TOWARD MEANINGFUL CABLE COMPETITION: GETTING BEYOND THE MONOPOLY MORASS

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ABSTRACT

This article argues that poor regulation has thwarted competition among cable providers. It begins by laying out the history of cable regulation to show that the regulatory framework was created by a series of ad hoc, often contradictory, policies. It then surveys the markets for video programming and broadband access to show that precious little competition exists today. Moving to an economic analysis of the industry, it highlights the surprising irony that despite years of anti-competitive maneuvering, even the incumbent players are facing financial uncertainty. The paper also proposes a new regulatory paradigm based on economic and technological reality. Finally, it discusses the legal authority to implement such a framework, addressing potential federalism and constitutional issues. The overarching goal is to provide a starting point for a regulatory regime that can benefit not only society and new entrants, but also ironically, incumbents themselves.

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INTRODUCTION

Today's cable industry is a mess. Consumers are at the mercy of rising prices, new entrants are either already bankrupt or facing bankruptcy, and even incumbents are shouldering staggering debt loads.

While this saga plays itself out in this $42.5 billion a year industry,[1] the deployment of broadband and other advanced services suffers.[2] Cable has the unique advantage of being able to offer video distribution, broadband access, and even telephony using technologies that are already available. Broadband is of particular importance, since it offers a portal into the much-touted, as yet unfulfilled, "information superhighway."[3]

Yet less than 15% of U.S. households are even using today's rudimentary broadband[4]—drastically limiting the market for new appli-

1. *See* 9 FCC ANN. ASSESSMENT, OF THE STATUS OF COMPETITION IN THE MARKET FOR THE DELIVERY OF VIDEO PROGRAMMING ¶ 28 (2002) [hereinafter FCC NINTH ANN. ASSESSMENT], *available at* http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-02-338A1.pdf (on file with the *New York University Journal of Legislation and Public Policy*). The approximately forty billion dollars divides roughly as follows: 76% video, 8% advertising, 6% digital video, 5% data, 3% pay-per-view/video on demand, 2% telephony. *See* JASON BAZINET, J.P. MORGAN SECURITIES, INC., INDUSTRY ANALYSIS: THE CABLE INDUSTRY 67 (2002) [hereinafter JP MORGAN REPORT]. Note that these are merely the direct revenues ascribed to the industry.

2. The definition of broadband can be quite confusing itself. The FCC defines "high-speed" services as those with speeds above 200 thousand bits per second (Kbps) in at least one direction, and defines "advanced services" (a subset of "high-speed") as having speeds in excess of 200Kbps in each direction. *See* 3 FCC INQUIRY CONCERNING THE DEPLOYMENT OF ADVANCED TELECOMMUNICATIONS CAPABILITY TO ALL AMERICANS IN A REASONABLE AND TIMELY FASHION, AND POSSIBLE STEPS TO ACCELERATE SUCH DEPLOYMENT PURSUANT TO § 706 OF THE TELECOMMUNICATIONS ACT OF 1996 ¶ 7 (2002), *available at* http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-02-33A1.pdf (on file with the *New York University Journal of Legislation and Public Policy*) [hereinafter ADVANCED TELECOMMUNICATIONS]. Of course, broadband's true power is at much higher speeds. For example, the 3 hour 14 minute movie Titanic takes 42 hours and 30 minutes to download on a 28.8Kbps modem; a 10 million bit per second (Mbps) cable modem can accomplish the same task in about seven minutes. *See* UNITED STATES INTERNET COUNCIL, STATE OF THE INTERNET 2000, at 43 (2000), *available at* www.eyefortravel.com/papers/internetrapport.pdf (Sept. 1, 2000) (on file with the *New York University Journal of Legislation and Public Policy*).

3. Today this essentially includes static content on World Wide Web pages, but its promise includes powerful applications such as ubiquitous real-time video and videoconferencing at every computer.

4. There are 105 million (M) households in the United States. *See* FCC NINTH ANN. ASSESSMENT, *supra* note 1, at Table B-1. 65M of these households pay a monthly fee to access the Internet, but only 14M of these are using broadband. *See The Financial Turmoil in the Telecommunications Marketplace; Maintaining the Operations of Essential Communications Facilities: Hearing Before the Senate Comm. on Commerce, Science, and Transport*., 107th Cong. (2002), *available at* http://commerce.senate.gov/hearings/073102powell.pdf (last visited Apr. 8, 2003) (on file with

cations. Sadly enough, the United States is falling behind other countries with a broadband penetration rate below that of Korea, Canada and Sweden.[5] Given the cost of broadband, there is also a real concern emerging over a "digital divide" which "splits those with access to new technologies and those without, affecting certain demographic groups and regions of our country."[6] We must do better if we hope to foster social equality and retain our technological leadership.

A weak regulatory regime has contributed to this disturbing state of affairs. Hence, revamping the regulatory regime is of paramount importance. Federal Communications Commission (FCC) Chairman Michael Powell makes the point emphatically, stating that "the Commission's central policymaking focus is and should remain the promotion of efficient broadband deployment . . . . And promoting such deployment is clearly imperative if we are to enjoy the full promise of our economy and our democratic society."[7]

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the *New York University Journal of Legislation and Public Policy*) [hereinafter Powell Senate Statement] (written statement of the Hon. Michael K. Powell, Chairman, FCC).

5. The United States has a broadband penetration rate of 3.24 per 100 inhabitants. Korea, Canada, and Sweden have rates of 13.91, 6.22 and 4.52 respectively. *See* ADVANCED TELECOMMUNICATIONS, *supra* note 2, ¶ 7. *See also* ORG. FOR ECON. COOPERATION AND DEV., WORKING PARTY ON TELECOMMUNICATION AND INFORMATION SERVICES POLICIES, THE DEVELOPMENT OF BROADBAND ACCESS IN OECD COUNTRIES 14 (2000), *available at* http://www.oecd.org/pdf/M00020000/M00020255.pdf (last modified Oct. 29, 2001) (on file with the *New York University Journal of Legislation and Public Policy*) [hereinafter OECD REPORT] (noting total broadband penetration rates for numerous countries).

6. Steven A. Augustino, *The Cable Open Access Debate: The Case for a Wholesale Market*, 8 GEO. MASON L. REV. 653, 656–57; *see also* MARK N. COOPER, DOES THE DIGITAL DIVIDE STILL EXIST? 2 (2002), *available at* http://www.consumerfed.org/DigitalDivideReport20020530.pdf (last visited Apr. 2, 2003) (arguing that divide does exist—primarily based on income levels) (on file with the *New York University Journal of Legislation and Public Policy*). *But see* JAMES E. PRIEGER, THE SUPPLY SIDE OF THE DIGITAL DIVIDE: IS THERE REDLINING IN THE BROADBAND INTERNET ACCESS MARKET? 13 (AEI-Brookings Joint Ctr. for Regulatory Studies, Working Paper No. 01-16, 2001), *available at* http://www.aei.brookings.org/publications/working/working_01_16.pdf (last modified Dec. 2001) [hereinafter PRIEGER] (claiming that "[r]ace focused rhetoric about the broadband Digital Divide may be unwarranted") (on file with the *New York University Journal of Legislation and Public Policy*). Note, however, that Prieger omits a price variable in his analysis, purporting to consider only entry into a market. *Id*.

7. Statement from Michael K. Powell, Chairman, FCC (Feb. 7, 2002) (accompanying ADVANCED TELECOMMUNICATIONS, *supra* note 2) (on file with the *New York University Journal of Legislation and Public Policy*). Though FCC Commissioners might disagree on how to develop the infrastructure, they agree on its importance. For instance, in a scathing dissent about the statutory classification of cable modems, Commissioner Copps stated that "[h]ow America deploys broadband is the central infrastructure challenge our country faces. It is a public policy matter of enormous implications." *See* Inquiry Concerning High-Speed Access to the Internet Over Cable

Analogies to the massive infrastructure challenges of the past are apt. One commentator has pointed out that "America, including rural America, runs on telecommunications networks as it once ran on rails."[8] Another has compared the importance of broadband deployment to that of the Interstate system in assuring national prosperity, commenting that "assuring high speed Internet access will be the engine that pulls all other trains."[9]

There is a fair amount of legal scholarship focused on debating the pros and cons of one cable regulatory regime or the other. This article, however, attempts to infuse the legal debate with economic analysis that is sensitive to the business realities that both incumbents and new entrants face every day. It seeks to use a number of analytical tools, ranging from statutory and constitutional interpretation to corporate finance, in an attempt to make some sense out of a complicated, fast-changing landscape.

The article contains four principal sections. Part I provides a survey of the current regulatory paradigm. Two themes emerge during a brief overview of the history of cable: (1) regulations based on statutory definitions have consistently struggled to keep up with changes in technology, and (2) the government has repeatedly had to intervene to curb anti-competitive behavior by incumbents. Moreover, a study of open access demonstrates that when straddled by antiquated legal definitions, even the best legal minds will struggle to develop successful regulation.

Part II shifts to a business and economic analysis, emphasizing that as all this legal wrangling has unfolded, competition has suffered dramatically in the markets for video programming and broadband. At first glance, cable incumbents have benefited enormously, to the detriment of consumers. However, once the cable companies' investments are taken into account, the picture for them looks gloomy as well. Can we make sense of this startling paradox?

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and Other Facilities; Internet Over Cable Declaratory Ruling Proceeding; Appropriate Regulatory Treatment for Broadband Access to the Internet Over Cable Facilities, ¶ 15 FCC (Mar. 14, 2002) [hereinafter High-Speed Cable Internet] (dissenting statement of Comm'r Michael J. Copps), *available at* http://ftp.fcc.gov/Speeches/Copps/Statements/2002/stmjc210.html (on file with the *New York University Journal of Legislation and Public Policy*).

8. Bob Rowe, *Strategies to Promote Advanced Telecommunications Capabilities*, 52 FED. COMM. L.J. 381, 393 (2000).

9. William R. Stensrud, *A Call To Arms: Broadband Deployment Needed Now*, VENTURE CAP. J., Feb. 2002, at 16. Needless to say, investors would be all too eager to fund new companies providing products and services if a vigorous broadband market were to develop.

Part III attempts to offer a new paradigm—one based on technology and economics rather than antiquated regulatory distinctions—with which to regulate the cable market. This foundational framework will hopefully be a first step in setting a national cable policy that can benefit not only society at large, but also—and perhaps ironically—the cable incumbents themselves.

Part IV underscores that the FCC would have authority to implement such a regime. It also considers possible challenges on federalism and constitutional grounds.

I.
CURRENT REGULATORY PARADIGM

A. History of Cable Regulation

This section's goal is not to provide a treatise on the history of cable regulation,[10] but rather to point out briefly two themes that seem to run throughout cable's history. The first is that what regulators are going through today is not new; indeed, they have struggled with how to regulate cable since the technology first appeared after World War II.[11] This historic struggle is in large part due to the fact that it is difficult, if not impossible, to apply accurately strict statutory definitions to an area of law that has evolved extremely rapidly. The second theme is that the market, when left to its own devices (or worse yet, regulation that further entrenches incumbents), can act to the detriment of consumers and society.

1. Setting the Stage: Pre-1984[12]

When the Communications Act of 1934[13] was drafted, cable technology did not yet exist. Cable television began in the late 1940s as "community antenna television" (CATV): where broadcast reception was poor (for example, due to remoteness or terrain), a cable operator would set up a microwave link to an antenna in a nearby city,

10. For a comprehensive discussion of the history of cable television, see THOMAS G. KRATTENMAKER, TELECOMMUNICATIONS LAW AND POLICY 507–705 (2d ed. 1998).

11. The first cable television site was launched in 1948 in Astoria, Oregon, and the first commercial system began in 1949 in Lansford, Pennsylvania. Stanley M. Besen & Robert W. Crandall, *The Deregulation of Cable Television*, 44 LAW & CONTEMP. PROBS. 77, 81 (1981).

12. *See generally* Pamela B. Gullett, Note, *The 1984 Cable Flip Flop: From* Capital Cities Cable, Inc. v. Crisp *to the Cable Communications Policy Act*, 34 AM. U. L. REV. 557 (1985) (surveying developments leading to Cable Communications Policy Act of 1984).

13. Communications Act of 1934, Pub. L. No. 73-416, ch. 652, 48 Stat. 1064 (1934) (codified as amended at 47 U.S.C. §§ 151614 (1934)).

then provide programming via coaxial cable. Over time, satellite programming was brought directly into the community, and eventually cable programming (such as CNN and HBO) evolved.

The first opportunity for meaningful regulation occurred in 1959. In its *Auxiliary Service Inquiry*,[14] the FCC, in response to a 1958 petition filed by TV broadcasters, declined to intervene, stating that "we do not now envision where we could find that the public interest would be disserved by affording an opportunity for choice of service and the benefits of competition and diversity of expression."[15] Just three years later, however, in what one classic article has called a "startling reversal of its earlier views,"[16] the Commission denied Carter Mountain Transmission's application for microwave facilities in order to protect the local broadcast station. The FCC concluded that "the need for the local outlet and the service which it would provide to outlying areas outweighs the need for improved service which Carter would furnish. . . ."[17] The United States Court of Appeals for the District of Columbia subsequently upheld the Commission's findings.[18]

By 1966, the FCC had decided to regulate cable even more extensively. In its Second Report and Order, the Commission required cable systems to carry all local stations and mandated that imported signals not duplicate local programming.[19] In addition, distant broadcast signals could not be carried into one of the top 100 markets without a showing in an evidentiary hearing that such carriage "would be consistent with the public interest, and particularly the establishment and healthy maintenance of UHF television broadcast service."[20]

In 1968, the Supreme Court upheld the Second Report, finding that the FCC had jurisdiction over all cable matters "reasonably ancillary to the effective performance of the Commission's various responsibilities for the regulation of television broadcasting."[21] Ironically, soon after this decision, over more than twenty years of deregulation of the cable industry began—a path that was not reversed until 1992.

14. Inquiry into the Impact of Community Antenna Systems, TV Translators, TV "Satellite" Stations and TV "Repeaters" on the Orderly Development of Television Broadcasting, 26 F.C.C. 403 (1959).
15. *Id*. at 408.
16. Besen & Crandall, *supra* note 11, at 85.
17. In re Application of Carter Mountain Transmission Corp., 32 F.C.C. 459, 465 (1962).
18. Carter Mountain Transmission Corp. v. Fed. Communications Comm'n, 321 F.2d 359 (D.C. Cir. 1963).
19. Amendment of Subpart L, Part 91 et. al., 2 F.C.C.2d 725 (1966).
20. *Id*. at 782.
21. United States v. Southwestern Cable Co., 392 U.S. 157, 178 (1968).

In 1972, the FCC produced a series of cable rules known as the "Consensus Agreement."[22] Though very complicated,[23] these rules had the effect of liberalizing restrictions in the cable industry. Thereafter, the federal courts further hastened deregulation. In *Home Box Office v. FCC*,[24] the United States Court of Appeals for the District of Columbia struck down the FCC's regulations restricting the ability of cable systems to offer pay cable. Known as "anti-siphoning" rules, these were designed to protect broadcast programming. Two years later in 1979, the Supreme Court invalidated the FCC's attempt to require cable operators to dedicate channels to unaffiliated programmers, reasoning that this would impose common carrier regulations on cable companies.[25]

2. 1984 Act

The tide pushed further in the cable companies' favor with the passage of the Cable Communications Policy Act of 1984.[26] Cable was regulated under Title VI of the act, but cable operators obtained statutory determination that they were not subject to any of the common carrier responsibilities faced by telephone companies.[27]

For our purposes, the 1984 Act had three significant components. First, it curtailed the ability of local franchising authorities to regulate rates where the FCC determined those systems faced "effective competition."[28] While it is a laudable goal to desire national consis-

22. 36 F.C.C.2d. 143 (1972).

23. [The rules] limited the importation of distant signals in a manner which varied with market size; they provided that "significantly viewed" signals from adjacent markets could be carried in addition to the distant-signal quota and provided an intricate test for determining whether a signal was "significantly viewed"; they continued the mandatory carriage requirement for local signals; they provided for two different forms of exclusivity protection for non-network (syndicated) programs; and they placed a rather heavy burden of local origination, franchising, and technical standards upon the cable operators.

Besen & Crandall, *supra* note 11, at 95.

24. 567 F.2d 9 (D.C. Cir. 1977).

25. Fed. Communications Comm'n v. Midwest Video Corp., 440 U.S. 689, 701–02 (1979). It is important to remember that prior to 1984, the FCC's ability to regulate cable derived solely from its authority over broadcasting.

26. Pub. L. No. 98-549, 98 Stat. 2779 (1984) (codified as amended at 47 U.S.C. §§521–573 (2000)).

27. 47 U.S.C. § 541(c) states that "any cable system shall not be subject to regulation as a common carrier or utility by reason of providing any cable service." The fact that cable companies are not common carriers is integral to the intense debate around open access. *See infra* notes 72–80.

28. Cable Communications Policy Act of 1984, 47 U.S.C. § 543(b)(1) (1984).

tency,[29] the FCC made a critical mistake by deeming "effective competition" to exist where a subscriber could receive three over-the-air stations.[30] The net effect was essentially to abolish rate regulation.

Second, incumbent cable franchises were granted a renewal expectancy.[31] In essence, the weight of the federal government was brought to bear to ensure that cable companies would be allowed to maintain their franchise—a franchise granted over public property. One cannot avoid wondering whether a statute that entrenches incumbents is really one that promotes a "free market."

