79. See Speta, *supra* note 5, at 40–41 (“While computer operating speeds have greatly and rapidly increased, the capacity of the connections to individual computers in homes and small businesses has remained largely unchanged.”).

80. *Id.*, at 49; see also Mehta, *supra* note 73, at 208 (describing the cable and DSL Internet services as a duopoly). Although satellite Internet services are available to virtually all U.S. households, expensive installation and high subscription fees have left satellite companies with less than a 2% share of the broadband market. Adam D. Thierer, *Solving the Broadband Paradox*, ISSUES IN SCI. & TECH., April 1, 2002, at 57, 60.

81. See Jason Roy Flaherty, Comment, *Reallocating the Instructional Television Fixed Service Electromagnetic Spectrum at 2.5 GHz*, 96 NW. U. L. REV. 1177, 1193–94 (2002) (describing the technical limitations of the DSL platform).

82. See Weinberg & Woolley, *supra* note 36, at 85 (reporting that DSL providers had only signed up 3.5 million customers out of 15 million ready-to-go data ports); Mehta, *supra* note 73, at 210 (estimating that approximately 28% of broadband users rely on DSL connections compared to cable's 70% share).

83. DSL service runs on regular phone lines, but requires the installation of a special modem. Hafner, *supra* note 70 (reporting customer “frustration over spotty D.S.L. service and inferior technical support from the phone companies”); see also Jonathan R. Laing, *Get Wired: Why Cable Will Beat the Bells in the Race to Wire Your Home*, BARRON'S, Aug. 20, 2001, at 23 (noting the inherent technical difficulties of working within a network comprised of “dozens of blends and grades of copper wires”).

84. See, e.g., Alfred E. Kahn, Editorial, *Unleash the Broadband Economy*, WALL ST. J., Dec. 13, 2001, at A16 (criticizing the policy of forced sharing).

85. Mehta, *supra* note 73, at 210; Pizzo, *supra* note 34, at 50 (reporting that BOCs blame the 1996 Act for cable's supremacy in the broadband market). See generally Thierer, *supra* note 80, at 59–60 (discussing regulatory differences among telephone, cable, satellite, and wireless companies).

difficult to compete with cable companies, which have thus far remained unburdened by such regulations.⁸⁶ These regulations, known in the industry as “unbundling” requirements, apply not only to the old networks on which most telephone calls are placed, but also to the new networks built alongside the old.⁸⁷ The BOCs argue that the current regulatory scheme contravenes economic law in that BOCs essentially are forced to nurture their own competition.⁸⁸ Unbundling requirements further impede investment to the extent that they further complicate the tricky cost-benefit-and-risks calculus in the telecommunications industry⁸⁹ given the inevitable “leakage” of business to competing carriers.⁹⁰

The cable/DSL rivalry notwithstanding, the barriers to widespread broadband deployment appear to be at least as much *economical* as they are technological. Recent statistics suggest that at least three-quarters of American homes are already wired to accommodate cable Internet or a DSL line, or both; and yet, only a small percentage of those homes presently subscribe to either type of service.⁹¹ Apparently, a majority of Internet users do not believe that

86. Mehta, *supra* note 73, at 210.

87. Kahn, *supra* note 84.

88. See, e.g., Noguchi, *supra* note 70 (noting BOCs contend “that the burden of having to foster their own competition by selling access to all their equipment” harms business development); Jon Van, *Rugged Route For Broadband Bandwagon*, CHI. TRIB., Nov. 23, 2001, at 1 (noting that SBC seeks to rid requirements that it share access to its technology with rivals).

89. Cf. *No End in Sight*, *supra* note 68, at 59 (describing the telecommunications industry as “an infrastructure-intensive business” and suggesting that its collapse has been exacerbated by the gross miscalculations of predictions of future demand of their services).

90. *Hold the Line*, ECONOMIST, Dec. 12, 1998, at 18 (suggesting that the current rules deter investors because of lower returns on capital); Kahn, *supra* note 84 (arguing that the pricing mechanisms under the 1996 Act are “manifestly hostile to the large, risky investments required for genuine competition in these markets”).

91. See, e.g., *No Broad Consensus: Everybody Agrees High-Speed Access Is Crucial to the Web's Future; But How Do We Get There?*, WALL ST. J., Jan. 14, 2002, at R12 (“[M]any consumers still balk at paying \$40 to \$70 a month for broadband connections”); *Tauzin Comes Under Fire*, *supra* note 2 (mentioning that recent studies by the FCC and the Department of Commerce show that, although 85% of U.S. homes have access to broadband services, only 10% of those homes subscribe); Thierer, *supra* note 80, at 58 (citing FCC figures that between 75% and 80% of U.S. households have access to cable and/or DSL broadband Internet services, though only 7% subscribe); Thomas E. Weber, *Broadband Advocates Should Fight to Increase Demand, Not Supply*, WALL ST. J., Jan. 28, 2002, at B3 (reporting that between 70% and 80% of U.S. households have access to cable and/or DSL broadband Internet services, though no more than 10% subscribe); see also Mehta, *supra* note 73, at 207 (arguing that the high price and lack of interesting applications is holding back the deployment of broadband more than governmental regulations). According to research by a leading investment firm, only 12% of eligible U.S. households subscribe to high-speed Internet services, even though approximately

the current extra cost of broadband merits the upgrade from dial-up.⁹² Indeed, two of the most popular activities on the web, e-mail and instant messaging, perform virtually as well on an average dial-up phone line as they do on broadband.⁹³ Some commentators conclude that, at current prices, true broadband deployment will not advance without the development of more compelling applications or the introduction of more interesting content.⁹⁴ For example, many in the telecommunications industry hope that the introduction of on-demand video services will accelerate broadband deployment.⁹⁵ With a few exceptions, however, even today's faster broadband connections remain too slow to support the kind of bandwidth required for TV-quality video transmission.⁹⁶

While software and hardware firms scramble to put together tomorrow's killer applications, what should the government do, if anything, to encourage the deployment of fast Internet to the nation's

three-quarters of U.S. households are wired for cable Internet and nearly one-half are wired for DSL. *Id.*; see also Emling, *supra* note 78 (blaming the slow deployment of broadband on high prices and "a dearth of compelling content"). In the meantime, approximately fifty million Americans still tap into the Internet the old-fashioned way—with a modem and a telephone line. Lizette Alvarez, *In Capitol, AT&T and Bells Fight to Control Web Access*, N.Y. TIMES, Aug. 29, 2001, at C1.

92. See Thierer, *supra* note 80, at 58 (quoting an FCC report that "cost appears to be closely associated with the number of consumers willing to subscribe to advanced services") (citing the findings of a private study that 30% of Internet users would pay \$25 a month for broadband, whereas only 12% would pay \$40); Weber, *supra* note 91 ("Most consumers don't see a compelling reason to shell out an extra \$20 or \$30 a month for a zippier Net link.").