Third, the 1984 Act attempted to provide channels to commercial programmers on a leased basis. The problem here was in implementation: since no standards were provided, the mandate proved irrelevent.[32] In parallel, courts invalidated the 1972 must-carry rules[33] requiring cable operators to carry local TV signals in each system's market, citing First Amendment concerns.[34]

What unfolded after the 1984 Act is a case study in the dangers of improper regulatory oversight.

3. 1992 Act

Subsequent to the 1984 Cable Act, there were a host of complaints regarding poor service and abuse of market power. In findings that serve as a preamble to the Cable Television Consumer Protection and Competition Act of 1992,[35] Congress made a number of rather disturbing[36] findings regarding what had happened to the cable market since the mid-eighties. Some of the most startling included:

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29. *See infra* note 390.

30. *See* Implementation of the Provisions of the Cable Communications Policy Act of 1984, Report and Order, 58 R.R.2d 1, 2526 (1985). Note that even today some sophisticated scholars believe in the power of broadcast television to impose market discipline. *See, e.g.*, Christopher S. Yoo, *Vertical Integration and Media Regulation in the New Economy*, 19 YALE J. ON REG. 171, 227 (2002) ("[T]he presence of even a single conventional television broadcaster may be sufficient to provide some downward price pressure on cable operators.").

31. *See* Cable Communications Policy Act of 1984, 47 U.S.C. § 547(c)–(d) (1984).

32. *See id.* at § 543(d), (f).

33. *See infra* notes 401–11.

34. *See, e.g.*, Century Communications v. Fed. Communications Comm'n, 835 F.2d 292 (D.C. Cir. 1987), *clarified*, 837 F.2d 517 (D.C. Cir. 1987); *see also* Quincy Cable TV, Inc. v. Fed. Communications Comm'n, 768 F.2d 1434 (D.C. Cir. 1985) (concluding that must-carry regulations are impermissible).

35. Pub. L. No. 102-385, 106 Stat. 1460 (1992) (codified as amended in 47 U.S.C. §§ 521–573 (2000)).

36. Disturbing, that is, to consumers and society at large. Interestingly enough, while it may appear that the cable companies have benefited from this state of affairs

- "The average monthly cable rate has increased almost 3 times as much as the Consumer Price Index since rate deregulation."[37]
- "[A] cable system faces no local competition. The result is undue market power for the cable operator as compared to that of consumers and video programmers."[38]
- "The cable industry has become highly concentrated. The potential effects of such concentration are barriers to entry for new programmers and a reduction in the number of media voices available to consumers."[39]
- "Vertically integrated program suppliers have the incentive and ability to favor their affiliated cable operators over nonaffiliated cable operators and programming distributors using other technologies."[40]

The 1992 Act re-regulated the cable industry along a variety of dimensions. To begin with, it imposed rate regulations.[41] It also placed limitations on the cable operator's ability to block content by mandating cable systems carry local broadcast signals (must-carry),[42] noncommercial stations,[43] and leased-access channels.[44] It also placed limits on horizontal and vertical concentration.[45]

Importantly, the 1992 Cable Act added "program access" provisions,[46] which attempt to foster competition and diversity in video

(*see infra* notes 200–06), their financial reality is more complex (*see infra* notes 207–27).

37. Cable Television Consumer Protection and Competition Act of 1992, Pub. L. No. 102-385, § 2(a)(1) (1992) (codified as 47 U.S.C. § 521 (1992)).

38. *Id.* § 2(a)(2).

39. *Id.* § 2(a)(4).

40. *Id*. § 2(a)(5).

41. *See id.* § 3

42. *See id.* § 4.

43. *See id.* § 5. Noncommercial stations include public access, educational and government channels (PEG).

44. *See id.* § 9.

45. *See id.* § 11.

46. *See id.* § 19. The program access provision was designed to sunset on October 5, 2002 unless the FCC finds that it "continues to be necessary to preserve and protect competition and diversity in the distribution of video programming." 47 U.S.C. § 548(c)(5). In June 2002 the FCC extended these program exclusivity rules for five years, commenting on how competition has not developed as anticipated when the 1992 Act was adopted. *See* Press Release, Federal Communications Commission, FCC Extends Program Exclusivity Rules (June 13, 2002) *at* http://www.fcc.gov/headlines.html (on file with the *New York University Journal of Legislation and Public Policy*). ("[W]ithout the prohibition on exclusivity, programmers that are affiliated with cable operators would have the incentive and ability to favor their cable affiliates over other cable operators and other competitive MVPDs [multichannel video pro-

programming. The basic idea is to prevent cable operators from engaging in unfair or anticompetitive practices in connection with the sale of programming. Unfortunately, the Act contained two loopholes: first, program access proscriptions apply only to programming sold by vertically-integrated programming vendors; second, the proscriptions apply only to satellite-delivered programming. The first loophole is not overly critical, since many large cable operators are vertically integrated into programming.[47] The second, however, has significantly hindered the development of competition, as incumbent operators have moved to terrestrial transmissions in an effort to prevent competitors from gaining access to programming.[48]

Despite its loopholes, the 1992 Act did bring some relief, by bringing cable price increases in line with the CPI[49] and by keeping economic rents for cable operators at a reasonable level.[50]

4. 1996 Act

The cable companies were displeased by this turn of events, and made sure their interests would be represented when Congress drafted new telecommunications legislation. The Telecommunications Act of 1996[51] helped set the stage for the lack of competition we see in the cable market today. It essentially eliminated rate regulation, except for the basic tier of cable service[52]—because of anticipated competition from other transmission media.[53]

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gramming distributor], and this favoritism would result in the failure to protect competition and diversity.").

47. *See infra* note 140.

48. *See infra* note 193.

49. *See infra* notes 120–21. The general criticism of rate regulation is that somehow product "quality" suffers, though defining "quality" is a problematic task, especially given that the Bureau of Labor Statistics makes quality adjustments to its Consumer Price Index calculations. *See infra* note 120. Note that to avoid such discussions, the proposal in Part III does not attempt to regulate output or retail prices.

50. *See infra* note 206.

51. Pub. L. No. 104-104, 110 Stat. 56 (1996) (codified in scattered sections of 47 U.S.C.).

52. *See* Telecommunications Act of 1996, 47 U.S.C. § 301 (delineating upper tier rate deregulation of cable service providers).

53. This has not yet happened. *See infra* Part II.B. Some commentators also posit that most rate regulation was repealed due to the Commission's inability to manage the complexity of pricing a variety of video services. *See, e.g.*, THOMAS W. HAZLETT & GEORGE BITTLINGMAYER, THE POLITICAL ECONOMY OF CABLE "OPEN ACCESS" 18 (AEI-Brookings Joint Ctr. for Regulatory Studies, Working Paper 01-06, 2001), *available at* http://www.aei.brookings.org/publications/working/working_01_06.pdf (May 2001) [hereinafter HAZLETT & BITTLINGMAYER] (on file with the *New York University Journal of Legislation and Public Policy*).

The 1996 Act also placed enormous importance on definitions because regulatory treatment varies dramatically depending on how a particular technology is characterized.[54] While this presents interesting nuances of statutory interpretation,[55] it frequently stretches common sense in a world of technological convergence. In particular, three definitions are central to the 1996 Act: "telecommunications,"[56] "cable service,"[57] and "information service."[58] "Telecommunications" carriers face obligations under Title II, whereas "cable services" do not. "Information services" fall under the FCC's ancillary authority under Title I, but remain essentially unregulated.[59]

The statute reaffirmed that cable companies are not subject to common carrier regulations.[60] This is particularly significant given that the 1996 Act placed increased obligations on common carriers such as a requirement that incumbent local exchange carriers ("ILECs") unbundle and interconnect certain network elements to "any requesting telecommunications carrier."[61] The idea was to allow new competitors—competitive local exchange carriers ("CLECs")—an opportunity to compete.[62] Cable companies offering "cable ser-

54. *See infra* notes 56–59 and accompanying text. This is similar to other regulatory frameworks, such as import/export tariffs. Definitional rigidity is, however, especially problematic in the telecommunications context given how rapidly the field is evolving.

55. *See infra* notes 79–80 and Part IV.B.I.

56. *See* 47 U.S.C. § 153(43) (2000) ("The term 'telecommunications' means the transmission, between or among points specified by the user, of information of the user's choosing, without change in the form or content of the information sent and received.").

57. *See id*. § 522(6) ("[T]he term 'cable service' means—(A) the one-way transmission to subscribers of (i) video programming, or (ii) other programming service, and (B) subscriber interaction, if any, which is required for the selection or use of such video programming or other programming service.").

58. *See id*. § 153(20) ("The term 'information service' means the offering of a capability for generating, acquiring, storing, transforming, processing, retrieving, utilizing, or making available information via telecommunications.").

59. The root of the "information services" classification are the Computer Inquiries where the FCC separated out "basic telecommunications" services from "enhanced services" as part of a bifurcated system that allowed Regional Bell Operating Companies to enter new markets. Robert Cannon, *Where Internet Service Providers and Telephone Companies Compete: A Guide to the Computer Inquiries, Enhanced Service Providers and Information Service Providers*, 9 J. COMM. L. & POL'Y 49, 53–56 (2001).

60. *See* 47 U.S.C. § 541(c).

61. 47 U.S.C. § 251(c). For a thought-provoking discussion of the key issues around unbundling, see Jerry A. Hausman & J. Gregory Sidak, *A Consumer-Welfare Approach to the Mandatory Unbundling of Telecommunications Networks*, 109 YALE L.J. 417 (1999).

62. The merits of this particular regulatory scheme are beyond the scope of this article, but are the subject of Reza Dibadj, *Competitive Debacle in Local Telephony:*

vice," on the other hand, faced no such obligations, allowing them to further consolidate their market positions. This dichotomy has also led to the raging "open access" debate covered in Part I.B below.

The state of affairs described above leads one to take a step back from the language and ask whether there is any reason why a telephone company's copper wire in the ground is a monopoly, but a cable operator's coaxial cable is not? Professors Mark Lemley and Lawrence Lessig write that they "believe there is no justification in law or policy for giving cable companies special treatment. The current regime is simply a historical accident resulting from the different regulatory schemes traditionally imposed on telephone and cable television companies."[63]

One scholar has cleverly termed the situation one of "regulatory arbitrage."[64] Even *Forbes* magazine writes that the FCC has imposed "divergent standards that favor one industry over another."[65] While these points of view are an important step in the right direction, they do not tell the whole story. As Part VI.B explores, the underlying transmission technology behind cable and copper are different, so while there may not be a justification in "law or policy" to treat cable differently, there might be one in technology.

This brief overview of cable history has attempted to show the ambivalence with which regulators have tried to manage the industry. The regulatory gestalt moved from no regulation in 1959, to strict regulation in 1966, to gradual deregulation beginning in 1972 and lasting through 1992. While the 1992 Act brought some abuses into check, its effect was watered down with the cable provisions contained in the 1996 Act.

Is the 1996 Telecommunications Act to Blame?, 81 WASH. U. L.Q. (forthcoming 2003) (on file with the *New York University Journal of Legislation and Public Policy*).

63. Mark A. Lemley & Lawrence Lessig, *The End of End-to-End: Preserving the Architecture of the Internet in the Broadband Era*, 48 U.C.L.A. L. REV. 925, 928 (2001). The authors later state that "[o]ne of the principal lessons of telecommunications convergence is that we are better off treating like things alike." *Id.* at 954.

64. Rob Frieden, *Regulatory Opportunism in Telecommunications: The Unlevel Competitive Playing Field*, 10 J. COMM. L. & POL'Y 81, 85 (2001).

65. Brett Pulley, *Commander of the Airwaves*, FORBES, Apr. 29, 2002 at 78, 82. *See also* Glenn T. Inanaga, Note, *Narrowing Broadband Choices: AT&T's Monopoly Over the Future of the Internet*, 10 S. CAL. INTERDISC. L.J. 133, 166 (2000) (lambasting "hypocritical double standard created in a recent regulation requiring xDSL providers to open access, but not requiring that of cable providers"). For an argument that access should not be regulated, see Robert W. Crandall et. al., *The Empirical Case Against Asymmetric Regulation of Broadband Internet Access*, 17 BERKELEY TECH. L.J. 953 (2002).

B. The "Open Access" Saga

Perhaps the best example of regulatory failure is a glimpse at the open access debate. Proponents of "open access" believe that cable operators should allow third-party Internet Service Providers (ISPs) access to their networks. Their opponents believe that this is tantamount to "forced access."

The debate started when AT&T bought Tele-Communications Inc. (TCI) and forced its cable modem users to use @Home, TCI's internet service provider (ISP).[66] Other ISPs, such as AOL and MCIWorldCom's UUNet complained, but the regulatory agencies did not act. Again, when AT&T/TCI merged with MediaOne, the FCC refused to mandate open access, stating that it would continue to "recognize and adhere to the distinctions Congress drew between cable and common carrier regulation."[67] AT&T thus was able to force consumers to purchase Internet access from affiliated ISPs such as @Home and Roadrunner and was able to prohibit subscribers from receiving more than ten minutes of broadcast quality video, or hosting a web page.[68]

Later, as a condition of allowing the AOL/Time Warner merger, the Federal Trade Commission (FTC) imposed some temporary open access conditions, but these were specific to the merger.[69] The issue subsequently quieted down as a few affiliated ISPs such as @Home went bankrupt. In addition, AOL switched sides and suddenly became opposed to open access once it was acquired by Time Warner.[70] But the question remains unresolved and is perhaps the single area in cable which has generated the most vigorous debate—as one article put it,

66. *See* Kevin Werbach, *Cable Operators vs. ISPs*, INTERNET WORLD, Dec. 15, 1999, at 54.

67. Applications for Consent to the Transfer of Control of Licenses and § 214 Authorizations from Tele-Communications, Inc., Transferor to AT&T Corp., Transferee, 14 F.C.C. 3160 (1999), 1999 FCC LEXUS 690. Of course, contrary to the FCC statement, what Congress intended is not so clear. *See infra* notes 74–78.

68. James B. Speta, *The Vertical Dimension of Cable Open Access*, 71 U. COLO. L. REV. 975, 979 (2000).

69. *See* Michael Rosenthal, *Open Access of Internet Service Providers to the Cable Operators' Facilities in the United States*, 6 INT'L J. COMM. L. & POL'Y 1, 7–8 (2000). The FCC later agreed with the FTC's determination, but some commentators suggest that had the FCC reviewed the merger first, no conditions would have been imposed. *See, e.g.*, Rosemary C. Harold, *Cable Open Access: Exorcising the Ghosts of "Legacy" Regulation*, 28 N. KY. L. REV. 721, 758 (2001) ("There are a number of differences that distinguish the AOL/Time Warner merger review from the AT&T proceedings that preceded it—and none of them may have been more important than the fact that a different agency undertook the formal antitrust review.").

70. This action could prompt some cynics to question Time Warner's true motivations.

the amount of attention lavished on this issue has been "nothing short of astounding."[71]

Perhaps unsurprisingly, given cable's checkered regulatory history, the jurisprudence around open access has been quite confusing. Unfortunately, given the 1996 Act's almost fetishistic reliance on definitions,[72] a lot has come down to determining whether Internet access is a Title VI "cable service"—if so, then Title II's unbundling requirements applicable to "telecommunications services" would not apply.[73] Much wrangling has occurred over the meaning of Congress' addition of the words "or use" to the definition of "cable service" in the Act—"the one-way transmission to subscribers of (i) video programming, or (ii) other programming service, and (B) subscriber interaction, if any, which is required for the selection *or use* of such video programming or other programming service."[74] "Other programming service" is further defined as "information that a cable operator makes available to all subscribers generally."[75] The legislative history offers little interpretative guidance. The original 1984 legislative history occurred before the advent of the Internet, and does not offer much help.[76] The 1996 House Committee Report says that the addition of "or use" reflects the "evolution of video programming toward interactive services."[77] The Conference Report includes "information services" but excludes "telecommunications services" from the definition—the only problem is that it fails to address whether Internet access is one or the other.[78]

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71. John F. Gibbs & Todd G. Hartman, *The Regulation of Convergence Technologies: An Argument for Technologically Sensitive Regulation*, 27 WM. MITCHELL L. REV. 2193, 2194 (2001).

72. *See supra* notes 56–59.

73. Section 251 of the Telecommunications Act of 1996, which imposes interconnection and unbundling requirements, applies only to "telecommunications carriers." *See* 47 U.S.C. § 251 (2000).

74. 47 U.S.C. § 522(6) (emphasis added).

75. *Id.* § 522(14).

76. For example, "downloading software" is given as an example of a cable service, whereas non-cable services included "shop at home and bank at home services, electronic mail, one-way and two-way transmission of non-video data and information not offered to all subscribers, data processing, video-conferencing, and all voice communications." H.R. REP. NO. 98-934, at 42–45 (1984), *reprinted in* 1984 U.S.C.C.A.N. 4655, 4679–81.

77. H.R. REP. NO. 104-204, at 97 (1996), *reprinted in* 1996 U.S.C.C.A.N. 10, 64.

78. The conferees intend the amendment to reflect the evolution of cable to include interactive services such as game channels and information services made available to subscribers by the cable operator, as well as enhanced services. This amendment is not intended to affect Federal or State regulation of telecommunications service offered through cable sys-

This ambiguity has led commentators to offer a variety of interpretations: some believing that Congress has set forth with "analytical clarity" that cable modems are "cable services";[79] others pointing out that anything following the "and" in the statute is merely an optional add-on clause, such that cable modems could not possibly be a "cable service."[80]

Perhaps it is no surprise that the federal courts have struggled with this issue in at least three lines of cases. In the *AT&T Corp. v. City of Portland* series, the city of Portland had made TCI's transfer of its franchise to AT&T contingent on AT&T's making its network available to third-party ISPs. The United States District Court for the District of Oregon ruled that cable modems are a "cable service," so the local government can impose local access under its authority to preserve local competition.[81] The United States Court of Appeals for the Ninth Circuit reversed, ruling that since cable modems are a "telecommunications" service, the local government does not have authority to interfere with telecommunications services by cable operators.[82] The court's decision, however, was not a model of clarity.[83]

While this saga was unfolding in Oregon, federal courts in Virginia developed their own interpretations. In *MediaOne v. County of Henrico*,[84] the United States District Court for the Eastern District of Virginia ruled that under the 1996 Act, the local government cannot

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tem facilities, or to cause dial-up access to information services over telephone lines to be classified as cable service.

H.R. CONF. REP. NO. 104-458, at 169 (1996), *reprinted in* 1996 U.S.C.C.A.N. 124, 182.

79. 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, 74 (2000).

80. *See* Earl W. Comstock & John W. Butler, *Access Denied: The FCC's Failure to Implement Open Access to Cable as Required by the Communications Act*, 8 J. COMM. L. & POL'Y 5, 16 (2000).

81. AT&T Corp. v. City of Portland, 43 F. Supp. 2d 1146, 1152 (D. Or. 1999). The court relied primarily on 47 U.S.C. § 533(d)(2) (1984), which allows a State or local franchising authority to prohibit ownership of a cable system if it "determines that the acquisition of such a cable system may eliminate or reduce competition in the delivery of cable service in such jurisdiction." For a discussion of 47 U.S.C. § 533(d)(2) in the context of broader federalism issues, *see infra* note 372.

82. AT&T v. City of Portland, 216 F.3d 871, 880 (9th Cir. 2000). The court relied on 47 U.S.C. § 541(b)(3)(B), which bars any local requirement "that has the purpose or effect of prohibiting, limiting, restricting, or conditioning the provision of a telecommunications service by a cable operator." *Id*. at 878.

83. *See, e.g.*, *id.* at 878 ("To the extent @Home is a conventional ISP, its activities are one of an information service. However, to the extent that @Home provides its subscribers Internet transmission over its cable broadband facility, it is providing a telecommunications service as defined in the Communications Act.").

84. 97 F. Supp. 2d 712 (E.D. Va. 2000).

impose open access since the cable modem platform is a "telecommunications" service.[85] It went on to proclaim that since cable modems themselves are "cable services," any local government regulation of these would also violate the 1996 Act.[86] The United States Court of Appeals for the Fourth Circuit declined to classify what cable modems are, but upheld the decision on the District Court's first basis—namely, that the "cable modem platform, separated from its Internet service component, is a telecommunications facility. . . ."[87] As one essay chronicling these developments points out, "[t]he court's lack of precision in this piece of analysis further darkens the already murky jurisprudential waters surrounding the provision of Internet over cable."[88]

Meanwhile, in a seemingly unrelated series of events, a group of electrical utilities challenged an FCC order determining that Internet services should be charged the lower "cable" rate rather than the higher "telecommunications" rate. The United States Court of Appeals for the Eleventh Circuit invalidated the FCC order, stating that since the Internet is neither a "cable" nor a "telecommunications" service, the FCC was without authority to regulate pole fees.[89] In January 2002, the Supreme Court reversed the Eleventh Circuit, holding that since the plain language of the Pole Attachments Act says that a pole attachment includes "any attachment *by* a cable television system"[90] regardless of whether the wires are being used for cable television or Internet services, the FCC does have authority to regulate rates for attachments to utility poles.[91] The Court found that the FCC's

85. *See id.* at 714. The court based this portion of its decision on wording in the Act: "a franchising authority may not require a cable operator to provide any telecommunications service or facilities, other than institutional networks, as a condition of the initial grant of franchise, a franchise renewal, or a transfer of franchise." *Id*. (quoting 47 U.S.C. § 541(b)(3)(D)).

86. *See id.* at 714–16. The court based its decision on three statutory provisions: 47 U.S.C. § 544(e) ("no State or franchising authority may prohibit, condition, or restrict a cable system's use of any type of subscriber equipment or any transmission technology"); § 541(c) ("[a]ny cable system shall not be subject to regulation as a common carrier or utility by reason of providing any cable service"); § 544(f)(1) ("[a]ny Federal agency, State or franchising authority may not impose requirements regarding the provision or content of cable services, except as expressly provided in [Title VI]."). 97 F. Supp. 2d at 714–16.

87. MediaOne Group v. County of Henrico, 257 F.3d 356, 363 (4th Cir. 2001).

88. Barbara S. Esbin & Gary S. Lutzker, *Poles, Holes and Cable Open Access: Where the Global Information Superhighway Meets the Local Right-of-Way*, 10 J. COMM. L. & POL'Y 23, 68 (2001).

89. Gulf Power Co. v. FCC, 208 F.3d 1263, 1266 (11th Cir. 2000).

90. Nat'l Cable & Telecomm. Ass'n, Inc. v. Gulf Power Co., 534 U.S. 327, 331 (2002) (citing 47 U.S.C. § 224(a)(4)) (emphasis added).

91. *Id*. at 338–39.

failure to categorize Internet services was irrelevant to the disposition of the case.[92] Justice Thomas, in a dissent to this portion of the opinion, noted that the case should be remanded to the FCC to determine under which authority it is regulating the rates, requiring "the Commission to decide at long last whether high-speed Internet access provided through cable wires constitutes cable service or telecommunications service or falls into neither category."[93]

The suspense came to an end in March 2002, when the FCC issued an opinion that cable modem service is an "information service"[94]—a category that is essentially unregulated, save under the FCC's ancillary authority[95]—which means that for now cable operators do not face open access requirements. But, perhaps unsurprisingly given the epic struggles highlighted above, the decision does not seem to have been easy for the FCC. Commissioner Abernathy issued a separate statement to warn that:

> As the owners of the nation's most extensive broadband architecture and as the leading providers of broadband service, cable operators have the potential to suppress competition. I believe that that Commission should not yet dismiss proposals to impose some kind of access requirement without better evidence that robust competition among broadband ISPs will develop on its own.[96]

Commissioner Copps, on the other hand, issued a scathing dissent. After stating that the decision puts cable modem services into the "uncertainty of Title I . . . [and the] generally deregulated information services category," he writes emphatically, "[t]oday we take a giant leap down the road of removing core communications services from the statutory frameworks established by Congress, substituting our

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92. *Id*. at 338. The Court wittily pointed out that "decisionmakers sometimes dodge hard questions, when easier ones are dispositive; and we cannot fault the FCC for taking this approach." *Id.*

93. *Id*. at 347 (Thomas, J., dissenting in part and concurring in part). Justice Thomas's point revolves around the fact that there are two specific rate methodologies set in the statute: 47 U.S.C. § 224(d)(3) for pole attachments "used by a cable television system solely to provide cable service" and 47 U.S.C. § 224(e)(1) for pole attachments "used by telecommunications carriers to provide telecommunications services." *Id*. The question therefore becomes whether Internet services falls into either of these categories, or whether it is regulated under 47 U.S.C. § 224(a)(4), which gives the FCC authority over "any pole attachment." *Id*.

94. Press Release, Federal Communications Commission, FCC Classifies Cable Modem Service as "Information Service" (Mar. 14, 2002) *available at* http://www.fcc.gov/headlines.html (last visited Mar. 13, 2003) (on file with the *New York University Journal of Legislation and Public Policy*).

95. *See supra* note 59.

96. *See* High-Speed Cable Internet Access, *supra* note 7 (separate statement of Comm'r Kathleen Abernathy).

own judgment for that of Congress and playing a game of regulatory musical chairs by moving technology and services from one statutory definition to another."[97]

The net result is a bewildering mess. Right now, for example, it would be fair to assume that the video programming portion of cable infrastructure is a "cable service," whereas the broadband access portion is an "information service." The fact that the regulatory regime is bifurcated even within cable regulation means that the interpretive battles are likely to continue.

Regretfully, the biggest casualty of this befuddling, seemingly "schizophrenic," regulatory pattern has been meaningful competition in the cable market.

II.
Business and Economic Analysis

A. Benefits of Competition

Before delving into an analysis of how little competition there is in today's cable market, a brief digression into the benefits of competition might prove useful.[98] The idea that consumers and society benefit when several economic actors are competing to offer a product or service accords with intuition and hundreds of years of economic history. It is also one of the underpinnings of modern antitrust law. As explained in a recent Department of Justice paper, "[a]ntitrust enforcement . . . assumes as its mandate the deterrence of business conduct that threatens to distort the competitive process in product and innovation markets. The fundamental reason we favor competition over monopoly is that *competition tends to drive markets to a more efficient use of scarce resources*."[99]

Efficiency means that consumers benefit from better products sooner. For instance, Professor Howard Shelanski has performed a study correlating innovation time to level of competitiveness, and concludes that:

> [I]nnovations have been more rapidly deployed in telecommunications networks the more competitive have been the markets in

97. *Id*. (dissenting statement of Comm'r Michael J. Copps).

98. If you are already convinced of the benefits of vigorous competition, then please skip to Part II.B.

99. William J. Kolasky & Andrew Dick, The Merger Guidelines and the Integration of Efficiencies into Antitrust Review of Horizontal Mergers 2, *at* http://www.usdoj.gov/atr/hmerger/11254.htm (last visited Feb. 20, 2003) (emphasis added) (on file with the *New York University Journal of Legislation and Public Policy*).

> which those networks operated. This positive correlation between competition and adoption of new technology suggests regulators and enforcement officials should be wary of claims that, by adhering to policies designed to preserve competition, they will impede firms from deploying innovations or bringing new services to consumers."[100]

Efficiency also means lower prices. In its most recent Report on Cable Industry prices, the FCC notes that the very few cable operators subject to "effective competition"[101] had rates 6.3% higher than those without competition.[102] More significantly, competitive operators offered 1.6 times more channels, so that the per channel difference is 9.4%.[103]

Summing up both the product and price dimensions (and adding a legal one), the Commission has noted that "the incumbent cable operator has generally responded to competitive entry in a variety of ways, such as by lowering prices, providing additional channels at the same monthly rate, improving customer service, adding new services, or by challenging the legality of the entrant's activities."[104] This ob-

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100. Howard A. Shelanski, *Competition and Deployment of New Technology in U.S. Telecommunications*, 2000 U. CHI. LEGAL F. 85, 85 (2000).

101. *See* IMPLEMENTATION OF SECTION 3 OF THE CABLE TELEVISION CONSUMER PROTECTION AND COMPETITION ACT OF 1992, STATISTICAL REPORT ON AVERAGE RATES FOR BASIC SERVICE, CABLE PROGRAMMING SERVICE, AND EQUIPMENT ¶ 28 (2002), *available at* http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-02-338A1.pdf (on file with the *New York University Journal of Legislation and Public Policy*) [hereinafter FCC REPORT ON CABLE PRICES]. The FCC deems "effective competition" to exist when a multichannel video programming distributor (MVPD) meets one of the following four conditions in its franchise area:

> (1) [F]ewer than 30% of households subscribe to the service of the cable system (herein referred to as the "low penetration test"); (2) at least two MVPDs serve 50% or more of households and at least 15% of those households take service other than from the largest MVPD (the "overbuild" test); (3) a municipal MVPD offers service to at least 50% of households (the "municipal" test); or (4) a local exchange carrier (LEC) or its affiliate (or any MVPD using the facilities of the LEC or its affiliate) offers video programming service (other than direct broadcast satellite ("DBS") service) comparable to the service of an unaffiliated MVPD (the "LEC" test).

Id. ¶ 1, n.3.

102. *See id.* ¶ 23.

103. *See id.* Compared to the non-competitive group, rates were 4.7% lower where there was low penetration, 7.0% lower where there was an overbuild, 7.7% lower in the presence of a LEC competitor, 22% lower with a municipal competitor, but 5.1% higher with a DBS competitor. *See id.* ¶ 37. This last piece of data may be an indication that DBS actually serves a niche and is not a direct competitor to cable. *See infra* note 119.

104. *See* FCC EIGHTH ANN. ASSESSMENT OF THE STATUS OF COMPETITION IN THE MARKET FOR THE DELIVERY OF VIDEO PROGRAMMING ¶ 197 (2002) [hereinafter FCC

servation is also supported by the OECD's finding that vigorous competition characterizes markets with high broadband penetration.[105]

Unfortunately, evidence suggests there is precious little competition in the market for video programming or broadband access.

B. Market Overview

1. Video Programming

a. Local Markets

The market for access to programming is inherently local in nature: the consumer is by definition captive in a fixed physical location. As a consequence, an inquiry into whether an operator has a monopoly in the provision of its cable services must be focused at the local level.[106]

Local markets for video programming are textbook examples of competitive deficiency. In a recent Consumer Reports study, only one in twenty cable subscribers reported having a choice of cable providers.[107] The FCC data is even more pessimistic, lamenting that "[o]f the 33,246 cable community units nationwide, 671, or approximately 2% have been certified by the Commission as having effective competition as a result of consumers having a choice of more than one wireline MVPD [multichannel video programming distributor]."[108]

Direct broadcast satellite (DBS) does have an increased presence in local markets, but its importance should not be overestimated. Of the 90 million MVPD households in the United States,[109] 69 million

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EIGHTH ANN. ASSESSMENT], *available at* http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-01-389A1.pdf (on file with the *New York University Journal of Legislation and Public Policy*). *See also* Advanced Telecommunciations, *supra* note 2, ¶ 150 ("[T]he existence of competition among providers benefits consumers by increasing the range and quality of service offerings, while reducing the price of services."); OECD REPORT, *supra* note 5, at 50 ("As would be expected prices are lower and service levels are higher in countries where competition is highest.").

105. *See* OECD REPORT, *supra* note 5, at 16 ("In the long run infrastructure competition is the best way to develop broadband services."); *id.* at 32 ("The success being experienced by Korea in the rollout of high speed Internet access is due to competition between companies, different technologies, and infrastructures.").

106. An analysis around vertical integration—for example to address concerns around the purchase of video programming between programmers and operators—could, on the other hand, be analyzed at a national level, since that is where much programming is purchased. *See infra* note 130.

107. *See* CONSUMER REPORTS, CABLE AND SATELLITE REPORT AND SURVEY 36 (2001).

108. FCC NINTH ANN. ASSESSMENT, *supra* note 1, ¶ 115.

109. There are approximately 105M TV households in the U.S., which would imply that approximately 14% of households receive broadcast-only signals. *See* FCC NINTH ANN. ASSESSMENT, *supra* note 1, at Table B-1.

(77%) are cable subscribers, whereas only 18 million (20%) are DBS subscribers.[110] If we assume, *arguendo*, that this pattern is distributed evenly across the United States, and that there is no overlap between cable and DBS subscribers,[111] then in any given local market, the cable company has 77% market share, the DBS providers 20%, and the others 3%.[112]

These market share numbers can be translated into a proxy for market power using the Herfindahl-Hirschman Index (HHI), employed by the Department of Justice (DOJ) to measure market concentration in antitrust analysis.[113] The HHI at the local level is approximately 6,200[114]—considered to be an extremely concentrated market. The effective lack of competition is likely much higher than this for several reasons. First, approximately two million MVPD subscribers have both cable and DBS,[115] several MVPD households may be unable to obtain DBS given line of sight issues,[116] and nearly half of DBS subscribers may live in rural areas that might not have access

110. *See id*.

111. When these two assumptions are relaxed, the market power of cable companies is even more pronounced. *See infra* notes 115–19.

112. The "other" category is an addition of four other FCC categories: multipoint and multichannel distribution service (MMDS), which beams a signal at a high frequency from point to point; satellite master antenna television systems (SMATV) which are private cable television systems that do not utilize public rights of way; home satellite dish ("HSD") where large reception dishes receive signals from low-power C-band satellites; open video systems ("OVS") where new entrants such as LECs and cable overbuilders offer video programming. Their market shares are as follows: MMDS (0.55%), SMATV (1.78%), HSD (0.78%), and OVS (0.07%). *See* FCC NINTH ANN. ASSESSMENT, *supra* note 1, at Table B-1. None of these technologies poses a threat to cable's dominance, and now is very unlikely to do so in the future.

113. *See* UNITED STATES DEPARTMENT OF JUSTICE, THE HERFINDAHL-HIRSCHMAN INDEX, *at* http://www.usdoj.gov:80/atr/hhi.htm (last visited Mar. 13, 2003) (on file with the *New York University Journal of Legislation and Public Policy*). The HHI is calculated by squaring the market share of each firm, then adding the resulting numbers. An index between 1,000 and 1,800 is considered "moderately concentrated"; anything above 1,800 is considered "concentrated."

114. Of the approximately 20% DBS, DirecTV has 12% and Echostar 8%. *See* FCC NINTH ANN. ASSESSMENT, *supra* note 1, at B-3. $77^2 + 12^2 + 8^2 + 3^2 = 6{,}146$. Note that the actual index might be slightly lower, since the remaining 3% is actually composed of a variety of smaller players. The FCC has denied the EchoStar/DirecTV merger. However, if the DBS market were to consolidate to one player, the HHI would rise by about 200 points. *Cf.* Press Release, Federal Communications Commission, FCC Declines to Approve EchoStar-DirecTV Merger (Oct. 10, 2002), *available at* www.fcc.gov/mb/cshlarc.html (on file with the *New York University Journal of Legislation and Public Policy*) (noting no approval for merger).