93. See Weber, *supra* note 91 (reporting that reading and sending e-mail is the most popular activity among both dial-up and broadband users).

94. See Clarence Page, *Old 'Mediasaurus' Still Manages to Stay Alive*, NEWSDAY, Mar. 5, 2002, at A32 ("The larger promise of music, movies, books and other copyrighted material over the Internet has been slowed in part by copyright holders who fear an explosion of Napster-style piracy."); Weber, *supra* note 91 (suggesting that the defeat of Napster removed one of the "compelling reason[s] to get a broadband connection" and supporting a compulsory Internet licensing system that would compensate copyright holders without the necessity of securing agreements from record companies); Daniel Akst, *In Technology, Supply Precedes Demand*, N.Y. TIMES, Sept. 2, 2001, at 3(4) (reporting on a consulting firm that "predicts an 'inferno' of bit-burning applications once high-capacity networks overcome the last-mile bottleneck"). One commentator claims that interactive games have been the primary push behind broadband in South Korea. Van, *supra* note 88 (reporting that Korea even established a state agency for the promotion of on-line gaming).

95. See Speta, *supra* note 5, at 44 (suggesting video-on-demand services alone could "become a one billion dollar a year market within the first three years").

96. Jube Shiver, *Intel CEO Makes Case for Broadband Aid*, L.A. TIMES, Jan. 28, 2002, at 3(1) ("Broadband, by today's definition, is cable or DSL. It's maybe 200 kilobits [per second] or 300 or 400. But broadband, I think, gets exciting when you get to 5 megabits per second or even 100 Mbps.") (quoting Intel CEO Craig Barrett).

households? Some senators have proposed the use of tax credits, grants and/or loans to encourage broadband deployment.⁹⁷ FCC Chairman Michael Powell seems to favor providing incentives to competing carriers to build their own networks rather than relying on sharing the BOCs' networks.⁹⁸ Indeed, the FCC could (and may yet), through its rulemaking authority, accomplish much of what the Internet Freedom Act purports to do.⁹⁹ A few municipal governments, perhaps seeking the competitive edge that may attach to the identification as a "wired" city, devised local initiative programs to spur broadband deployment.¹⁰⁰ But compared to other countries, relatively little has been done in the United States at the national level to promote the deployment of broadband Internet services.¹⁰¹

Meanwhile, BOCs lobby intensively for federal incentives to invest in the development of broadband technology,¹⁰² while competitors and consumer watchdogs balk at the idea of letting the BOCs control any more of the country's communication networks than they already do.¹⁰³ The result so far is a stalemated legislative tug-of-war fueled by significant sums of money on both sides of the rope.¹⁰⁴ Enter the Internet Freedom Act.

97. See *Tauzin Comes Under Fire*, *supra* note 2; Thierer, *supra* note 80, at 57, 61 (dubbing the introduction of such bills the "Digital New Deal").

98. Stephen Labaton, *U.S. Appeals Court Order Is Victory for Regional Bells*, N.Y. TIMES, May 25, 2002, at C3.

99. See Labaton, *supra* note 1; Weber, *supra* note 2 (reporting on a proposed FCC regulation that would allow BOCs to offer long-distance data services without the usual sharing requirements); *cf.* Burns, *supra* note 4 (reporting on an FCC decision relieving cable providers that offer high-speed Internet services of a prior obligation to lease bandwidth to competitors). See generally Thierer, *supra* note 80, at 57, 60–62 (arguing that industry-wide harmonization and clarification of regulatory rules would stimulate broadband deployment more than government subsidization efforts).

100. Pizzo, *supra* note 34, at 50 (describing CivicNet, a program in Chicago, as an example of municipal initiatives); Thierer, *supra* note 80, at 62 (stating that such "broadband municipalization efforts have not made much progress" and arguing that the municipalization of broadband networks runs the risk of "greater bureaucratic micromanagement").

101. See Burns, *supra* note 4 (reporting that the U.S. is the only country among the Group of Seven leading industrial nations without a national broadband policy); see also Pizzo, *supra* note 34, at 50 (describing broadband initiatives in Canada including SuperNet in Alberta, and Canarie at the national level).

102. Katie Hafner, *The Internet's Invisible Hand*, N.Y. TIMES, Jan. 10, 2002, at G1.

103. See *infra* notes 128–35 and accompanying text.

104. See *supra* note 5 and accompanying text.

II. THE INTERNET FREEDOM AND BROADBAND DEPLOYMENT ACT OF 2001

Introduced in the House on April 24, 2001, the Internet Freedom and Broadband Deployment Act of 2001 aims to accelerate the deployment of advanced Internet services through market incentives.¹⁰⁵ The primary mechanisms by which the Act seeks to achieve its purposes are twofold. First, the Internet Freedom Act would permit BOCs to offer long-distance data (broadband) services regardless of the development of competition in their respective service areas.¹⁰⁶ Second, the Act would exempt the BOCs high-speed data networks from network sharing (“unbundling”) requirements currently imposed under the 1996 Act.¹⁰⁷

Some commentators object generally to the type of deregulation contemplated by the Internet Freedom Act, arguing that the nation’s phone lines should be treated as quasi-public assets.¹⁰⁸ Because new networks are built with the returns from these quasi-public assets, critics argue even those new networks should be subject to regulation and open to competing carriers.¹⁰⁹ The Internet Freedom Act accommodates this view to a limited extent. For example, the Act provides that BOCs must offer requesting carriers access to the BOCs high-speed fiber loops.¹¹⁰ The Act also preserves BOCs’ duty to provide space for competing carriers to build next to BOCs’ remote terminals¹¹¹ and ensures CLECs access to the BOCs’ rights-of-way.¹¹²

105. H.R. 1542, 107th Cong. § 2(b) (2001). A number of related “Internet” bills have been introduced in both houses of Congress, but the Internet Freedom Act has drawn the most publicity to date. See Broadband Regulatory Parity Act of 2002, S. 2430, 107th Cong. (2002), at <http://thomas.loc.gov/cgi-bin/query/z?c107:S.2430> (on file with the North Carolina Law Review); Broadband Deployment and Competition Enhancement Act of 2001, S.1126, 107th Cong. (2001); Broadband Internet Access Act, S. 88, H.R. 267, 107th Cong. (2001), at http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=107_cong_bills&docid=f:h267ih.txt.pdf (on file with the North Carolina Law Review); Rural America Technology Enhancement (“RATE”) Act, H.R. 2847, 107th Cong. (2001), at http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=107_cong_bills&docid=f:h2847ih.txt.pdf (on file with the North Carolina Law Review).

106. H.R. 1542, § 6(a).

107. *Id.* § 4.