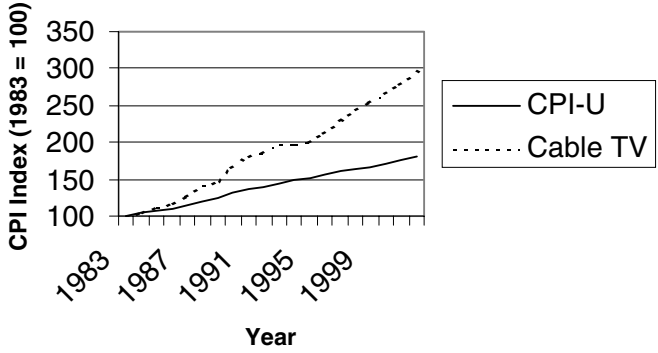
115. *See* FCC EIGHTH ANN. ASSESSMENT, *supra* note 104, ¶ 57, n.190.

116. Typically, a South or Southwest exposure is needed to obtain DBS in the continental United States.

to cable[117]—which implies even less head-to-head competition between cable and DBS.[118] There is also a very provocative question as to whether DBS may in fact occupy a separate "high-volume/high quality service" niche, and thus may not compete head-to-head with cable.[119]

If the analysis in Part II.A around the benefits of competition is correct, then one would expect high prices and poor quality in such a market. Indeed, this is exactly what we find. Figure 1 shows that cable prices rose at a rate 1.9 times that of the CPI from 1984 to 1992, and 2.4 times that of the CPI from 1996 to 2002. From 1992 to 1996—when the 1992 Act was in full effect—the increase was only 1.2 times. To boot, the actual cable price increases may be greater than what the Bureau of Labor Statistics (BLS) calculates.[120]

FIGURE 1: *CABLE PRICES VS. CONSUMER PRICE INDEX*[121]



117. *See* FCC NINTH ANN. ASSESSMENT, *supra* note 1, ¶ 59, n.180.

118. *See* MARK COOPER, THE FAILURE OF "INTERMODAL" COMPETITION IN CABLE MARKETS 43 (2002) (calculates HHI above 7,000 for local markets). Regardless of the exact HHI number, it is clearly above any reasonable threshold that should cause concern. As a comparison, a duopoly with 50/50 market share would have HHI of 5,000.

119. *See id.* at 11–14. Note that this hypothesis is consistent with the FCC's finding that "[i]n areas where effective competition is achieved as a result of DBS penetration, there is no measurable effect on cable subscriptions, the price of cable service, or the number of channels offered." FCC Report on Cable Prices, *supra* note 101, ¶ 47. It is also consistent with JP Morgan's analysis indicating that "more than 95% of all cable churn is caused by factors other than DBS competition." JP MORGAN REPORT, *supra* note 1, at 4. Note that some commentators apparently believed that DBS serves as a substitute to cable television based on older FCC data that suggested otherwise. *See, e.g.*, Yoo, *supra* note 30, at 228.

120. For example, for twelve months ending July 2001, the BLS calculates the cable prices to have increased by 3.9%. The FCC's calculation indicates a 7.5% increase. The FCC posits that this is due to differences in methodology, notably the fact that when "an item shows a significant change in price, BLS attempts to make a quality adjustment." FCC Report on Cable Prices, *supra* note 101, ¶ 22, n.26.

121. UNITED STATES DEPARTMENT OF LABOR, BUREAU OF LABOR STATISTICS, CPI

As one commentator has pointed out in rather strident terms:

> If you are like the overwhelming majority of cable television subscribers in America, you probably have noticed that your cable television bill has dramatically increased over the past four years. . . . [M]ost cable companies "can" raise rates with impunity . . . because 99% of them are not subject to effective competition.[122]

This situation has particular ramifications given issues around the "digital divide"—with an average cable bill approaching $40 per month,[123] low income consumers will have difficulty getting access to a variety of video programming. Perhaps more importantly, to the extent cable serves as the conduit of choice for broadband,[124] low income consumers will be denied access to new applications.[125]

Beyond price, consumers view the cable proposition as weak compared to DBS. For example, in a recent Consumers Union study, only 6% rated their cable service "excellent" (versus 35% for satellite), while 31% rated cable as "poor" (versus 7% for satellite).[126] In terms of quality, a recent Consumers Report survey found that "[s]atellite scored significantly higher than digital cable for picture and sound quality."[127] In fact, many audio-visual experts consider

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CALCULATOR, *available at* http://www.bls.gov/data (last visited Mar. 13, 2003) (on file with the *New York University Journal of Legislation and Public Policy*). There are slight discrepancies in the BLS data since it spans both new and old series, but these do not affect the overall trends.

122. Andrew Ketter, Comment, *The Narrow Choice of Broadband Providers for Consumers: Competition and Local Regulation*, 2002 WIS. L. REV. 211, 211 (2002).

123. Thirty six dollars, ninety nine cents, which includes basic tier service ("BST") at $12.84, major cable programming service tier ("CPST") at $20.91 and equipment at $3.24. *See* FCC Report on Cable Prices, *supra* note 101, at 21 Attachment B-1. This of course does not include broadband access, which can add $40–50 per month, for a total that approaches $100.

124. *See infra* notes 150–153.

125. *See* Press Release, Federal Communications Commission, Federal Communications Commission Releases Data on High-Speed Services for Internet Access (Dec. 17, 2002) at Table 12, *available at* http://ftp.fcc.gov/Bureaus/Common_Carrier/Reports/FCC-State_Link/IAD/hspd1202.pdf (on file with the *New York University Journal of Legislation and Public Policy*) [hereinafter FCC Access Data]. For example, the latest FCC statistics indicate that in the top one-tenth of zip codes ranked by median family income, at least one high speed subscriber is reported in 98% of zip codes; by contrast, in the bottom one-tenth, only 69% of zip codes have at least one high-speed subscriber. *Id*.

126. *See* MARK COOPER, *supra* note 118, at 12. This is consistent with JP Morgan's assessment that DBS has a superior customer service record and superior niche programming. *See* JP MORGAN REPORT, *supra* note 1, at 27.

127. *See* CONSUMER REPORTS, *supra* note 107, at 36.

current cable offerings to be sub-standard for high performance display media such as digital televisions and plasma screens.[128]

The competitive situation in the local markets should not be very inspiring to students of competition.

b. National Markets

Since consumers purchase cable television at a local level, one might wonder why an analysis of the national market is even relevant. However, looking at the national market provides additional insight into issues surrounding vertical and horizontal concentration. Most programming is purchased at a national level,[129] so analyzing this market allows for a glimpse into the relative power of incumbent cable companies as purchasers of programming.

The latest FCC statistics calculate a HHI of 884,[130] which approaches the Department of Justice level for a "moderately concentrated" market (1,000 to 1,800), but is below the 1,800 threshold for a "concentrated" market.[131] While at first glance, this might look somewhat benign, there are significant areas of concern. The first cause for concern is that AT&T, the largest cable incumbent, owns shares in Cablevision and Time Warner. One analysis places the HHI as high as 1,923 when these factors are taken into account[132]—making the market "concentrated."

The second is that the market is becoming centralized at a very fast rate. When cable was deregulated in 1984, there were approximately thirty equal-sized competitors, creating a HHI of only 350.[133] Since then, the industry has become increasingly concentrated with a wave of mergers, most recently AT&T-TCI and AT&T-MediaOne. Today, the top 10 cable companies serve about 85% of cable subscribers.[134] Moreover, as the AT&T-Comcast merger is implemented, the

128. *See* Author visits to audio/video retailers in New York, Boston and Miami (notes on file with author). Many experts, for example, complain that current incarnations of digital cable programming leave much to be desired in terms of variety and quality.

129. *See, e.g.*, Yoo, *supra* note 30, at 227. Non-broadcast networks typically try to serve a national audience, for example, CNN or HBO. A few target regional niches, for example, New England Sports Channel. *See* FCC NINTH ANN. ASSESSMENT, *supra* note 1, ¶ 124.

130. *See* FCC NINTH ANN. ASSESSMENT, *supra* note 1, Table B-3 (indicating top players and their respective market shares are: AT&T (14.75%), Time Warner (14.29%), DirecTV (11.99%), Comcast (9.46%), EchoStar (8.30%), Charter (7.55%)).

131. *See supra* note 113.

132. *See* MARK COOPER, *supra* note 118, at 44.

133. *Id.* at 43.

134. FCC NINTH ANN. ASSESSMENT, *supra* note 1, ¶ 14.

HHI will rise by approximately 300 points.[135] The Department of Justice considers a merger that will raise the HHI by more than 100 points in concentrated markets to be worthy of significant scrutiny.[136]

The foregoing suggests that the antitrust authorities should have paid very careful attention to the AT&T–Comcast merger,[137] as well as other horizontal combinations. While the national market is more competitive than the local market, the ability of incumbent MVPD distributors to affect purchasing decisions will necessarily have second order effects on program choice and quality. This conclusion is consistent with an FCC study using experimental economics that found that higher levels of horizontal concentration lead to decreases in economic efficiency as well as a statistically significant decrease in a DBS operator's relative bargaining power in markets with larger multiple service operators (MSOs).[138]

In addition, when analyzing any potential vertical integration it is important to go beyond simple HHI calculations[139] to consider the fact

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135. *See id*. at 58 (AT&T currently has 14.75% share, and Comcast has 9.46% share). Together these contribute 307 to the HHI ($14.75^2 + 9.46^2$). A combined entity would have a HHI of 586 $(14.75+9.46)^2$, or 279 higher. Note that this number will be even higher if AT&T's shares in Cablevision and Time Warner are taken into account—that is, the number to be squared would be even higher.

136. *See supra* note 113.

137. *See* Robert Kuttner, *AT&T and Comcast: A Bad Deal for Almost Everybody*, BUS. WK., May 20, 2002, at 26 ("The deal, which still must be approved by three regulatory agencies and by shareholders, has several suspicious wrinkles."). On November 13, 2002, the FCC approved the AT&T–Comcast merger. Press Release, Federal Communications Commission, FCC Grants Conditioned Approval of AT&T–Comcast Merger (Nov. 13, 2002) *available at* http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-228446A1.pdf (last visited Mar. 13, 2003) (on file with the *New York University Journal of Legislation and Public Policy*).

138. *See* FED. COMMUNICATIONS COMM'N, HORIZONTAL CONCENTRATION IN THE CABLE TELEVISION INDUSTRY: AN EXPERIMENTAL ANALYSIS 3–4 (Office of Plans and Policies, Working Paper No. 35, 2002), *available at* http://hraunfoss.fcc.gov/edocs_public/attachmatch/DA-02-1589A2.pdf (last visited Mar. 13, 2003) (on file with the *New York University Journal of Legislation and Public Policy*). For suggestions on how to build upon the study, see Reza Dibadj, *Ex Parte Comments on Experimental Economics Study Examining Horizontal Concentration in the Cable Industry*, *available at* http://www.fcc.gov/transaction/att-comcast/dibadj_exparte070902.pdf (July 8, 2002) (on file with the *New York University Journal of Legislation and Public Policy*).

139. The Department of Justice's Non-Horizontal Merger Guidelines indicate that one factor is whether the HHI is above 1,800 in both the acquiror's and acquiree's markets. *See* U.S. DEP'T OF JUSTICE, NON-HORIZONTAL MERGER GUIDELINES 25, 28, *available at* http://www.usdoj.gov/atr/public/guidelines/2614.pdf (last visited Mar. 13, 2003) (on file with the *New York University Journal of Legislation and Public Policy*). The HHI for the national MVPD market is at first glance 905, but potentially above 2,000. *See supra* notes 130–36 and accompanying text. Professor Christopher Yoo has calculated the HHI of the market for television programming networks to be between 1,600 and 1,700. *See* Yoo, *supra* note 30, at 211. These calculations, how-

that many incumbent cable companies have significant interests in programming networks, something which heightens anti-competitive combination concerns.[140]

2. *Broadband*

a. Market Definition

Before discussing the relative positions of competing technologies for broadband delivery, it might be useful to discuss briefly why broadband is a distinct market. At one extreme, there are commentators who lump narrowband and broadband into one market.[141] At the other are those who believe that "cable Internet access is a market unto itself."[142]

The truth lies somewhere in between. Broadband access—whether by cable, DSL, or other technology—offers functionality that narrowband does not.[143] The Department of Justice,[144] Federal Trade Commission,[145] and FCC[146] consider broadband to be its own market.

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ever, treat each market as independent, ignoring that cable operators have substantial interests in programming networks.

140. Ninety-two out of the 308 programming networks (30%) are vertically integrated with an MSO. In addition, eight of the top twenty programming networks are vertically integrated with cable MSOs. FCC NINTH ANN. ASSESSMENT, *supra* note 1, ¶¶ 134–36.

141. *See, e.g.*, Julian Epstein, *A Lite Touch on Broadband: Achieving the Optimal Regulatory Efficiency in the Internet Broadband Market*, 38 HARV. J. ON LEGIS. 37, 60 (2001) (referring to fact that cable controls "less than 5% of the Internet access market").

142. *See, e.g.*, Inanaga, *supra* note 65, at 151.

143. *See infra* note 283 and accompanying text.

144. *See* Competitive Impact Statement at 9, United States v. AT&T Corp., No. 1-00CV01176, 2000 U.S. Dist. LEXIS 14459 (D.D.C. Sept. 26, 2000), *at* http://www.usdoj.gov/atr/cases/f4800/4842.pdf (last visited Mar. 13, 2003) (on file with the *New York University Journal of Legislation and Public Policy*) ("A relevant product market affected by this transaction is the market for aggregation, promotion, and distribution of broadband content and services.").

145. *See* Press Release, Federal Trade Commission, FTC Approves AOL/Time Warner Merger with conditions (Dec. 14, 2000), *available at* http://www.ftc.gov/opa/2000/12/aol.htm (last visited Mar. 13, 2003) (on file with the *New York University Journal of Legislation and Public Policy*) ("According to the Commission's complaint, the proposed transaction would violate Section 7 of the Clayton Act, as amended, and Section 5 of the Federal Trade Commission Act, as amended, by: lessening competition in the residential broadband Internet access market . . . .").

146. *See* Applications for Consent to the Transfer of Control of Licenses and § 214 Authorizations by Time Warner Inc. and America Online, Inc., Transferors, to AOL Time Warner Inc., Transferee, 16 F.C.C. 6547 (2001) FCC LEXUS 432 at ¶ 69 (FCC 2001) (Memorandum Opinion and Order) ("We begin by addressing whether high-speed Internet access services, as distinct from narrowband services, constitute the relevant product market in determining the effects of the proposed merger on the public interest. We conclude that they do." (citations omitted)), *available at* http://

Leading economists have even shown that broadband is a distinct market under the Department of Justice's Horizontal Merger Guidelines[147] and that there is minimal cross-price elasticity in the narrowband and broadband markets.[148]

b. Cable vs. DSL

Within the residential broadband category, the vast majority of competition is between cable modems of the cable companies and DSL lines of local exchange carriers (LECs). The latest statistics on high-speed lines[149] indicate approximately 9.2 million cable modems as opposed to 5.1 million DSL lines.[150] Cable companies thus have nearly a 2:1 lead over DSL.[151] The statistics on advanced services lines[152] are even more heavily tilted: 6.8 million cable modems as opposed to 1.9 million DSL lines, or a 3:1 advantage for cable.[153]

There are several reasons for this disparity. DSL faces at least two technological constraints. First, the home must be within fifteen thousand feet of a central office switch for DSL to function, which limits its applicability to 80% of telephone subscribers;[154] second, the bandwidth is inherently limited to approximately 1.5Mbps, which is

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www.fcc.gov/Bureaus/Cable/Orders/2001/fcc01012.pdf (last visited Mar. 13, 2003) (on file with the *New York University Journal of Legislation and Public Policy*).

147. The DOJ's and FTC's conception of a "product market" basically inquires whether consumers of the set of products in the proposed market would be susceptible to "a small but significant and nontransitory" increase in product price by a hypothetical monopolist operating in that market. *See* U.S. DEP'T OF JUSTICE AND THE FED. TRADE COMM'N, HORIZONTAL MERGER GUIDELINES § 1.11 (1997), *available at* http://www.usdoj.gov/atr/public/guidelines/horiz_book/hmg1.html (last visited Mar. 13, 2003) (on file with the *New York University Journal of Legislation and Public Policy*).

148. *See* Jerry A. Hausman et al., *Residential Demand for Broadband Telecommunications and Consumer Access to Unaffiliated Internet Content Providers*, 18 YALE J. ON REG. 129, 140–41 (2001).

149. 'High speed' lines are capable of transmitting over 200Kbps in at least one direction. *See supra* note 2.

150. FCC Access Data, *supra* note 125, at 2. In addition, there are 1.2 million "other wireline" lines (e.g., ISDN), 520 thousand optical fiber lines, and 220 thousand satellite or fixed wireless lines. *Id*. at 9, Table 1.

151. One recent article in the business press even goes so far as to claim that "cable operators have trounced phone giants in high-speed Net access." Scott Woolley & Neil Weinberg, *Tele-revision*, FORBES, July 22, 2002, at 56, 58.

152. 'Advanced services lines' are defined as 200Kbps in both directions. *See supra* note 2.