108. See James B. Speta, *A Common Carrier Approach to Internet Interconnection*, 54 FED. COMM. L. J. 225, 226 (2002) (arguing that the regulatory framework for the Internet should be based on the rules of common carriage); see also Romero, *supra* note 72 (reporting on the decision of the New York State Public Service Commission ordering Verizon to lower the rates it charges competitors to lease lines on its network).

109. Romero, *supra* note 72.

110. H.R. 1542, 107th Cong. § 4(b) (2001) (amending section 251(j)(1)(B)(i) of the 1934 Act).

111. *Id.* (amending section 251(j)(1)(C) of the 1934 Act).

112. *Id.* (amending section 251(j)(1)(D) of the 1934 Act).

On the other hand, by defining this access to fiber loops as a “nondominant service,”¹¹³ the Act would exempt BOCs from wholesale pricing rules.¹¹⁴ The Act thus appears to represent a compromise between the 1996 Act piggyback provisions and complete deregulation. Such compromise reflects fundamental differences between old-fashioned telephone services and the multi-platform Internet service. Unlike the old telephone networks, the Internet is not a natural monopoly, but rather an amalgam of networks whose success in large part has been due to so-called “peering arrangements.”¹¹⁵ Under these peering arrangements, the (mostly private) firms that control the backbone of the Internet agree to exchange data traffic free of charge.¹¹⁶ To the extent that many consumers can access the Internet by bypassing the BOCs’ networks altogether,¹¹⁷ fears that the Internet Freedom Act would lead to a monopolization of Internet services are exaggerated. Thus, the Internet might be said to be self-immunizing from monopolistic control. The greater danger is that the BOCs may simply decide that it is not worth upgrading the “last mile” of fiber without a stronger guarantee that they will be able to profit from their labors.¹¹⁸ Such demands begin to appear more reasonable in light of the ill-fated experience of the start-up companies that folded while laying the foundation of that fiber optic network.¹¹⁹

The Internet Freedom Act further seeks to resolve some of the collateral issues that have plagued the implementation of the 1996 Act since its inception. For example, with respect to the disputes over reciprocal compensation agreements,¹²⁰ the Internet Freedom Act

113. *Id.* (amending section 251(j)(1)(B)(iii) of the 1934 Act).

114. *See, e.g.*, 14 F.C.C.R. 14221, 14245–46 (describing the differences in regulatory treatment afforded dominant carriers and non-dominant carriers).

115. Hafner, *supra* note 102 (describing the Internet as “a sprawling collection of networks owned by various telecommunications carriers”).

116. *Cf.* Stephanie N. Mehta, *So Square It's Hip; BellSouth Missed Out on All the Frenzied Telecom Action*, FORTUNE, Sept. 3, 2001, at 209 (noting an agreement between BellSouth and SBC that allows each company's cell phone customers to call from the other's network at no extra charge); *see also* H.R. 1542, 107th Cong. § 3(a)(4) (2002) (defining “Internet backbone”).

117. *See infra* notes 180–82 and accompanying text.

118. Arguing along similar lines, some commentators have proposed that the builders of new networks should have exclusive control of those networks, but only for a limited amount of time. *Cf.* Alvarez, *supra* note 91 (reporting that some Washington aids have suggested timetables that would dictate when BOCs could cease mandatory network sharing).

119. *See supra* notes 57–60 and accompanying text.

120. *See supra* notes 40–56 and accompanying text.

defines the nature of Internet access services¹²¹ as inherently interstate and international,¹²² and expressly preempts state regulation.¹²³ Thus, the Internet Freedom Act reinforces the FCC ruling concerning the interstate nature of ISP calls and, perhaps more significantly, tips the scale of authority in favor of the federal government with respect to the (de)regulation of Internet telecommunications services. With respect to the FCC and enforcement of the 1996 Act,¹²⁴ the Internet Freedom Act makes several findings that are critical of the FCC. The Act finds that the FCC has impeded the deployment of high-speed Internet access both as a result of its own regulations¹²⁵ as well as faulty application of the 1996 Act.¹²⁶ These rebukes notwithstanding, the Act also gives the FCC authority to levy fines of up to ten times present levels.¹²⁷

A number of interests have lined up against the bill,¹²⁸ including cable companies,¹²⁹ long-distance providers,¹³⁰ independent DSL

121. H.R. 1542, § 3(a) (“The term ‘Internet access service’ means a service that combines computer processing, information storage, protocol conversion, and routing with transmission to enable users to access Internet content and services.”).

122. *Id.* § 2(a)(1) (preempting state regulation in this area).

123. *Id.*

124. See *supra* notes 36–39 and accompanying text.

125. H.R. 1542, § 2(a)(2) (finding that FCC and state regulations have impeded broadband deployment to the detriment of consumers).

126. *Id.* § 2(a)(6) (finding fault with the FCC’s interpretation of the 1996 Act’s prohibition on BOCs of long distance services).

127. *Id.* § 8 (authorizing the FCC to impose a penalty of up to \$1,000,000 for each distinct violation).

128. If the frequency of editorials is any indication, the bill is rife with opposition. See, e.g., *Broadband Captives*, Editorial, ST. PETERSBURG TIMES, Feb. 22, 2002, at 20A, available at 2002 WL 12606868 (claiming the bill “would turn the so-called Baby Bell telephone companies into monopolistic bullies that make former parent Ma Bell look like a 98-pound weakling”); *Broadband Communications*, Editorial, BUFFALO NEWS, Feb. 22, 2002, at C10 (affirming that newspaper’s stance against the bill); *Don’t Let Phone Companies Bar Internet Competition*, Editorial, NEWSDAY, Feb. 26, 2002, at A32, at <http://pqasb.pqarchiver.com/newsday> (on file with the North Carolina Law Review) (urging Congressional lawmakers to vote against the bill); James K. Glassman, Editorial, *SBC Looks to William Daley for Political Clout*, ST. LOUIS POST-DISPATCH, Dec. 4, 2001, at B7 (arguing that the bill will “wipe out the remaining competitors to the mega-Bells, leaving the field free for an end-to-end monopoly takeover of U.S. telecom service” and lead to higher prices and deteriorating service); Tom Johnson, Editorial, *Burning Questions*, STAR-LEDGER, Feb. 21, 2002, at 43 (quoting Eugene Kimmelman, co-director of the Washington, D.C. office of Consumer Union, as stating the bill “could harm consumers”).

129. Yachi Dreazen & Jim Vandettei, *Plugging In: Tech Lobbyists Seek Bonanza in New Push For Speedy Internet*, WALL ST. J., Jan. 18, 2002, at A1 (showing that DSL competitors believe the Internet Freedom Act “would allow the Bells to cement their dominance over the DSL market while quashing any chance of competition in the local phone market”).