153. FCC Access Data, *supra* note 125, at 9, Table 2.

154. Note that the 15,000 foot limitation is for asynchronous DSL (ADSL) where upstream speeds are lower than downstream speeds. ADVANCED TELECOMMUNICATIONS, *supra* note 2, App. B at 9. Symmetric DSL (SDSL) requires an even shorter distance of 10,000-12,000 feet. *Id*.

unlikely to be enough for future cutting edge applications.[155] Upgrading infrastructure for DSL can also be more expensive where the existing switches have loading coils and bridge taps originally put in to improve the quality of voice communications.[156] Also, DSL started out slowly since many ILECs were reluctant to cannibalize their profitable T-1 service which offered high-speed connections at a very expensive price.[157] In addition, the 1996 Act, which was designed to allow CLECs to compete with ILECs, is perceived to be—as the Supreme Court has pointed out—"not a model of clarity."[158] Despite these challenges, DSL has grown and offered some competition to cable,[159] to the benefit of consumers.[160] However, one must bear in mind that only 33% of homes have a choice between DSL and cable—19% don't have access to either, and 48% face a monopoly where there is only either cable or DSL.[161] Moreover, even where cable and DSL compete, we have a duopoly with a 5,000 HHI, far above the 1,800 threshold for a concentrated market.[162]

But cable will continue to have the upper hand for a number of reasons. Cable plant, like copper wire, is ubiquitous—98% of televi-

155. *See supra* notes 2–3. Note that a new standard that would allow 2.3Mbps symmetrical communications is being developed, as well as extenders that would allow connections beyond the 15,000 foot limit. *See* FCC Inquiry, *supra* note 2, at ¶ 84. However, this speed is still well below maximum cable speeds, and extenders add significant cost to the system.

156. *See, e.g.*, PRIEGER, *supra* note 6, at 7; ADVANCED TELECOMMUNICATIONS, *supra* note 2, App. B at 10.

157. A T-1 line operates at 1.544Mbps and is prohibitively expensive for a household, with a monthly fee ranging from $450 to $2,000 dollars. *See* ADVANCED TELECOMMUNICATIONS, *supra* note 2, App. B at 10.

158. AT&T v. Iowa Util. Bd., 525 U.S. 366, 397 (1999). For a discussion of whether the 1996 Act itself is to blame for the lack of competition in local telephony, see Dibadj, *supra* note 62. *See also infra* notes 254–256.

159. *See* FCC Access Data, *supra* note 125, Table 1 (stating that during 2001, both DSL and cable modem lines in service grew by approximately 100%).

160. *See, e.g.*, PRIEGER, *supra* note 6, at 12–13 ("When there is local competition the probability of broadband access rises by 16.5 percentage points.").

161. *See* JP MORGAN REPORT, *supra* note 1, Fig. 36.

162. Some commentators correctly analyze the national market for purchase of video programming, then attempt to carry over the same national analysis to the market for broadband access. *See, e.g.*, Yoo, *supra* note 30, at 154. In doing so, they conflate two different markets: the (typically) national market for the purchase of video programming, and the local market for access to programming and broadband. In other words, it would seem odd to suggest that we should not be concerned about the fact that a consumer in Savannah, Georgia should not be allowed a choice in cable modem access other than Comcast because a consumer in Bakersfield, California can get her broadband access from Time Warner. *See also* Hausman et. al., *supra* note 148, at 154 ("As we described earlier, broadband Internet services markets are local in nature.").

sion households are passed by cable,[163] and 65% of these households are already cable TV subscribers.[164] However, coaxial cable is an inherently superior transmission medium than twisted pairs of copper wire in that there is significantly greater bandwidth inherent in the transmission medium. Copper was designed to carry voice transmission with a bandwidth of 3-4KHz[165]—something which DSL partially overcomes through clever engineering.[166] An average cable system, on the other hand, has 650-750MHz of bandwidth.[167]

Criticisms of cable's underlying technology also tend to be red herrings. They focus on the architecture of the last mile of the cable network—essentially a node which feeds a local area network (LAN) of anywhere from 200–500 homes.[168] The concerns are that the LAN can become "clogged" if too many users are on at the same time, and that shared infrastructure creates a security risk. Fortunately, in an era of ubiquitous shared packet switch networks, software has evolved to ensure that communications remain secure.[169] The bandwidth concern is more complex, but centers fundamentally on how cable incumbents have chosen to allocate bandwidth.

A cable system operator typically devotes only one channel, or 6MHz out of 750MHz, to broadband—something Thomas Hazlett and George Bittlingmayer have called "starving broadband access."[170] In other words, the bandwidth issues are artificial, since merely allocating greater bandwidth to broadband access will obviate any "clogging" that occurs at the node. Of critical importance, however, will be understanding why incumbents have chosen to "starve" broadband;

163. *See* FCC NINTH ANN. ASSESSMENT, *supra* note 1, ¶ 19; OECD REPORT, *supra* note 5, at 12 (stating that 96% of U.S. households are passed by cable TV networks).

164. *See* FCC NINTH ANN. ASSESSMENT, *supra* note 1, Table B-1.

165. The maximum data transfer speed of a copper line is about 56Kbps.

166. For a look at the engineering behind DSL, see Martin Taylor, *DSL Slashes Dial-Up Bottlenecks*, ELEC. ENG'G TIMES, June 21, 1999, at 132.

167. Less than 10% of cable MSO systems have bandwidth below 330MHz, while two-thirds have bandwidth of 750MHz or higher. *See* FCC NINTH ANN. ASSESSMENT, *supra* note 1, ¶ 23.

168. In distinction to DSL architecture where there is a dedicated connection between the central office switch and the subscriber.

169. For instance, Cable Labs' Data Over Cable Service Interface Specification (DOCSIS), the protocol which cable modems use to communicate, defines a Baseline Privacy Interface (BPI). In addition, computer operating systems and servers now have secure access features under Windows NT, NetWare, and Unix. *See* Steve Steinke, *Cable Modem Systems*, Network Magazine.com (Mar. 1, 2000), *at* http://www.networkmagazine.com/article/NMG20000727S0019 (on file with the *New York University Journal of Legislation and Public Policy*).

170. *See* HAZLETT & BITTLINGMAYER, *supra* note 53, at 17.

indeed, any successful regulatory framework must squarely address this issue.[171]

c. Other Media

Beyond cable and DSL, there is unfortunately very little practical technology on the horizon.[172] Satellites—able to offer at least some competition in the market for video programming[173]—are weak in the broadband context, since they have very limited two-way capability, are often billed hourly without an "always on" capability, and sometimes even require a different dish.[174] Though there has been a lot of press around next generation wireless systems, they have not come to practical fruition yet given their high costs.[175] Other, more esoteric fixed wireless technologies suitable for niche markets, such as LMDS[176] and MMDS,[177] where the signal is beamed at a high frequency over a line of sight, serve limited markets and are also very unlikely to gain substantial market share. FCC estimates sum up this sobering state of affairs: fewer than 2% of subscribers are accessing the Internet via satellite or wireless technologies.[178] Given this reality,

171. *See infra* Part III.

172. For surveys of competing technologies in greater depth, see Howard A. Shelanski, *The Speed Gap: Broadband Infrastructure and Electronic Commerce*, 14 BERKELEY TECH. L.J. 722 (1999) (raising a number of issues that remain barriers to deployment); Hausman et al., *supra* note 148, at 149–54 (noting that competing technologies will be unable to discipline cable modem access prices).

173. *See supra* notes 112–19.

174. *See* Hausman et al., *supra* note 148, at 153–54. Hughes and Starband (EchoStar affiliate) have recently introduced two-way service that begins to address these basic problems, for $60-100 per month. In addition to the high cost, uplink speeds are only 20-70Kbps. Moreover, given the distances the signal must travel, there is a significant latency period. As a result, this will likely be an application only for niche markets. *See* McGregor McCance, *Satellite Broadband May Be Best, Or Only Choice For Many*, RICHMOND TIMES-DISPATCH, July 21, 2002 at D8.

175. *See, e.g.*, Stephen H. Wildstrom, *Wireless Data: Call Back Later*, BUS. WK., Mar. 4, 2002, at 24.

176. Local Multipoint Distribution Service (LMDS) operates above 24GHz and has a service radius of about five miles. It can transmit data at high speeds, but is very sensitive to environmental conditions. *See* ADVANCED TELECOMMUNICATIONS, *supra* note 2, at App. B ¶ 37.

177. Multichannel Multipoint Distribution Service (MMDS) operates below 3GHz and has a service radius of approximately 30 miles. *See id*. ¶ 38.

178. *See* FCC NINTH ANN. ASSESSMENT, *supra* note 1, ¶ 45 (noting that as of year-end 2001 "there were between approximately 6.9 and 7.4 million subscribers [to high-speed Internet services over cable], whereas there were between 3 and 3.3 million residential DSL subscribers. At that same time, there were about 200,000 subscribers to other broadband technologies."). *See also* Augustino, *supra* note 6, at 661–62. Augustino states that:

> Fixed wireless service . . . likely will not become a ubiquitous factor in this market for years, if ever, because equipment installation is complex

the optimism of some commentators has been misplaced.[179]

Cable is already ubiquitous in people's homes.[180] It also happens to be the only medium that has the potential to offer video, voice and data at very high speeds. As Professor Jim Chen points out, "[t]hanks in no small part to cable television's deep reach, hybrid fiber coaxial cable has become the residential broadband conduit of choice."[181] If regulated properly, cable's potential is enormous. If regulated poorly, everyone suffers: consumers, competitors . . . and surprisingly enough, incumbents themselves.[182]

C. Cable Industry Overview

1. Tactics

This current state of affairs did not happen by accident. Incumbents have carefully built their positions, and regulators have refrained from intervening.

The most obvious tactic has been for cable companies to merge and become increasingly large—putatively to benefit from economies of scale and scope and better serve consumers. In fact, the FCC has found the opposite; namely, that operators with two or more systems had rates 23% higher than single system operators.[183] Moreover, the

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> and because current monthly service rates may preclude residential and other low-volume subscribers. Similarly, satellite Internet services are years away from becoming a significant threat to cable modem services.

Id.

179. *See, e.g.*, Application for Consent to the Transfer of Control of Licenses to MediaOne Group, Inc. to AT&T Corp., Written Ex Parte of Assistant Professor James B. Speta (CS Docket No. 99-251), ¶ 15 n.7 (noting that "LMDS and other terrestrial wireless systems can be deployed quickly and with little sunk costs").

180. One commentator also suggests that one of cable's advantages may be consumer inertia. *See* Marcus Maher, Comment, *Cable Internet Unbundling: Local Leadership in the Deployment [of] High Speed Access*, 52 FED. COMM. L.J. 211, 221 (1999). The author states:

> Just as the FCC's faith in the A/B switch [between cable and broadcast programming] and consumer maintenance of a TV antenna proved misguided, faith in competing hardware solutions may be misguided as well. The same consumers who were unwilling to keep or obtain a TV antenna in the face of readily available cable television service are unlikely to undertake the effort necessary to have new technologies wired into their home for the purpose of Internet access, when comparable service is available through their existing cable connection.

Id.

181. Jim Chen, *The Authority to Regulate Broadband Internet Access Over Cable*, 16 BERKELEY TECH. L.J. 677, 679 (2001) (citation omitted).

182. *See infra* notes 207–13 for an analysis of this paradox.

183. *See* FCC REPORT ON CABLE PRICES, *supra* note 101, ¶ 36.

FCC readily admits that "[c]ontrary to our hypothesis, the data suggest that as the number of subscribers belonging to the MSO [multiple system operator] of which the operator is a part increases, the rates charged by that MSO also increase."[184]

But the incumbents have not grown at random. A related part of the strategy has been to "cluster" assets to dominate a certain territory, effectively controlling the geographical market.[185] One of the justifications for this tactic was to offer consumers lower prices.[186] In reality, though, the exact opposite has happened—the FCC has found that "cable operators that were part of a cluster had, on average, higher monthly rates than operators that were not part of a cluster."[187]

Another clever strategy has been for cable companies to "lock up" the multiple dwelling unit (MDU) market[188]—by signing exclusive long-term contracts and limiting new entrants' access to inside wiring.[189] MDU residents are particularly vulnerable, given that many of them might not have the proper exposure to receive DBS signals,[190] as well as the fact that their cable cost is already bundled into their monthly fees, such that obtaining any service other than cable would involve paying twice.[191]

New entrants have also been thwarted in their attempts to foster competition. At first, cable companies tried to form a coalition to control satellite programming, but were blocked by the Department of Justice.[192] More recently, incumbents have placed a number of obstacles, including blocking access to sports programming[193] and utility poles, opposing new franchise applications, and have even been ac-

184. *Id*. ¶ 45.

185. *See* FCC NINTH ANN. ASSESSMENT, *supra* note 1, ¶ 126.

186. *See id*. ¶ 127.

187. *See* FCC EIGHTH ANN. ASSESSMENT, *supra* note 104, ¶ 141.

188. The classic example of an MDU is an apartment building or condominium. These constitute approximately 20% of cable companies' income. *See id.* ¶ 124.

189. *See id*. ¶ 127–34. The FCC is contemplating whether to add pro-competitive policies governing inside wiring. *See* ADVANCED TELECOMMUNICATIONS, *supra* note 2, ¶ 157.

190. *See supra* note 116.

191. The FCC is also considering adopting restrictions on exclusive contracts to promote competition in the MDU market. *See* FCC NINTH ANN. ASSESSMENT, *supra* note 1, ¶ 78.

192. *See* Hausman et al., *supra* note 148, at 133 ("AT&T's acquisition of MediaOne represents a traditional cable strategy of controlling alternative sources of delivery for video programming. Before AT&T's recent cable acquisition initiative, the most recent implementation of this anticompetitive strategy was the attempt by a coalition of cable firms to control satellite delivery of video programming.") (citation omitted).

193. *See, e.g*., EchoStar Communications v. FCC, 292 F.3d 749 (D.C. Cir. 2002) (denying EchoStar's petition for review that Comcast switched its Sportsnet programming from satellite to terrestrial (*e.g.*, fiber optic) transmission to evade program ac-

cused of "predatory pricing and marketing discrimination practices."[194] After chronicling several examples of how incumbents have inhibited competitors in several markets,[195] the Commission concludes that:

> The vast resources of a large MSO may simply prove too much if brought to bear in a targeted fashion against a single system entrant. Moreover, we are concerned about the signal such targeting may send to others who would compete in the MVPD market, and particularly to the financial markets in which a new entrant may well be dependent for resources.[196]

2. *Performance*

Having looked at the market position and tactics of the cable industry, the next logical step would be to see how the industry has been performing financially. Going in, a reasonable hypothesis would be that the incumbents are doing well, while the new entrants either go bankrupt, or suffer.[197] While true,[198] this is only part of the story.

One measure that investors frequently use to assess a company's value is a proxy for cash flow known as Earnings Before Interest Taxation Depreciation and Amortization (EBITDA), which is an operating measure that essentially takes revenue and deducts cash operating expenses.[199] Judged by this metric, and as Figure 2 illustrates, cable incumbents are quite healthy, with 20–50% EBITDA margins,[200] while the remaining new entrants have negative EBITDAs.[201] In fact,

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cess provisions of 1992 Act); FCC NINTH ANN. ASSESSMENT, *supra* note 1, ¶ 141. Note also that clustering facilitates the switch to terrestrial delivery.

194. FCC NINTH ANN. ASSESSMENT, *supra* note 1, ¶¶ 110–11.

195. *See* FCC EIGHTH ANN. ASSESSMENT, *supra* note 104, ¶¶ 196–208.

196. *Id.* ¶ 209. One commentator uses even harsher terms:

> For decades, the cable industry has succeeded in persuading Congress and the Federal Communications Commission that real competition is around the corner. But competition never materializes. Instead of competing with one another to offer competition, cable companies merge with each other to monopolize markets and raise prices.

Kuttner, *supra* note 137, at 26.

197. Based on the incumbent tactics outlined *infra* Part II.C.

198. *See infra* notes 201–05.

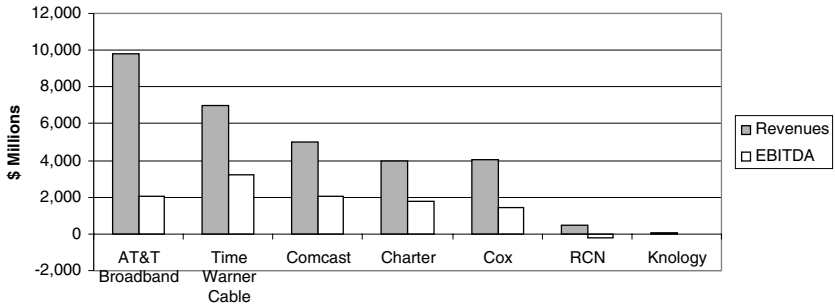
199. Interest and taxation are not included because they are considered financial expenses. Depreciation and amortization are not included since they are non-cash expenses.

200. This analysis is consistent with the FCC's calculation of an average 38.0% EBITDA margin in 2002. *See* FCC NINTH ANN. ASSESSMENT, *supra* note 1, at Table 4.