130. Labaton, *supra* note 1.

providers,¹³¹ consumer groups,¹³² a majority of state regulatory commissions,¹³³ a number of industry coalitions,¹³⁴ and politicians.¹³⁵ On the other side of the debate, a surprisingly diverse amalgam of organizations has endorsed the bill including the AFL-CIO,¹³⁶ the Communication Workers of America,¹³⁷ and coalitions of technology companies such as TechNet.¹³⁸

131. See *Hold the Line*, *supra* note 90, at 18 (noting the argument of DSL competitors that consumer prices would increase without unbundling requirements); Pizzo, *supra* note 34, at 51 (citing Thomas Santaniello, public policy manager for the Computing Technology Industry Association, who warns that deregulation would put independent DSL providers out of business).

132. See, e.g., *Press Release, Consumer Federation of America, Proposed Legislation Threatens Consumers, Competition in Local Telephone and High Speed Internet Markets* (April 25, 2001) (arguing that the Act would shift competition and undermine the efficiency of the 1996 Act), at http://www.consumerfed.org/cu-cfa_tauzinbroadbandbill_20010425.pdf (on file with the North Carolina Law Review).

133. See Letter from Members of the National Association of Regulatory Utility Commissions, to J. Dennis Hastert, Speaker, U.S. House of Representatives (Nov. 21, 2001) (listing thirty state public service commissions that have opposed the Act through letters to their congressional delegations), at http://www.naruc.org/committees/telecom/tauzin_dingell.pdf (on file with the North Carolina Law Review). The letter argues that the Act would, among other things, preempt state authority to enforce competition in the voice and data markets which could hurt competitors and increase consumer prices. *Id.*

134. See, e.g., Marilyn Geewax, *Tech Industry Split on Broadband Stance*, ATLANTA J. CONST., April 4, 2002 (reporting on the dizzying array of coalitions which have formed on both sides of the issue); cf. Brian Hammond & Edward M. Rovetto, *With Chance of Sweeping Broadband Changes at FCC, CLECs 'Galvanize,' Tech Groups Push for Deregulation*, TELECOMM. REP., April 8, 2002, 2002 WL 20133609 (describing a similar formation of coalitions surrounding FCC broadband rulemaking proposals).

135. Among the most outspoken politicians to object to the Internet Freedom Act is Democratic Senator Ernest F. Hollings, chairman of the Commerce Committee. See Alvarez, *supra* note 91.

136. Edward M. Rovetto, *As 'Tauzin-Dingell' Vote Nears, Both Sides Seek House Support*, TELECOMM. REP., Feb. 25, 2002, 2002 WL 20133219 (reporting that the AFL-CIO distributed a legislative alert to congressmen in support of the bill arguing it would stimulate the U.S. economy and create new jobs).

137. *Digits*, WALL ST. J., Dec. 13, 2001, (Technology Journal), at B8 (reporting that the 725,000-member union endorsed the Tauzin-Dingell bill in hopes of making telecom companies more competitive in face of challenges from the cable television industry).

138. TechNet is a consortium of high-tech heavyweights including Microsoft, Intel, and Compaq. See TechNet, *TechNet CEOs Call for National Broadband Policy* (Jan. 15, 2002), at http://www.technet.org/issues/updates_/2002-01-15.69.html (on file with the North Carolina Law Review). TechNet has joined the Baby Bells in an effort to pressure the FCC to ease regulations. *Id.* Hardware and software companies are banking on the prospect that the speedier deployment of broadband services will rouse flagging sales. Dreazen & Vendettei, *supra* note 129 (describing the lobbying efforts of the high-tech industry to push broadband); see also Mehta, *supra* note 73, at 207 (referring to a number of prominent leaders in the high-tech field who favor measures that would invite BOCs into the competitive fray in hopes of stimulating the economy).

III. MUCH ADO ABOUT NOTHING?

For all of the controversy and media hype surrounding passage of the bill in the House, the Internet Freedom Act, if it becomes law, may prove to be much less potent than both proponents and opponents make out. This is due in large part to the confluence of overlapping technological trends in the telecommunications industry that will have the continuous effect of diminishing the relevance of the Internet Freedom Act (or similar acts). The most important of those trends include: (1) the diminishing value of the BOCs' copper networks (which will erode the BOCs' financial edge); (2) the disappearing long-distance market (which will further diminish the value of the BOCs' copper network); and (3) the existence of alternative technologies in communications (which will keep the BOCs in check with respect to price gouging).

A. *The Diminishing Value of the BOCs' Copper Networks*

Local phone service—the BOCs' perennial cash cow—already shows signs of decline as exhibited by decreasing numbers of subscribers and declining revenues.¹³⁹ Some of the decline can be attributed in part to consumer migration to wireless telephony.¹⁴⁰ Indeed, the increasing commoditization of phone service¹⁴¹ will continue to erode the comparably hefty margins enjoyed by local exchange carriers.¹⁴² Perhaps the greatest threat to the value of the BOCs' local phone lines is the migration of voice communications from copper lines to cable or fiber-optic lines.¹⁴³ In fact, since 1997

139. Haddad, *supra* note 26 (citing a 1.3% reduction in the number of local lines in the third quarter of 2001). The decline is expected to continue as households drop second phone lines as they switch from dial-up to broadband networking or from ground to wireless telephony. *Id.* at 120; *see also* Charles Haddad, *Is Bellsouth Just Window Shopping?*, *BUS. WEEK*, Nov. 5, 2001, at 102 (citing a 1.4% annual decline in phone lines and slowing revenue growth for Bell South). In 1999, 2% of cell phone users did not even use the traditional land-based phone, up from less than 1% in the prior year. Bonnett, *supra* note 19, at 250.

140. *See* Uchitelle, *supra* note 4 (noting that cell phones have cut into the business of traditional phone service); *see also* Donlan, *supra* note 20, at 18.

141. It is already common practice among long-distance carriers to spot trade bandwidth on voice minutes to select cities. *Buying Time*, *ECONOMIST*, Oct. 27, 2001, at 61–62; *see also* Janet Guyon, *Malone's Global Grab: Retirement?*, *FORTUNE*, Feb. 18, 2002, at 98 (“Practically everything else [apart from content]—from long distance to Internet backbones to wireless service—is subject to commoditization.”).

142. Stephanie N. Mehta, *AOL's Formula: Does It Add Up?*, *FORTUNE*, Feb. 4, 2002, at 105, 106 (describing traditional narrowband service over the telephone lines as “a high-margin business”).

143. *Id.*; *see also* Weinberg & Woolley, *supra* note 36, at 85 (estimating that the volume of data traffic will catch up to voice traffic in two years).

the nation's phone networks have carried more *data* traffic than *voice* traffic.¹⁴⁴ Given that copper networks move data relatively inefficiently, it seems only natural that alternative technologies will continue to siphon traffic from the copper network.¹⁴⁵ Eric Schmit, CEO of Novell, a leading provider of networks, may have summed it up best: "We started out running the Net on top of the phone system and we'll end up with telephony running over the Net."¹⁴⁶

Two closely related industry phenomena will lead the telecommunications industry out of its copper age—convergence and digitalization.¹⁴⁷ The term "convergence" as used in the telecommunications industry refers to the amalgamation of previously distinct services (e.g., the transmission of voice messages or faxes, Internet access, or even the measurement of electricity consumption) on one system. In light of the advantages in economic efficiencies brought about through convergence, it is not surprising that the miscegenation of voice and data telecommunications is already afoot.¹⁴⁸ Telephone companies deliver information services; cable companies provide phone services.¹⁴⁹ The notion of the "last

144. *The Shape Of Phones To Come*, ECONOMIST, Mar. 24, 2001, at 24, 25.

145. Haddad, *supra* note 26 ("Consultant Eastern Management Group estimates that new technologies account for 10% to 15% of communications that would have traveled over the traditional phone network two or three years ago, and that figure will grow over time."). Fortunately for the Bells, they have a stake in many of the emerging technologies. *See id.* at 120 (reporting that the Bells control 45% of the wireless market).

146. *Snatching BT's Bride*, ECONOMIST, Oct. 4, 1997, at 19, 20.

147. *See, e.g.,* Marissa A. Piropatto, *Open Access and the Essential Facilities Doctrine: Promoting Competition and Innovation*, 2000 U. CHI. LEGAL F. 369, 369 (describing convergence as "the integration of several media into one system, delivering voice, entertainment programming, and high-speed data on one multi-function terminal"); Tuan N. Samahon, *The First Amendment Case Against FCC IP Telephony Regulation*, 51 FED. COMM. L.J. 493, 495 (1999) (describing this phenomenon as "convergence of the modes" made possible by "[d]igitalization, or the use of ones and zeroes to represent real world data."). Experimentation matching public utilities and the fiber optic lines has already begun. *See* Eric A. Taub, *Reading the Meter (and the Customer) From Afar*, N.Y. TIMES, Dec. 20, 2001 (What's Next), at G9 (reporting on a rural community in Washington whose utility usage statistics are sent down the same pipe as its television signals and seventy-five homes in Pennsylvania whose thermostats are linked to the power station such that consumers can sell back electricity to the power station during periods of peak-demand).

148. *See* Elizabeth M. Donahue, Comment, *Directly Competing Policies: The Growth of Internet Telephony and the Future of the Universal Service Fund*, 9 COMMLAW CONCEPTUS 225, 225 (2001) (suggesting that "[t]he growing popularity of Internet telephony threatens to make the traditional circuit-switched networks of voice telephony obsolete").

149. Laing, *supra* note 83, at 23 (describing mixed results from the initial efforts of cable companies to enter the voice market); Mehta, *supra* note 142, at 105–06 (reporting on AOL's \$159/month "convergence of services" plan that would deliver a bundle of services including phone service); *see also* Andrew Bary, *Market Week, Market Posts Slim Gain on Mixed Bag of Earnings*, BARRON'S, Jan. 28, 2002, at 3, 5 (describing the parent

mile” is no longer exclusive to copper phone lines, but refers more generally to other technologies such as cable¹⁵⁰ and fiber optics.¹⁵¹ This trend is well illustrated by advancements in the field of IP telephony driven by voice over Internet protocol, or VoIP technology.¹⁵²

VoIP technology derives its advantage over traditional phone networks from differences in the way data is shuffled from caller to caller. The traditional phone network relies on dedicated circuits that must remain continuously open for the duration of a telephone call.¹⁵³ The circuit remains open even during periods of silence, resulting in a comparatively inefficient use of resources.¹⁵⁴ Moreover, because any given phone network has a finite number of lines, it follows that the number of calls that the network can handle at any one time is, likewise, finite. Once that number is reached, an additional call cannot be put through unless another call is dropped. This, in fact, is precisely what happened to the phone networks in New York City in the hours following the terrorist attack on the World Trade Center.¹⁵⁵

company of Bell Canada, BCE, which delivers an impressive bundle of telecom services as “the envy of U.S. telecom companies”). As of August 2000, roughly 6% of AT&T’s customers actually had their long-distance serviced through cable lines. Scott Woolley, *Cable Crazy; AT&T Overpaid for its Cable Assets*, FORBES, Aug. 20, 2001, at 41 (expressing pessimism over Comcast’s plans to deliver voice services along cable lines).

150. See Speta, *supra* note 5, at 45–48.

151. See H.R. 1542, 107th Cong. § 4(b) (describing incumbent sharing requirements in terms of high-speed data services delivered over fiber loops and subloops).

152. See generally Donahue, *supra* note 148, at 225–29 (providing a succinct history of Internet telephony); Laing, *supra* note 83, at 23 (“Time Warner Cable, Comcast and the other leading cable companies have been running limited IP Telephony trials around the country and express much optimism about the technology.”); *The Shape Of Phones To Come*, *supra* note 144, at 25–26 (discussing recent technological advancements in VoIP technology).

153. Samahon, *supra* note 147, at 496–97.

154. *Id.*

155. Simon Romero, *Attacks Expose Telephone’s Soft Underbelly*, N.Y. TIMES, Oct. 15, 2001, at C4 (describing the apparent advantage of a decentralized network such as the Internet over hub-dependent telephone networks when the network is ruptured); see also Kenneth N. Gilpin, *Telecom Recovery: A Matter Of Time*, N.Y. TIMES, Oct. 14, 2001, at 3(6) (describing the superior scalability of the Internet compared to current telephone networks as demonstrated in the hours following the terrorist attacks of September 11); Lisa Guernsey, *Keeping the Lifelines Open*, N.Y. TIMES, Sept. 20, 2001, at G1 (describing the state of telecommunications in Manhattan immediately following the attacks of September 11); Bob Tedeschi, *E-Commerce Report: The Internet Passes Its First Test as a Source of Communications in the Aftermath of a Disaster*, N.Y. TIMES, Sept. 17, 2001, at C6 (reporting that the attacks of September 11 may have slowed but did not degrade the overall flow of Internet data according to firms which track Internet traffic).

IP telephony works more efficiently. Software digitizes, or converts sounds into a string of zeros and ones.¹⁵⁶ Those strings of data are parsed into smaller, manageable packets of data and routed along various network paths until they reach their destination where they are reassembled and converted into sound waves.¹⁵⁷ Sophisticated hardware, or “routers,” placed along the network ensure that these data packets get sent along the most efficient path.¹⁵⁸ IP telephony thus is not constrained to a finite number of circuits, but only by the overall capacity of the network (the Internet).