201. This is also in line with the FCC's observation that competitors "continue to report that regulatory and other barriers to entry limit their ability to compete with incumbent cable operators." *Id*. ¶ 12. *See also* FCC EIGHTH ANN. ASSESSMENT,

the reason there is very little overbuild is that there are few entrants that are still solvent. For example, RCN is by far the biggest, but has only 5% of AT&T Broadband's revenue, while running nearly a minus 50% EBITDA margin.[202]

FIGURE 2: 2001 REVENUE, EBITDA, AND EBITDA MARGINS FOR REPRESENTATIVE CABLE COMPANIES[203]



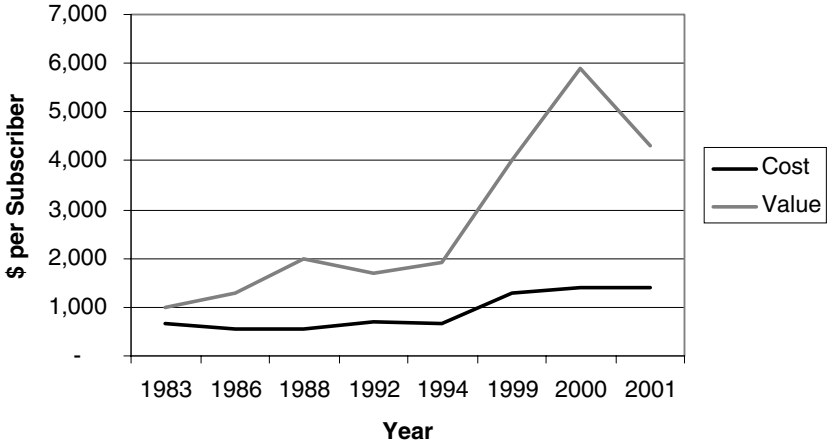
supra note 104, ¶ 13 (noting that new entrants "face considerable challenges inherent in entering markets with entrenched competitors"). The Commission also notes that several new competitors have stopped expanding, and many have declared bankruptcy. *See id*. ¶ 123.

202. The three largest overbuilders (RCN, WideOpenWest, and Knology) have 506,700, 310,000 and 124,700 subscribers, respectively. By comparison, the three largest cable companies (AT&T, Time Warner and Comcast) have 13.3 million, 12.8 million and 8.5 million subscribers, respectively. *See* FCC NINTH ANN. ASSESSMENT, *supra* note 1, ¶¶ 103–04 and at Table B-3 (cable company subscribers obtained by multiplying market share by total MVPD households).

203. Based on analysis of company finances, as follows: AT&T Broadband–AT&T Corp., Form 10-K (year ending Dec. 31, 2001), 22, *available at* http://www.sec.gov/Archives/edgar/data/5907/000095012302004634/e56632a1e10-ka.txt (on file with the *New York University Journal of Legislation and Public Policy*) [hereinafter AT&T 10-K]; Time-Warner Cable–AOL Time Warner, Form 10-K (year ending Dec. 31, 2001), F-71, *available at* http://www.sec.gov/Archives/edgar/data/1105705/000095013002001845/d10k405.htm (on file with the *New York University Journal of Legislation and Public Policy*) [hereinafter Time Warner 10-K]; Comcast–Comcast Cable Communications, Form 10-K (year ending Dec. 31, 2001), 27, *available at* http://www.sec.gov/Archives/edgar/data/1040573/000095015902000190/cable10k.txt (on file with the *New York University Journal of Legislation and Public Policy*) [hereinafter Comcast 10-K]; Charter–Charter Communications, Form 10-K (year ending Dec. 31, 2001), F-6, *available at* http://www.sec.gov/Archives/edgar/data/1091667/000095012302003204/y58890e10-k405.htm (on file with the *New York University Journal of Legislation and Public Policy*) [hereinafter Charter 10-K]; Cox–Cox Communications, Form 10-K (year ending Dec. 31, 2001), 42, *available at* http://www.sec.gov/Archives/edgar/data/25305/000091205702011652/a2073562z10-k405.htm (on file with the *New York University Journal of Legislation and Public Policy*) [hereinafter Cox 10-K]; RCN–RCN Corporation Form 10-K (year ending Dec. 31, 2001), 66, *available at* http://www.sec.gov/Archives/edgar/data/1041858/000095012302003210/y58571e10-k405.txt (on file with the *New York University Journal of Legislation and Public Policy*); Knology–Knology Broadband, Form 10-K (year ending Dec. 31,

Another metric that is commonly used to measure the health of an industry is Tobin's q ratio, which essentially measures the deviation between the enterprise value of a firm and the replacement costs of its assets.[204] Typically, analysts use the purchase price investors are willing to pay as a proxy for the value of the firm.[205] Figure 3 plots value per subscriber vs. cost per subscriber, and shows the rapid increase over time in the q ratio, indicating investor's perception of monopoly rents.

FIGURE 3: TOBIN'S "Q RATIO" – VALUE/SUBSCRIBER VS. COST/SUBSCRIBER[206]



The picture so far looks quite nice for the incumbents: strong margins and monopoly rents. Could a monopolist ask for anything more? Indeed, most analysis stops here.

Unfortunately, the situation for the incumbents is not as rosy as it may first appear. As the cable industry points out, it has spent about

2001), F-4, *available at* http://www.sec.gov/Archives/edgar/data/1048932/000095016802003105/d10ka (on file with the *New York University Journal of Legislation and Public Policy*).

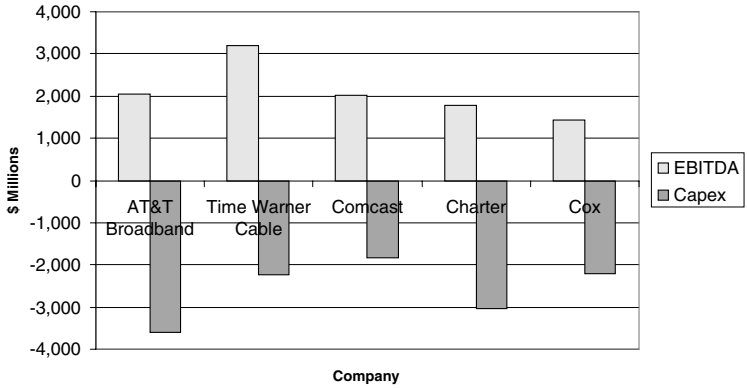
204. Mathematically, Tobin's q is approximately $(M_c + M_p + M_d)/A_r$, where M_c is the market value of a firm's common stock, M_p is the value of the preferred stock, M_d is the value of the debt, and A_r is the book value of the assets. *See* Kee H. Chung & Stephen W. Pruitt, *A Simple Approximation of Tobin's q*, 23 FIN. MGMT. 70, 71 (Autumn 1994).

205. *See* HAZLETT & BITTLINGMAYER, *supra* note 53, at 4.

206. *See* data from MARK COOPER, *supra* note 118, at 42–43. Where ranges were presented for a single year, these numbers have been averaged to obtain one data point. *See also* George Mannes, *Adelphia Asset Sales Could Lift Cable Stocks*, thestreet.com (May 27, 2002), *at* http://thestreet.com/tech/georgemannes/10024256.html (noting that average price paid per subscriber has ranged from $3,500 to $5,378 since 1999) (on file with the *New York University Journal of Legislation and Public Policy*); HAZLETT & BITTLINGMAYER, *supra* note 53, at 5.

$55 billion in capital expenditures since the passage of the 1996 Act.[207] Indeed, a look at the financial statements reveals that the cable industry has spent a staggering amount on capital expenditures. As Figure 4 shows for representative companies, capital expenditures are routinely higher than EBITDA.

FIGURE 4: *2001 EBITDA VS. CAPITAL EXPENDITURES FOR INCUMBENT CABLE COMPANIES*[208]



Taking capital expenditures into account, the following astounding situation emerges: even though cable incumbents have monopoly power up to the point of anti-competitiveness, they are still not cash

207. *See The Status of Competition in the Multi-Channel Video Programming Distribution Marketplace: Hearing Before the Subcomm. On Telecomm. and the Internet of the Comm. on Energy and Commerce*, 17th Cong. 20–28 (2001) (testimony of Robert Sachs, Pres. and CEO, National Cable and Telecommunications Ass'n). Press Release, National Cable and Telecommunications Association, Testimony of Robert Sachs on Competition in the Multi-Channel Video Programming Distribution Marketplace before the Subcommittee on Telecommunications and the Internet (Dec. 6, 2001), *available at* http://www.ncta.com/docs/pfriendly.cfm?prid=205&pPRess=ok (on file with the *New York University Journal of Legislation and Public Policy*). The FCC notes that in 2001 the cable industry spent $17.8 billion in capital expenditures. *See* FCC NINTH ANN. ASSESSMENT, *supra* note 1, ¶ 33.

208. Capital expenditure data based on analysis of company finances as follows: AT&T Broadband–AT&T 10-K, *supra* note 203, at 22; Time Warner Cable–AOL Time Warner 10-K, *supra* note 203, at F-71, F-73; Comcast–Comcast 10-K, *supra* note 203, at 27-28; Charter–Charter 10-K, *supra* note 203, at F-6, F-8; Cox–Cox 10-K, *supra* note 203, at 42, 44.

flow positive.[209] Notably, cash flow is what sophisticated investors increasingly are using to measure the true value of a firm.[210]

The reason for this paradox might lie in the desire of many management teams to "build an empire." One article in the business press summed up the situation nicely: "All too often nowadays, corporate boards seem eager to rubber-stamp deals negotiated by empire-building CEOs."[211] It is why many companies, for example, overpay for acquisitions.[212] It has also led companies to try to build large proprietary networks. As the fate of companies like Apple in computers[213] and Wang in word processing[214] shows, this strategy rarely works.

The cable companies may be falling prey to the same trap. One critic points out that AT&T Broadband's imprudent acquisition strategy has destroyed "$35 billion in shareholder value."[215] In addition, as Hazlett and Bittlingmayer note, "[t]he purpose of cable operators in pushing digital cable and video-on-demand, while starving broadband access: Keep content 'on network.'"[216]

A look at cable industry economics bears out their point: video revenues are both more significant and more profitable than broad-

209. A measure known as Free Cash Flow (FCF) can be derived from EBITDA by subtracting out capital expenditures, interest expense and changes in working capital. Taking into account interest expense and working capital changes would make the situation described above even worse. In particular, cable companies have very high interest expenses, since many of their capital expenditures are financed with debt.

210. Interestingly enough, investment bankers' cable valuation models acknowledge the negative cash flows of cable companies. JP Morgan, for example, has a "years to positive FCF" in its model. *See* JP MORGAN REPORT, *supra* note 1, at 72. *See also* Reinhardt Krause, *Cable TV Stocks Go In For Pummeling on Debt, Cash Flow, Accounting Fears*, INVESTOR'S BUS. DAILY, June 28, 2002, at A1 (expressing concern with balance sheet weakness of many cable companies that have used debt to fund capital expenditures).

211. Michael Arndt, *Let's Talk Turkey*, BUS. WK., Dec. 11, 2000, at 44.

212. *See, e.g.*, Robert Eccles et al., *Are You Paying Too Much for that Acquisition?*, HARV. BUS. REV., July-Aug. 1999, at 136 ("Despite 30 years of evidence demonstrating that most acquisitions don't create value for the acquiring company's shareholders, executives continue to make more deals, and bigger deals, every year.").

213. *See, e.g.*, *Sculley Placed All Bets on the Proprietary Mac Way*, INFOWORLD, Feb. 17, 1997, at 53 (noting with some amusement Sculley's 1987 statement of future unimportance of compatibility with IBM's PC standard).

214. *See, e.g.*, *The Innovator that Quit Innovating*, U.S. NEWS & WORLD REP., Aug. 31, 1992, at 23 (observing that "Wang also stuck with its own proprietary software on its minis after cheaper models running Unix, an industry standard operating system, caught on").

215. Kuttner, *supra* note 137, at 26. *See also* Woolley & Weinberg, *supra* note 151 (noting that AT&T's CEO, Michael Armstrong, "tried—and largely failed—to reshape the aging giant into a digital powerhouse offering a bundle of telecom, wireless, cable and Internet services. In the process he oversaw massive destruction of shareholder wealth").

216. HAZLETT & BITTLINGMAYER, *supra* note 53, at 17.

band access. Video revenues are anywhere from ten to twenty times greater than broadband revenues.[217] The situation is unlikely to change much in the future: video revenues are projected to dominate high speed access by a ratio as high as 12:1 in 2010.[218]

It is difficult to get an accurate picture of cash flows for different portions of the cable business, since this information is not reported publicly. Though more data would be useful, some investment banking research analysts have already tried assessing relative profitability.[219] As Figure 5 shows, the 2001 margins for video are estimated to be at least twice that of broadband access. To be sure, these same analysts are projecting dramatic increases in profitability for high-speed data access, which may come to pass.[220] But based on analyst estimates as of year-end 2001, there is at least a tenable hypothesis that there are significant differences in margins between video and data access.[221] Even if this analysis is only directionally correct, it is quite plausible that cable companies are optimizing against these economics and promoting closed video systems over an open infrastructure. This observation also accords with business articles that tout the high margins of services such as video on demand.[222]

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217. For example, approximate company ratios, based on publicly reported data, are as follows: Comcast=14, Charter=20. *See* Comcast 10-K, *supra* note 203, at 21; Charter 10-K, *supra* note 203, at F-25.

218. *See* HAZLETT & BITTLINGMAYER, *supra* note 53, at 8–9. Note that some financial analysts are predicting a video to broadband ratio as low as 3 to 1 by 2006. *See, e.g.*, CREDIT SUISSE FIRST BOSTON, DOWNGRADING CHARTER TO UNDERPERFORM DUE TO DETERIORATING FUNDAMENTALS 6 (Nov. 5, 2002) [hereinafter CSFB CHARTER REPORT]; CREDIT SUISSE FIRST BOSTON, SOLID 3Q; SG&A AND BASIC SUB. TRENDS A CONCERN 8-9 (Oct. 29, 2002) [hereinafter CSFB COX REPORT]. These investment banking projections, however, should be taken with a grain of salt, especially given their significant divergence with current operations.

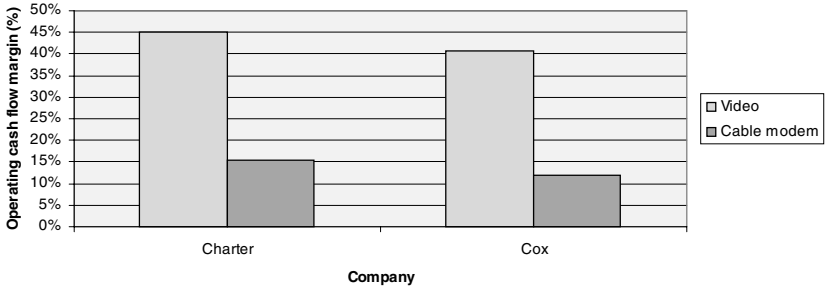
219. *See infra* note 223.

220. For instance, some analysts predict that cable modem margins could reach 45%–65% by 2006, while video margins decline to 33% during the same period. *See, e.g.*, Charter–CSFB CHARTER REPORT, *supra* note 218, at 6; Cox–CSFB COX REPORT, *supra* note 218, at 8–9. Again, multi-year estimates should be viewed with some skepticism, especially when they differ dramatically from current reality.

221. *See infra* note 223.

222. *See, e.g.*, Justin Opelaar, *Film Gains but Red Ink Flows at AOL*, DAILY VARIETY, Jan. 31, 2002, at 1 ("Pittman [AOL-Time Warner's COO] ran off a laundry list of potential high-margin broadband offerings, including video-on-demand, voice services, music, games and shopping."); Diane Mermigas, *The Bad Drowns Out Cable's Good*, ELEC. MEDIA, May 27, 2002, at 16 ("The good news is that once established, high-margin services such as video-on-demand will be the golden egg that makes cable gatekeepers a commanding competitive and economic force.").

FIGURE 5: ESTIMATES OF 2001 VIDEO VS. CABLE MODEM MARGINS[223]



This may be an insight into why broadband deployment lags—it should be less of a surprise now as to why only 8% of cable-modem ready homes actually have them, or why cable telephony is virtually non-existent.[224] As Part III will explore, what cable companies may not have taken into consideration is the astronomical cost of trying to "go it alone" by building a closed proprietary video system. In addition, even when offering broadband services, cable operators often create a "walled garden": caching content on local servers, which offers the ability to make additional money through the sale of local advertising and services.[225] But by doing so, the cable operators also exert some control over content by determining what goes on the local server and thus gets preferential access.

The principle that competition engenders efficiency, explored above,[226] is also useful. Since cable companies are not facing effective competition, they might lack the discipline to use their resources efficiently; rather, they will spend their resources inefficiently—on capital expenditures to build closed networks that are expensive, quickly obsolete, and conducive to negative cash flows. Perhaps, then, it is less of a surprise that cable stocks have under-performed the S&P Industrials and NASDAQ.[227] As one trade journal summed up: "Red flags are going up on Wall Street in response to a 43 percent decline this year in cable television stock prices, which industry ana-

223. Data from the following sources: Charter–CSFB CHARTER REPORT, *supra* note 218, at 6; Cox–CSFB COX REPORT, *supra* note 218, at 8–9.

224. ADVANCED TELECOMMUNICATIONS, *supra* note 2, ¶ 45.

225. *See* Walter S. Ciciora, *The Cable Modem Traffic Jam*, IEEE SPECTRUM, June 2001, at 48, 50; Hausman et al., *supra* note 148, at 160.

226. *See supra* Part II.A.