Despite these advantages, IP telephony continues to work out its own kinks.¹⁵⁹ One of the biggest drawbacks to Internet telephony thus far has been the less than pristine sound quality.¹⁶⁰ Another problem may arise with the slight, but perceivable, delay between responses.¹⁶¹ But these technical hang-ups rapidly disappear as the bandwidth on IP networks increases.¹⁶² Originally the loudest critics of VoIP, telephone exchange carriers are increasingly adopting an if-you-can’t-beat-them-join-them attitude towards the new technology, as many of their new networks implement VoIP technologies.¹⁶³

The current regulatory model was designed at a time when phone service was viewed as a natural monopoly and there was very little service overlap between carriers.¹⁶⁴ The convergence

156. Bonnet, *supra* note 19, at 242 n.13.

157. *Id.*

158. *Id.* at 252 n.62.

159. As of 1999, less than one-half of one percent of telephone calls were placed over the Internet. Samahon, *supra* note 147, at 497. In 2000, only 3% of international telephone calls were initiated from a PC. *The Shape Of Phones To Come*, *supra* note 144, at 24 (explaining that calls from personal computers accounted for 3.4 billion minutes versus 120 billion minutes over conventional phone lines).

160. VoIP calls rated a 3.5 on the industry’s quality-of-service index, a scale of one to five, with five representing standard telephone quality. *The Shape Of Phones To Come*, *supra* note 144, at 25. The quality of cell phone calls usually peaks at four and is frequently less than that. *Id.*; see also Naweem A. Mangi & Kevin Ferguson, *Forecast 2002: What’s Next for Small Business in Finance, Technology, Labor, the Economy, and More*, BUS. WK., Dec. 10, 2001, (Small Biz Supplement) at 16, 21 (suggesting that companies use VoIP technology for “your less important long-distance phone calls”); Scott Woolley, *supra* note 36, at 115 (reporting that a ten-minute cell phone call gets dropped approximately 10% of the time).

161. *The Shape Of Phones To Come*, *supra* note 144, at 26.

162. Another solution is a hybrid between circuit switched networks and IP networks. *Id.*

163. *Id.* at 25–26.

164. Antonia M. Apps & Thomas M. Dailey, *Non-Regulation of Advanced Internet Services*, 8 GEO. MASON L. REV. 681, 684 (2000) (arguing that the unequal treatment between telephone carriers and cable companies “undermines the economic rationale of the ‘perfectly contestable’ market theory, and may distort market decisions as to which competing technology to invest in”).

phenomena, however, highlights the increasingly outdated structure of the 1996 Act which subjects various telecom providers to different regulatory schemes even though they may offer functionally-identical services.¹⁶⁵ For example, Internet Service Providers currently are exempted from contributing to the Universal Service Fund (“USF”) even though their services rely heavily on the switching networks of the telephone companies, which are subject to mandatory USF contributions.¹⁶⁶ Such disparate treatment may have been justified when the BOCs enjoyed a clear advantage over their competitors, but the phenomenon of convergence is rapidly eliminating that advantage.¹⁶⁷

In sum, new and superior technologies have forever tarnished the luster of the old copper networks. The question now is whether the BOCs deserve a more level playing field in the area of advanced data services as proposed by the Internet Freedom Act. The fact that the BOCs will, sooner or later, lose their “copper edge” suggests an affirmative answer.¹⁶⁸

165. See Robert M. Frieden, *Universal Service: When Technologies Converge and Regulatory Models Diverge*, 13 HARV. J.L. & TECH. 395, 397 (2000) (“Regulatory dichotomies work when categories of technology remain discrete and absolute. However, they do not work when technological convergence results in porous service categories and diversification by providers.”); see also Apps & Dailey, *supra* note 164, at 682–83 (suggesting the anomaly of a regulatory scheme in which different technologies would trigger different regulatory treatment for the same services); Alexandra M. Wilson, *Harmonizing Regulation By Promoting Facilities-Based Competition*, 8 GEO. MASON L. REV. 729, 731 (2000) (arguing that the 1996 Act’s separate treatment of local exchange carriers, wireless operators, and cable operators is outdated in that it does not reflect the realities of technological convergence and suggesting that technological developments have left us with no “natural” monopolies in the communications field).

166. See Donahue, *supra* note 148, at 230 (“The 1996 Act now appears outdated as it fumbles for direction in regulating an unpredictable industry with converging technologies.”).

167. Cf. James Alleman et. al., *Universal Service: The Poverty Of Policy*, 71 U. COLO. L. REV. 849, 850 (2000) (arguing that asymmetric measures to control market power should be phased out as an incumbent’s market share decreases); Apps & Dailey, *supra* note 164, at 683 (suggesting that a regulatory scheme that differentiated according to the nature of the Internet service would pose significant impracticalities and raise privacy concerns).

168. Cf. Piropatto, *supra* note 147, at 371 (arguing for a concerted but cautious application of the essential facilities doctrine to the telecommunications field and that the FCC, “not the courts, should be setting forth the general social, economic, and technological parameters for open access disputes”). Under the essential facilities doctrine, the owner of a facility that is considered “essential” to fair competition must provide competitors with reasonable access to the facility. *Id.* at 370–71, 394–95 (citing Microsoft’s attempt to use its dominant position in the operating system market to push its Internet browser as an example of a violation of the essential facilities doctrine).

B. *The Disappearing Long-Distance Market*

Although the Telecommunications Act of 1996 may not have succeeded in developing a competitive market for local phone service, the same cannot be said about long-distance service. Today, the long-distance telephone market is highly competitive and most consumers can choose from several long-distance providers.¹⁶⁹ But the long-distance market is now showing signs of its own demise¹⁷⁰ and, ultimately, some of the same technologies that threaten the supremacy of the phone networks will also threaten the vitality of the long-distance industry.¹⁷¹ For some consumers, the distinction between local and long-distance calling has already lost its significance. For example, by offering “free long-distance,” cell phone companies have effectively eliminated the distinction between local and long-distance calls among certain subscribers.¹⁷² Similarly, with the aid of a microphone and soundcard (both standard accessories in most new computers), Internet users the world over can bypass traditional long-distance charges by using PC-to-PC telephony software.¹⁷³ Today, several startup companies employ similar technologies to provide PC-to-phone, or even phone-to-phone long-

169. See *supra* note 75 and accompanying text.

170. Julie Creswell, *End of the (Easy Credit) Line for AT&T?*, FORTUNE, Nov. 26, 2001, at 224 (attributing the decline in the long-distance market in part to competition from e-mail and wireless); Jacqueline Doherty, *Market Week, Market Rings in the New Year With a Pop*, BARRON'S, Jan. 7, 2002, at 3 (describing the downward push on long-distance rates due to increased use of cell phones); *Long Distance on the Rise*, Monica Roman, ed., BUS. WK., Jan. 14, 2002, at 42 (predicting a continued decline in the long-distance market despite recent price rate hikes by major long-distance companies); Mehta, *supra* note 19, at 138 (“The consumer long-distance business has been a dog for years and will only get worse as prices continue to fall.”); Stephanie N. Mehta, *That Old Sinking Feeling; With Rock-bottom Prices and Killer Competition, the Cell Phone Business Is Starting to Resemble the Long-Distance One. Glub . . . Glub*, FORTUNE, Dec. 10, 2001, at 207 (comparing the cell phone market to “the downtrodden long-distance business, which lacks a unique product and has been ravaged by ugly price wars”); Morgenson, *supra* note 57 (citing a telecom analyst that “business will become grimmer for long-distance carriers”); Steve Rosenbush et al., *AT&T Hits a \$5 Billion Wall*, BUS. WEEK, Oct. 15, 2001, at 52 (“All long-distance companies suffer from falling prices and slowing growth.”); Weinberg & Woolley, *supra* note 36, at 83 (describing Sprint’s 5% reduction in long-distance sales despite a 21% rise in call volume).

171. *Snatching BT’s Bride*, *supra* note 146, at 19, 20 (predicting the death of the distance premium).

172. Cf. Mehta, *supra* note 116, at 209 (noting an agreement between BellSouth and SBC that allows each company’s cell phone customers to call from the other’s network at no extra charge).

173. See Donahue, *supra* note 148, at 227 (describing recent developments in PC-to-PC voice communications).

distance services, often at a fraction of the price of traditional long-distance plans.¹⁷⁴

A brief examination of the nature of long-distance telephony further reveals that the distinction between long-distance and local phone service is indeed an attenuated one. In the early days of phone communications, placing a long-distance call required a chain of operators to relay the call across the switchboards of several networks.¹⁷⁵ Long-distance customers grew accustomed to paying extra for distance.¹⁷⁶ Today, however, computers do the work of relaying those calls such that, in certain circumstances, it may actually cost the phone company less to put through a long-distance call than a call down the street.¹⁷⁷

The disappearing long-distance market not only reflects the inexorable effects of the convergence phenomenon in the telecommunications industry, but also sheds additional light on the outdated structure of the 1996 Act which is in large part based on a distinction between local and long-distance phone services (among other service distinctions).¹⁷⁸ To the extent that the Internet Freedom Act continues to address a separate category of data services, it would appear that its drafters continue to follow a pre-convergence mentality. Although such distinctions may remain workable in the near- to medium-term, the potential impact of the Internet Freedom Act pales in comparison to the need to revamp telecommunications legislation in face of the convergence phenomenon. Doubtless, Congressional inertia with respect to revamping legislation can be attributed in part to the diverse nature of lobbying forces¹⁷⁹ which pull towards improving an entity's bottom line as opposed to aligning policy with the inexorable waves of future technologies.

C. *Alternative Technologies Will Keep the BOCs in Check*

Two simultaneous developments should dispel much of the fear that the Internet Freedom Act would result in higher consumer prices. First, there already exists a rapidly developing market for the

174. *Id.* at 228 (citing an FCC prediction that the Internet will handle 15% of long-distance traffic by 2005).

175. *The Shape Of Phones To Come*, *supra* note 144, at 24–25.

176. *Id.* at 24.

177. *Id.*

178. *See, e.g.*, 47 U.S.C. § 271(a) (2000) (prohibiting BOCs from providing long-distance services except as provided in this section).

179. *See supra* notes 128–38 and accompanying text.

delivery of data services.¹⁸⁰ Second, consumers have already demonstrated a marked price sensitivity in their current reluctance to upgrade to broadband.¹⁸¹ All things being equal, the average customer appears indifferent as to whether fast Internet is piped in from a phone line, a coaxial cable, a cellular tower, or a satellite dish.¹⁸² If anything, the deregulatory provisions of Internet Freedom Act vis-à-vis the BOCs would help lower their investment costs, the savings of which would likely be passed on to the consumer as the BOCs compete with other high-speed providers. The existence of alternative technologies should not only help keep high-speed data service prices in check, but also provide the competitive incentive for all data service providers to develop add-on services to compete with other providers. As long as Internet-driven products such as interactive television,¹⁸³ on-demand video,¹⁸⁴ Internet¹⁸⁵ and satellite radio,¹⁸⁶ cell phones that double as credit cards,¹⁸⁷ and Smart VCRs¹⁸⁸ continue to change the way we work and live, Internet providers of all

180. Andrew Ratner, *The Regional Bells vs. Everybody Else*, BALTIMORE SUN, Jan. 20, 2002, at 6M (discussing the already strong competition in the broadband market). *But see* Weber, *supra*, note 2 (suggesting the existence of a cable-phone duopoly that dooms customers to “higher prices and mediocre service” in the short-term).

181. See *supra* notes 86–91 and accompanying text.

182. See, e.g., John Markoff, *2 Tinkerers Say They’ve Found a Cheap Way to Broadband*, N.Y. TIMES, June 10, 2002, at C1 (suggesting that Wi-Fi, or 802.11b, an inexpensive wireless data standard, could “make cable or D.S.L. connections obsolete”).

183. Scandinavian MTV fans can already play virtual games such as “*Trash Your Hotel Room*” while catching the latest videos. Kerry Capell, et. al., *MTV’s World*, BUS. WK., Feb. 18, 2002 at 81, 83.

184. The Motion Picture Association of America has already expressed concerns about the rising incidence of downloading illicit copies of movies. Scott Woolley, *Steal This Movie*, FORBES, Feb. 18, 2002, at 66. Most cable or DSL connections, however, still move data a fifth too slow to support real time, TV-sized projection. *Id.* at 67. If home online connection speeds continue to increase at the 20-year historical average rate of 35%, full-screen on-demand Internet video will arrive in roughly four years. *Id.* (citing the magic target rate of two megabits per second).

185. See Weber, *supra* note 2 (reporting on regulatory threats to Internet radio services “that give music fans an alternative to broadcast stations’ endless top-40 fare and inane DJ blather”).

186. Stephen Manes, *Something Special in the Airwaves*, FORBES, Feb. 18, 2002, at 90 (reporting that the satellite radio system XM has already been deployed nationwide). This technology has actually been commercially available since 1995. *Id.*

187. Denizens of Seongnam, a suburb of Seoul, South Korea, will soon be able to use their cell phones and PDAs to make shop purchases. Moon Ihlwan, *A Nation of Digital Guinea Pigs*, BUS. WK., Feb. 4, 2002, at 50 (reporting that more than half of South Korean households currently enjoy broadband Internet connections).