227. *See, e.g.*, BANK OF AMERICA EQUITY RESEARCH, CABLE INDUSTRY COMMENT 2 (2002) (showing that starting at index of 1.00 in January 2002, by July 2002, S&P Industrials, NASDAQ, and cable industry stocks had fallen to approximately 0.85, 0.75 and 0.35 respectively).

lysts attribute to largely unfounded concerns about rising debt, costly system upgrades and the slow rollout of digital services."[228]

III.
PROPOSED FRAMEWORK

A. Underpinnings

1. Need for Flexibility and Technological Sensitivity

A number of premises drive the proposal being outlined. The first is that any tenable framework must move away from reliance on rigid classifications and toward technological and economic reality. As one article summed up, "[t]here are no clear answers under the law today. Only clear-sighted policy choices can rescue us from this bewildering morass of finely crafted, but never entirely satisfactory, statutory definitions and consequences intended for the services of the past, not the future."[229]

Telecommunications scholarship has already been moving in this direction. For example, Professor Jonathan Weinberg has written about the inconsistencies engendered by the "telecommunications" vs. "information services" distinction where only "telecommunications" carriers must pay universal service subsidies.[230] Instead, he proposes a simple, effective solution based on the ownership of transmission facilities regardless of what statutory category they fall into.[231]

Another requirement for any proposal is for it to be readily adaptable to future changes. As the Supreme Court has pointed out, "the subject matter here is technical, complex, and dynamic."[232] Interestingly enough, there are telecommunications parallels to Alan Greenspan's words in the securities context that "regulation and supervision of our financial markets need to be flexible enough to adapt to an

228. Mermigas, *supra* note 222. *See also* Peter Grant, *Paul Allen's In Danger of Losing His Charter*, WALL ST. J., Jan. 29, 2003, at C1 (discussing financial problems of cable companies, with focus on Charter Communications).

229. Esbin & Lutzker, *supra* note 88, at 77. *See also* Harold, *supra* note 69, at 721 ("The entire regulatory design of the Communications Act of 1934, even after the recent amendments, depends upon being able to slot a particular service into one of the main 'regulatory classifications' set out in the statute."); Gibbs & Hartman, *supra* note 71, at 2195 ("Predominant in many of these controversies has been the struggle to define the *service* provided by the new technology.").

230. *See* Jonathan Weinberg, *The Internet and "Telecommunications Services," Universal Service Mechanisms, Access Charges, and Other Flotsam of the Regulatory System*, 19 YALE J. ON REG. 211, 224–25 (1999).

231. *Id.* at 244.

232. Nat'l Cable & Telecomm. Ass'n, Inc. v. Gulf Power Co., 534 U.S. 327, 339 (2002).

ever-changing and evolving financial structure. Regulation cannot be static or it will soon distort the efficient flow of capital."[233] Unfortunately, regulation has already distorted the flow of capital in the cable markets toward closed systems, and regulators should do something to fix it.

2. Why Bother at All?

Some might argue at this point that there is no reason for the government to intervene, since the "free market" will solve our woes. As Professors Lemley and Lessig correctly point out "[i]t is fashionable today to argue that innovation is assured if government simply stays out of the way."[234] Even FCC Chairman Powell, who is acutely aware of the issues faced with the deployment of broadband, has mentioned to the press that one option to restore regulatory parity would be to "free the Bells of the open-network requirement" rather than try to regulate cable differently.[235] The response is both philosophical and practical.

At a philosophical level, it is unclear what the "free market" is, since doing nothing is actually doing something—that is, further entrenching anti-competitive incumbents engaging in monopolistic behavior. As explained in Part II, giving the cable companies essentially free reign has caused great harm not only to consumers and society, but also to the companies' own shareholders.

Beyond philosophy, a number of practical arguments are often brought to bear against cable regulation: technological infeasibility, investment disincentives, indirect network externalities, and regulatory impracticality. These often have been raised in policy discussions around open access, and each will be addressed in turn.

The first argument is that it is technologically infeasible to mandate access given the inherently proprietary nature of cable networks that must be constantly upgraded.[236] This argument is very similar to the argument that AT&T used to make around customer premises equipment, and that LECs tried to make vis-à-vis the 1996 Act un-

233. *See The Federal Reserve's Second Monetary Policy Report to Congress for 2002: Hearing Before the Sen. Comm. on Banking, Hous., and Urban Affairs*, 107th Cong. (2002) (testimony of Alan Greenspan, Chairman, Federal Reserve), *available at* http://banking.senate.gov/02_07hrg/071602/index.htm (on file with the *New York University Journal of Legislation and Public Policy*).

234. Lemley & Lessig, *supra* note 63, at 12.

235. *See* Pulley, *supra* note 65.

236. *See, e.g.*, William P. Rogerson, *The Regulation of Broadband Telecommunications, the Principle of Regulating Narrowly Defined Input Bottlenecks, and Incentives for Investment and Innovation*, 2000 U. CHI. LEGAL F. 119 (2000).

bundling requirements.[237] History and engineering reality makes this a weak argument. As Professor Jim Chen has pointed out in the open access context:

> The cable companies' recitation of "technical reasons" is no more persuasive than Bell's stunning claim that a rubber attachment to a telephone mouthpiece would damage the national telephone network. Continued inaction on cable broadband reinforces the impression that federal communications law has learned nothing from its experience with the Bell divestiture.[238]

Even those making the technological arguments admit that copper/fiber telecommunications loops have been opened successfully to third parties, and that within the cable context, it would be possible to define a "virtual loop that must be made available at regulated prices, [but that] . . . it would reduce incentives for innovation and investment in loop technologies."[239] What these critics are making, then, is not really a technological, but rather an economic argument.

What detractors are effectively arguing is that cable operators would not invest in their platforms if they were forced to open their networks. But there is little economic analysis behind this claim. As the OECD notes, rather bluntly, "[t]o date the major criticism of unbundling or line sharing are [sic] that such policies allegedly discourage investment in new infrastructure. No evidence has been forwarded to substantiate this claim."[240] One commentator notes that:

> To begin, the argument that any regulation would stifle development is overblown. To put it in proper perspective, this argument is the functional equivalent of telling the FCC at the dawn of the television era not to engage in public interest regulation of television broadcasting because otherwise no one will risk investing in television.[241]

For example, Professor James Speta, one of the leading critics of opening cable networks, notes simply that "because of the need to ensure adequate returns to owners of broadband open access plat-

237. *See, e.g.*, Hush-a-Phone Corp., 20 F.C.C. 391 (1955) (agreeing with AT&T that any attachments to telephone system must be approved by carrier); Richard Waters, *Quagmire over Telecoms Pricing and Policy Issues*, FIN. TIMES, Jan. 17, 2001, at 5 (discussing how incumbent telephone companies can drag their feet over technical issues when faced with opening up their networks).

238. Chen, *supra* note 181, at 720–21 (citation omitted). *See also* Inanaga, *supra* note 65, at 173 (noting cable companies' claims of technological difficulties of open access).

239. Rogerson, *supra* note 236, at 147.

240. OECD REPORT, *supra* note 5, at 15.

241. Augustino, *supra* note 6, at 667.

forms, *on balance* open access rules are undesirable."[242] Hazlett and Bittlingmayer make a more sophisticated argument. After correctly pointing out that cable companies are "starving" bandwidth,[243] they go on to posit that this "slow access architecture" is defensively engineered because cable operators fear regulation of broadband, whose provision more closely resembles a common carrier service.[244] A more likely explanation, based on the economic analysis in Part II, is that cable executives simply are allocating bandwidth based on where they think they can make money. Their revenues and margins are higher in traditional video, so that is where the vast majority of the bandwidth goes.[245] The irony, of course, is that without competition, cable operators will have an incentive to invest inefficiently—in closed proprietary networks. The situation may thus be worse than the OECD's statement that regulation does not stunt investment: lack of regulation may actually encourage bad investments as cable operators sacrifice their balance sheets to try to build closed empires.

A third argument against regulatory intervention is that market demand for content variety will provide market incentives for cable incumbents to open their networks. Professor Speta terms these "indirect network externalities."[246] Unfortunately, there are several problems with this argument.

The first problem is that, at its core, it is based on a belief that there is no "reason the cable companies would seek to protect video programming revenues instead of seeking new revenues from internet

242. Letter from James Speta, Visiting Assistant Professor, Northwestern University School of Law, to Senator John McCain, Sen. Commerce Comm. 9 n.10 (May 3, 1999), *available at* http://www.law.nwu.edu/faculty/fulltime/speta/spetopen.html (emphasis added) (on file with the *New York University Journal of Legislation and Public Policy*).

243. *See* HAZLETT & BITTLINGMAYER, *supra* note 53.

244. *See id.* at 21. Note that a cable provider can often obtain the same revenue from one channel offering broadband access as from offering a package of video channels. In fact, an argument can even be made that cable operators are pricing their broadband products expensively precisely to discourage use. For example, $45 per month for 40 6MHz channels translates into $1.13 per channel, compared to about $40 for a shared 6MHz of broadband. *See* George Bittlingmayer & Thomas Hazlett, *The Political Economy of Cable "Open Access,"* Telecommunications Policy Paper 11 (Aug. 2001), *available at* http://www.business.ku.edu/home/gbittlingmayer/research/openaccess.tp.pdf (on file with the *New York University Journal of Legislation and Public Policy*).

245. *See supra* Part II.C.2.

246. *See* Speta, *supra* note 79, at 76–90. This is premised on Speta's notion that "a monopolist has no incentive to attempt to limit the development of markets for goods that are used in conjunction with the monopolist's goods." Speta, *supra* note 179, at 9.

service."[247] As Part II purported to show, however, it is in large part because cable companies are seeking to protect their video programming revenues that they are starving broadband—as Hausman and Sidak point out, "a vertically integrated firm like AT&T can block out any competing content that it wants to."[248] Ignoring differences in revenues and margins is typical of commentators who believe that cable operators have no incentive to leverage their monopoly vertically.[249] Even the more sophisticated analysts "assume that profit margins are equal across services."[250]

The second problem is simply the common sense notion that if, as Speta argues, "cable companies will find it in their economic interest to provide open access,"[251] then why have they spent enormous time and energy fighting open access?[252] If cable companies have not yet realized that open access is in their long-term economic interests, then it is the regulator's job to make sure they do.[253]

A fourth argument against intervention is simply that regulation is impractical and has failed in the past. This does not appear to be an argument against regulation per se, but against its implementation. The most often cited example is how ILEC unbundling requirements have created little effective competition. However, a few points are worth bearing in mind. The first is that the ILECs prior to unbundling were not exactly paragons of innovation[254]—at least the 1996 Act

247. Speta, *supra* note 68, at 1005.
248. Hausman et al., *supra* note 148, at 160.
249. *See, e.g.*, Yoo, *supra* note 30.
250. HAZLETT & BITTLINGMAYER, *supra* note 53, at 10.
251. Speta, *supra* note 68, at 994.
252. *See supra* Part I.B. One commentator even points out that cable companies threatened municipalities that demanded open access by telling them they would be the last ones to see broadband technology. *See* Inanaga, *supra* note 65, at 170.
253. Note that Professor Speta's view may be evolving. In a recent paper, he proposes imposing common carrier obligations to regulate the Internet, but carves out an exception for cable open access, based on wanting to avoid agency price-setting. *See* James B. Speta, *A Common Carrier Approach to Internet Interconnection*, 54 FED. COMM. L.J., 225, 247–57 (2002). In a later book review, however, he seems to reemphasize his earlier argument that a "cable monopolist . . . would have no incentive to favor affiliated content over unaffiliated content or to favor traditional video services over new Internet services." James B. Speta, *A Vision of Internet Openness by Government Fiat*, 96 NW. U. L. REV. 1553, 1568–69 (2002) (reviewing LAWRENCE LESSIG, THE FUTURE OF IDEAS: THE FATE OF THE COMMONS IN A CONNECTED WORLD (2001)). One is left wondering whether imposition of common carrier obligations on Internet players is consistent with Speta's otherwise laissez-faire approach.
254. *See, e.g.*, Dhruv Khanna & Bruce Aitken, *The Public's Need for More Affordable Bandwidth: The Case for Immediate Regulatory Action*, 75 OR. L. REV. 347, 352 (1996) ("Unlike competitive businesses, the monopoly LECs are not adept at innovation, deploying new services, expanding output or otherwise successfully seizing new business opportunities.").

brought about limited competition in local markets, and significant competition in long distance markets. The shortcomings in the Act's unbundling provisions also can be traced to the fact that the FCC priced access using a methodology known as total element long-run incremental cost (TELRIC), which economists have shown has significant deficiencies.[255] In addition, as Professor Jerry Hausman points out, the fact that many CLECs went bankrupt may ironically be due to the fact that the interconnection price was set too low: through artificially low unbundling rates, the FCC gave CLECs a free option to rent ILEC infrastructure. This generated unsustainable growth rates, as CLECs spent their money on customer acquisition, not product differentiation. As the capital markets dried up, the CLECs who had not really developed any competitive advantage went bankrupt.[256]

Other examples of poorly implemented regulation abound. For instance, economists have pointed to the fact that universal service obligation taxes should be collected on local, not interstate, telephone charges,[257] or that spectrum could be allocated more efficiently.[258] These are all valid points, but saying that the implementation is poor does not mean that allowing rural areas or schools and libraries to have access to the telephone network or protecting public airwaves is a bad idea. On a grander scale, few would disagree that the innovation we see today in telecommunications markets is due in large part to the government taking an active role in breaking up the AT&T monopoly. The Internet itself, as Professor Jim Chen points out, "is a far cry from an object lesson in the virtues of *laissez-faire* economics; much of the wealth accumulated in the Internet owes its origins to a systematic policy favoring Internet use."[259]

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255. *See* Michael J. Doane et al., Response, *Having Your Cake—How to Preserve Universal-Service Cross Subsidies While Facilitating Competitive Entry*, 16 YALE J. ON REG. 311 (1999).

256. *See* Jerry Hausman, *Competition and Regulation for Internet-related Services: Results of Asymmetric Regulation*, 32–34 (Aug. 2001), *at* http://www.mit.edu/afs/athena/course/urop/jyurop/www/bin2/Hausman-CITIFinal%20Feb%209,%202002.pdf (on file with the *New York University Journal of Legislation and Public Policy*).

257. *See, e.g.*, JERRY HAUSMAN, TAXATION BY TELECOMMUNICATIONS REGULATION (NBER, Working Paper No. 6260, 1997) (using public finance analysis to show that subsidizing Internet access for schools and libraries based on interstate telephone charges results in massive efficiency losses to the economy, in large part due to price elasticity of long distance service). Professor Hausman has also made a similar argument around the inefficiencies of current wireless taxation. *See* JERRY HAUSMAN, EFFICIENCY EFFECTS ON THE U.S. ECONOMY FROM WIRELESS TAXATION (NBER, Working Paper No. 7281, 1999).

258. *See, e.g*., Pablo T. Spiller & Carlo Cardilli, *Towards a Property Rights Approach to Communications Spectrum*, 16 YALE J. ON REG. 53 (1999).

259. Chen, *supra* note 181, at 714 (emphasis added).

Adopting a "wait-and-see" attitude to cable regulation, as one commentator has pointed out, "will cause irreparable harm to millions of American citizens."[260] It may be painfully obvious, but there is a difference between good regulation and bad regulation. We must learn to develop regulations that are economically sound—where benefits outweigh the costs—rather than abandon the whole concept.

B. Development

The approach advocated is based on five simple steps:

(1) Define the underlying technology.

(2) Isolate the scarce resource associated with this technology.

(3) Identify whether there is an actor with monopoly control over this resource.

(4) If yes, determine whether this actor is using the resource in a manner consistent with public policy.

(5) If no, regulate the scarce resource in a manner consistent with public policy.

Each step will be addressed in turn, with a particular focus on step five, which proves to be the most difficult and controversial.

1. Defining the Underlying Technology

Gibbs and Hartman survey a number of telecommunications regulations, pointing out that those regulations based on technological reality have proven successful, while others have not.[261] They go on to criticize open access advocates who would like regulatory parity between cable modems and DSL based on the fact that they offer similar services.[262]

Understanding the technology before attempting to regulate it is thus an important first step.[263] Cable companies capture programming with large satellite antennae that are located atop a head-end building. These signals are then transmitted along high-speed fiber optic cables to neighborhood distribution centers known as nodes. At the node, the

260. Augustino, *supra* note 6, at 669.

261. *See* Gibbs & Hartman, *supra* note 71. For example, wireless telephony has been successful, whereas open video systems have not.

262. *Id*. They call this the "service-driven" approach, and point out how it has consistently failed to achieve its objectives. However, their analysis does not go on to address other possible alternatives, preferring instead to advocate a laissez-faire approach to cable regulation. *See id.* at 2221–25.

263. The description that follows is obviously only a stylized high-level overview of the technology. For more details, see, e.g., Amitava Dutta-Roy, *Cable: It's Not Just For TV*, IEEE SPECTRUM, May 1999, at 53; ADVANCED TELECOMMUNICATIONS, *supra* note 2, App. B, ¶¶ 3–8.

signals are then transmitted via coaxial cable to individual households, which, in effect, constitute a local area network (LAN). A typical cable system has a frequency range of 0 to 750MHz, with an analog TV channel occupying 6MHz.[264] It was first designed as a one-way system that effectively simulates broadcasting.

The Internet requires two-way communications, so cable operators have upgraded their equipment to handle bi-directional information flow.[265] The lower end of the cable frequency range, from 5 to 42MHz, is reserved for upstream communications.[266] Cable companies typically reserve only one 6MHz channel for Internet access. With the advent of digital cable, anywhere from 4 to 12 digital TV channels can now occupy a 6MHz frequency slot, thus allowing for significantly more content with the same bandwidth.[267]

Two points emerge from this brief overview. The first is that cable needs to be regulated holistically as a medium that has significant bandwidth and can carry traditional video signals as well as broadband data. Today, however, regulation is confusingly piecemeal, with the video portion designated as a "cable service" and the data portion as an "information service."[268]

The second point is that cable architecture is very different from telephone architecture, which consists of a series of dedicated low bandwidth lines from home to central office, designed to carry voice signals. As a consequence, the technical considerations behind open access for DSL should be different from those behind open access for cable.