188. Some VCRs can skip over the commercials and exchange recordings between other devices. Stephen Manes, *Court TV, Ad-Free*, FORBES, Feb. 4, 2002, at 74 (noting that this technology has been around for years but only recently has drawn the ire of the broadcasting industry).

platforms will be motivated to become the medium of choice. One can imagine a future with other technological innovations in store. Watch your favorite sitcom any time you want and as many times as you want without having to program a VCR—watch it commercial-free for a nominal fee. Or choose new programming from dozens of virtual “mini-networks” offering a dizzying array of shows, shorts, and movies. Gone will be the days of pilot shows; the major networks will simply monitor the Internet to pick up the hottest new talents. Such developments spell more, not less, value for consumers.¹⁸⁹

Ironically, the fiber-optic footprints left by some of the defunct corporate giants of yesteryear may mark the first steps of the next generation of fast Internet.¹⁹⁰ Hopefully, it is only a matter of time before those dormant fiber lines can be “lit up.”¹⁹¹ Those lines will serve little purpose, however, if a majority of businesses and homes cannot tap into them. The equipment and the labor needed to connect homes and businesses to a fiber optic network require considerable outlays of cash.¹⁹² Like it or not, the BOCs are natural

189. The author of this Comment suggests that two somewhat competing visions of the future of cyberspace, the “information superhighway” and the “information superstore,” may account for some of the differences in approaches to reform. Under one vision, the “last mile” simply represents a point of departure—the chunk of hardware that stands between the user and the information superhighway. Under the second vision, the “last mile” represents the first stop on the superhighway—an information superstore where ISPs seek to sell their wares. See also Mehta, *supra* note 142, at 105 (describing the commercial importance of controlling the last mile in view of delivering content). The mantra of adherents to the second vision is “bundling.” Weinberg & Woolley, *supra* note 36, at 83 (quoting BellSouth’s CEO: “No question, packaging the right services is important” and Verizon’s cochairman describing himself as a “Bundle freak”).

190. See *No End in Sight*, *supra* note 68, at 59 (suggesting broadband “might someday generate the traffic needed to fill operators’ empty pipes”).

191. Fiber optic lines are considered “lit” when they are carrying data. See Akst, *supra* note 94 (comparing the glut of fiber optic lines to the glut of railroad and telegraph lines, both of which were eventually put to good use and suggesting the wisdom in leaving the risk to investors rather than burdening taxpayers); see also *Arsenic and Chips*, *ECONOMIST*, Sept. 8, 2001, at 86 (noting the lack of access points to the glut of fiber optic lines); *So the Elephants Danced*, *ECONOMIST*, July 30, 1998, at 20 (“[T]he time is not far off when all the world’s current voice traffic could be carried on a single pair of fibres the width of a human hair. Even today, that pair of fibres can carry all of North America’s long-distance traffic.”); Drazzen & Vandettei, *supra* note 129 (reporting that “millions of miles of fiber-optic cable lay ‘dark’ and unused across the U.S.”); Weinberg & Woolley, *supra* note 36, at 85 (reporting that “[n]ew fiber networks use just 3% of their fiber capacity and just 15% of their switching capability”).

192. Vikas Bajaj, *Baby Bells Facing New Rival: AT&T Comcast Might Be More Than a Match For Local Phone Giants*, *DALLAS MORNING NEWS*, Dec. 27, 2001, at 1D; *The Shape Of Phones To Come*, *supra* note 144, at 29 (reporting that laying the “last mile” represents the costliest part of a telephone network).

candidates, in terms of both financial and technical competencies, to connect the last mile.¹⁹³

Trends of convergence and consolidation in the telecommunications section naturally arouse suspicion among nearly anyone whose memory extends beyond the time of AT&T's domination of the telephone market.¹⁹⁴ For example, some consumer groups and Congressional leaders have expressed concern that increased consolidation in the media markets tends to stifle a diverse stream of voices in broadcasting.¹⁹⁵ But such a view misses the bigger picture. A free-flowing, fast Internet makes it easier for diverse views to be heard. As bandwidth stretches to accommodate moving pictures, viewers will be less dependent on cable and television operators to satisfy their watching pleasures. Of course, just as the BOCs have tried and will continue to try to milk their copper lines for all they are worth, cable companies will do their utmost to keep viewers glued to their programming line-up. But as long as those viewers are given the choice of turning to the Internet for their entertainment, cable companies and BOCs alike should be allowed to take advantage of that last mile, their premium for building the network in the first place.

CONCLUSION

These are gloomy days for the telecommunications industry, a gloom epitomized by the collapse of industry giants WorldCom and Global Crossing.¹⁹⁶ Meanwhile, for many Americans, the promise of affordable high-speed access to the Internet remains unfulfilled.¹⁹⁷ The Internet Freedom and Broadband Deployment Act of 2001 aims to accelerate the deployment of affordable broadband Internet through a number of deregulatory measures designed to encourage BOCs to invest in high-speed data networks.¹⁹⁸ In addition, the Act seeks to resolve a number of collateral issues related to the

193. See Akst, *supra* note 94 (suggesting the wisdom in leaving the risk to investors rather than burdening taxpayers); see also Wilson, *supra* note 165, at 731 (arguing that deregulation in the communications industry depends on the construction of new networks, therefore suggesting that policymakers should devise a regulatory scheme that most encourages the construction of new network facilities).

194. See *supra* notes 17–21 and accompanying text.

195. Stephen Labaton, *Court Weighs Easing Limits On Big Media*, N.Y. TIMES, Sept. 8, 2001, at A1 (suggesting that recent FCC decisions mark a shift in telecom policies towards increased market consolidation).

196. See *supra* notes 57–60 and accompanying text.

197. See *supra* notes 91–96 and accompanying text.

198. See *supra* notes 105–07 and accompanying text.

implementation of the Telecommunications Act of 1996 which have resulted in a significant expenditure (waste?) of resources from both sides of the debate.¹⁹⁹ Considering the size and importance of the telecommunications industry and the number of divergent interests involved, the Act naturally has generated a great deal of controversy.²⁰⁰

This Comment concludes, however, that both proponents and opponents overestimate the likely effects of the Internet Freedom Act (or similar legislation) to the extent that existing technological trends have already begun to undermine many of the industry distinctions upon which the current statutory telecommunications regime (including the Internet Freedom Act) is premised.²⁰¹ To the extent that the Act would encourage BOCs to invest in the development of new “last-mile” fiber-optic networks,²⁰² the Act represents a small step towards fulfilling the bright future of broadband. Congress must come up with something more, however, if we are to go that extra mile.

BRET L. GREBE

199. *See supra* notes 102–04 and accompanying text.

200. *See supra* notes 128–38 and accompanying text.

201. *See supra* notes 139–89 and accompanying text.

202. *See supra* notes 190–93 and accompanying text.