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264. *See, e.g.*, Ciciora, *supra* note 225.

265. This involves installing controllers, return amplifiers, and the like. In addition, a high-speed connection to the Internet is set up at the head end. The cost is approximately $200–600 per home passed. *See* Dutta-Roy, *supra* note 263, at 55.

266. This portion of the spectrum is typically noisier since it receives interference from radios, and thus requires less efficient modulation schemes. Upstream data is typically limited to 300K–10Mbps under Quadrature Phase Shifting Keying (QPSK) or 16 Quadrature Amplitude Modulation (16 QAM). Of course, upstream capacity could be increased by allocating more channel capacity or improving the modulation algorithm. DOCSIS and IEEE standards setting bodies are working to address these issues. There is also significant engineering activity aimed at the upstream issue. *See id.*

267. *See* Digital Cable, National Cable and Telecommunications Association (2002), *at* http://ncta.com/broadband/broadband.cfm?broadID=2 (last visited Feb. 19, 2003) (on file with the *New York University Journal of Legislation and Public Policy*).

268. *See supra* Part I.B.

2. *Isolating the Scarce Resource*

The scarce resource in this technological architecture is the perennial "last mile" problem: the portion of the network that runs from the fiber node to the subscriber's home.[269] It is a "pipe dream"[270] that new entrants successfully will deploy another "fat" pipe in the foreseeable future on any significant scale—the financial resources needed and cable company opposition are too steep. Indeed, the fate of the new entrants illustrates this point quite vividly.[271]

Successful regulation, then, must recognize that lack of access to the last mile of cable plant is what has stymied competition in the cable market. The "last mile" is thus what economists would call a "bottleneck input." Professor William Rogerson—who quite wisely opposes traditional cost-based regulation of outputs in fast-changing markets—points out that "[r]egulating narrowly defined inputs instead of outputs is one approach regulators can use to attempt to confine regulation to as small a sphere as possible, and thereby allow the benefits of competition to infuse more segments of an industry."[272]

More specifically, in the telecommunications context, Professors Lemley and Lessig have pointed out that:

> The fundamental economic goal of the FCC in deregulating telephony is to isolate the natural monopoly component of a network—the actual wires—from other components in which competition can occur. By requiring the natural monopoly component at the basic

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269. *See, e.g.*, Shelanski, *supra* note 172, at 723. The author states that:

> While the paving of the "infobahn" has reached the freeways and main roads, it has not yet reached the neighborhood streets. For the most part, the high-capacity fiber infrastructure stops well short of individual customer lines—often called "loops" or the "last mile"—that connect individual customers to the network.

Id.; *see also* ADVANCED TELECOMMUNICATIONS, *supra* note 2, app. B, ¶ 1 ("We focus particularly on the last mile because it is a critical link between existing long haul transport and middle mile infrastructure and the last 100 feet to the end-user's terminal, and it appears to be where there is the greatest need for further investment."); OECD REPORT, *supra* note 5, at 4. According to the report:

> The current bottleneck to growth in the communications sector, and beyond for areas such as electronic commerce, is the limitations of local access networks. These limitations are not just technological. The inheritance of many decades of monopoly provision of access networks is that there is usually only one, or at best two, networks passing homes and businesses.

Id.

270. No pun is intended.

271. *See supra* Part II.C.2.

272. Rogerson, *supra* note 236, at 135. Rogerson, however, goes on to advocate open access for DSL, but not for cable modems based apparently on technical difficulties. *See id.* at 147.

> network level to open to competitors at higher-levels, intelligent regulation can minimize the economic disruption caused by that natural monopoly, and permit as much competition as industry will allow.[273]

One refinement is critical, however: the cable wire is actually 750MHz of bandwidth, split into 6MHz channels, and the scarce resource is the bandwidth. This is what traditional open access advocates lose sight of. For example, it is valid to point out that without open access rules, cable companies can often demand that consumers use a captive ISP on their network, or else pay twice.[274] However, simply granting a third-party ISP access to the *wire* will only address a small portion of the problem: the real scarce resource is the *bandwidth*. Adding other ISPs to a small 6MHz sliver of capacity will not ensure adequate broadband deployment.

> The scarce resource, simply put, is the bandwidth on the one coaxial cable wire coming into people's homes.[275]

3. Identifying the Actor With Monopoly Control

Hopefully, it should be evident by now that incumbent cable companies have monopoly control over the scarce resource.[276] The FCC itself has summarized a number of significant barriers to entry into this market, including:

> (a) predatory conduct including 'predatory pricing'; (b) strategic behavior by an incumbent to raise its rivals costs by limiting the availability of certain popular programming as well as equipment; (c) local and state level regulations, including delay in gaining access to local public rights-of-way facilities as well delay in getting cable franchises.[277]

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273. Lemley & Lessig, *supra* note 63, at 135. *See also* Augustino, *supra* note 6, at 657 ("[T]he focus should be on creating market conditions that facilitate competition in, and the availability of, broadband last mile facilities.").

274. *See* FCC NINTH ANN. ASSESSMENT, *supra* note 1, ¶ 46 ("[T]he Internet service providers ("ISPs") used in cable modem service are selected by the cable provider.").

275. This is not to say, of course, that there are not other bottlenecks in a broadband system. For example, the website "serving" up content can become bogged down. However, solving the issue of last mile facilities is the most complex, and without it little else is possible. *See, e.g.*, Ciciora, *supra* note 225, at 50.

276. *See supra* Part II.B.

277. *See* FCC NINTH ANN. ASSESSMENT, *supra* note 1, ¶ 113.

4. *Determining Whether the Actor is Using the Scarce Resource Consistent with Public Policy*

As discussed above, the most important goal of United States telecommunications policy is to foster broadband deployment.[278] As it turns out however, the most significant avenue we have for broadband deployment—the cable plant—is effectively choking broadband.

It is worth reiterating that currently cable companies devote only 6MHz out of 750MHz to broadband.[279] 6MHz roughly converts into a 27Mbps transmission rate,[280] which is typically shared among 500 subscribers in a LAN.[281] Cable companies typically offer download speeds somewhere between 100Kbps and 1.5Mbps and upstream speeds below 300Kbps.[282] While these levels are faster than a 56K dial-up modem, they are significantly below what is actually possible and required for cutting edge broadband applications.[283] In addition, cable companies place numerous limitations on use, most notably limiting the ability to download large files or real-time video.[284] The ostensible reason for these limitations is to protect the network from "bandwidth hogs"—however the real reason is that cable operators fear competition with cable programming.[285]

Instead of investing in proprietary video networks, cable companies could be increasing broadband speeds dramatically using a number of techniques—including adding more bandwidth,[286] node

278. *See supra* note 7.

279. *See supra* note 170.

280. Signals are typically modulated using 64 QAM. *See supra* note 266.

281. *See, e.g.*, Brian Santo, *If You Build It, Will Cable Come?*, CABLE WORLD, Aug. 20, 2001, at 34. Note that a node could serve anywhere up to 2,000 residences. *See* Dutta-Roy, *supra* note 263.

282. *See, e.g.*, Mike Langberg, *Not So Picture Perfect*, SAN DIEGO UNION-TRIB., Sept. 23, 2002, at E4.

283. For example, to watch a DVD over the net would require 4Mbps; VHS quality is about 300Kbps, and a high quality TV experience is estimated at 750Kbps. *See* Kira Greene, *Coming Eventually: TV on the PC*, BROADCASTING & CABLE, Dec. 11, 2000, at 88.

284. *See* Speta, *supra* note 68, at 979.

285. *See, e.g.*, Hausman et al., *supra* note 148, at 160 ("[A] vertically integrated broadband provider can limit the duration of streaming videos of broadcast quality to such an extent that they can never compete against cable programming."). Obviously, as the Napster debacle illustrates, royalty issues also stand in the way, both for music and movies.

286. For example, if the allocation to broadband services were increased tenfold to 60MHz, it would allow 270Mbps to be shared among 200–500 users. Given that users only use bandwidth when they are sending or receiving data, very high bandwidth applications become possible. Note that 60MHz is still less than 10% of the bandwidth of a cable system.

splitting,[287] and improving the conversion algorithm.[288] In addition, Cable Labs is promulgating a new DOCSIS standard that will triple upstream capacity to 30Mbps, enabling symmetrical applications.[289] These technologies could raise cable modem rates to several Gbps, in contrast to DSL.[290]

What we have, then, is a striking divergence between aspiration and reality. As a society, we aspire to a high-technology world of real-time video communications and Internet TV where we can watch what we want when we want—in short, a custom world the individual subscriber designs and where being a "bandwidth hog" is not necessarily a bad thing. Instead, we have a world of cable modem "traffic jams,"[291] interminable wait times, and a poor imitation of video on the Internet that is "still slow, jerky, grainy and small."[292] We have hundreds of generic television channels based on an antiquated "one-to-many" broadcast model that goes back half a century. Surely, large swathes of bandwidth could be put to better use.

5. Regulating the Scarce Resource Consistent with Public Policy

The government should allow private broadband providers to gain access to portions of cable bandwidth, opening up the cable monopoly to new competition. This would force competition in Internet services beyond the 6MHz straightjacket that is currently being imposed. A related component of the strategy would be to mandate attention to evolving common standards[293] among providers such that equipment and services would be interchangeable, much like they are in telephony and consumer electronics today. This would be a giant

287. This occurs where more fiber optic lines are attached from the head-end to the node. For example, one node serving 500 homes can be split into four nodes, each serving 125 homes. *See* Dutta-Roy, *supra* note 263.

288. For example, 256QAM rather than 64QAM downstream; 16QAM rather than QPSK upstream.

289. *See* Press Release, CableLabs, Cable Labs Completes DOCSIS 2.0 Specs, Enabling More Advanced Modems (Jan. 16, 2002), *available at* http://www.cablelabs.com/news/newsletter/SPECS/JanuaryFebruary2002/news.pgs/leadstory.html (last visited Feb. 15, 2003) (on file with the *New York University Journal of Legislation and Public Policy*); ADVANCED TELECOMMUNICATIONS, *supra* note 2, ¶ 81. Note that more bandwidth could be added to upstream data transfer as well.

290. *See* Rawn Shah, *Cable Network Ins and Outs*, SUN WORLD, Mar. 1998.

291. *See* Ciciora, *supra* note 225, at 48.

292. *See* Greene, *supra* note 283, at 88.

293. For instance, working with CableLabs, IEEE, and the Internet Streaming Media Alliance (ISMA) to develop standards that span video, voice and data. *See supra* note 266. Hausman et al. raise the very real danger that vertically integrated cable incumbents will develop proprietary standards onto their closed networks to embed significant switching costs. *See supra* note 148, at 161.

step toward moving away from today's closed networks that lack innovation for consumers and are costly to incumbents.[294]

Note that the concept of allowing third-parties to compete on platforms dominated by monopolies is not new. The FCC successfully has adopted rules that allow consumers to purchase their own telephone customer premises equipment and pre-subscribe their long distance to different carriers—leading to dramatic decreases in costs for consumers.[295] In Korea, which has by far the highest broadband penetration in the world,[296] different service providers provide cable TV and broadband via Korea Electric's infrastructure rather than Korea Electric trying to do everything itself.[297]

Analogies can also be drawn to allocating spectrum. The Radio Act of 1927[298] successfully brought an end to the chaos that ensued when private parties tried to use unallocated radio frequency.[299] More recently, one of the reasons why wireless telephony is more competitive is that when the FCC allocated PCS spectrum, it was careful not to allow more than 45MHz out of 180MHz to a single carrier.[300] In the cable context, we have a private party who is monopolizing an entire range of valuable spectrum using a local franchise that grants rights over public land. Nonetheless, they have made significant in-

294. But note that some scholars take a more benign view of proprietary standards, arguing that they may simply be a "natural outgrowth of heterogeneous consumer preferences." *See, e.g.*, Yoo, *supra* note 30, at 272. But history has shown that platforms built on open standards—the Internet being the prime example—are those that flourish precisely because they can accommodate innovation among third parties, thereby satisfying different consumer preferences. In contrast, those companies that have tried to enforce proprietary standards in their empire-building quests have floundered precisely because they could not by themselves address the multitude of consumer needs.

295. *See* Augustino *supra* note 6, at 664.

296. *See* OECD REPORT, *supra* note 5, at 32.

297. *See* Jerry A. Hausman, Competition and Regulation for Internet-related Services: Current Competition and 3G in the Future? 13 (Oct. 2001), (unpublished manuscript, on file with the *New York University Journal of Legislation and Public Policy*).

298. The Radio Act, Pub. L. No. 69–632, 44 Stat. 1162 (1927).

299. For the argument that the Radio Act was a rational bargain between regulators and incumbents, *see* Thomas W. Hazlett, *Assigning Property Rights to Radio Spectrum Users: Why Did FCC License Auctions Take 67 Years?*, 41 J.L. & ECON. 529 (1998).

300. 47 C.F.R. §20.6 (2001). *See also* Shelanski, *supra* note 100 at 89. Note that the FCC has removed these spectrum caps as of January 1, 2003, justifiably creating fear of consolidation and diminished competition among wireless carriers. *See, e.g.*, Jube Shiver, *FCC Gets Rid of Limits on Mobile Airwaves*, L.A. TIMES, Nov. 9, 2001, at C3.

vestments to create this bandwidth.[301] Precisely for this reason, it is imperative that the incumbents be compensated appropriately.[302]

For instance, the FCC could allocate half to the cable incumbent[303] (or preferably a newly-formed subsidiary),[304] but mandate a wholesale market for the rest among three-to-four competitors who would be providing both broadband access and other video services. The FCC would be regulating the underlying transport sold by the cable monopolies, while allowing new products and services—driven by common standards—to flourish above the transport layer. This paradigm should address the biggest concern that scholars might have with the approach offered—namely, that it does not break the monopoly.[305] The response is that it does "break" the monopoly where it counts: the provision of products and services to consumers. Even if there were some value to breaking the monopoly at the transport level, such a scheme would necessarily involve very costly duplication of resources—it has been tried already, and so far has failed.[306]

The key question, of course, is how to set a price for this access. Even though such a policy should decrease capital expenditures—cable companies will no longer be trying to build the proprietary network that bleeds cash[307]—there are still substantial costs associated with maintaining and upgrading the cable system that incumbents should be well compensated for. The new entrants are not to be granted a "free ride"—in exchange for the privilege of bandwidth; they must share the costs of using the network. In Chairman Powell's

301. Although a tenable argument can be made that operators using the electromagnetic spectrum have to make significant investments as well. Though the air, unlike coaxial cable, is "free," there are enormous equipment costs associated with being able to put this "free" resource to good use.

302. *See infra* notes 307–320.

303. Assuming for example that an incumbent retains 350MHz, this translates into more than 50 analog channels. With the advent of digital cable, this can be multiplied by approximately six to offer 300 digital channels, or multiplied by two to offer 100 high definition (HDTV) channels. Current technology would thus allow even a portion of existing bandwidth to offer striking variety. Unfortunately, as some analysts have pointed out, "cable operators have been slow to adopt a standard means of digitizing content." Steinke, *supra* note 169.

304. A subsidiary is recommended to make the relationship between the transport layer and the services layer more explicit and easier to monitor. Note that the subsidiary would not be subject to rate regulation and would be free to compete on equal terms with the new entrants.

305. *See*, *e.g.*, Yoo, *supra* note 30, at 296.

306. *See supra* Part II.

307. For example, cable companies have spent enormous amounts on cable boxes for digital cable in hopes of recouping their investment over time through lease payments from consumers (embedded in monthly fees). They would no longer have an incentive to expend resources in this manner.

words, we need a strategy that succeeds in "providing new incentives to new entrants and incumbents to produce an efficient wholesale market and by providing a regulatory framework that promotes competition, investment and innovation to deploy advanced networks."[308]

As Professor William Baumol has pointed out, "[h]ow to price bottleneck services is an issue that is being debated vigorously before courts and regulatory agencies throughout the industrial and industrializing world."[309] The key is not charging incumbents too low a bandwidth price, thereby making them subsidize the new entrants, nor setting too high a price for a new company, making it impractical for them to enter.

There seem to be two approaches emerging among the leading economists, who have summarily criticized the TELRIC model.[310] One is parity pricing, first articulated by Robert Willig,[311] and later applied to telecommunications by William Baumol.[312] Its central idea is that an incumbent firm should not be penalized for being efficient and should be able to recoup the opportunity cost of not being able to sell or use the bottleneck input itself.[313] In other words, an incumbent should be able to price the bottleneck input by subtracting the cost of its non-bottleneck inputs from the total price it is charging today. Also known as competitive neutrality, or the efficient component pricing rule (ECPR), the principle essentially states that the bottleneck service should be priced at the bottleneck owners' final price minus the incremental cost of supplying remaining inputs. Mathematically, the formula is simply: $P_b = P_f - IC_r$, where P_b is bottleneck price, P_f is final price, and IC_r is the incremental cost of the remaining inputs. For example,[314] a cable operator might receive $30 per month for 200MHz of bandwidth, and have $18 of cost associated with this, about $6 of which is for the last mile facilities it will be leasing. Applying the parity pricing formula, the incumbent should charge the new entrant $18 a month.[315] Note that this efficient result is higher than one based on simple regulatory equity which might say that since

308. Powell Senate Statement, *supra* note 4, at iii.
309. William J. Baumol, *Having Your Cake: How to Preserve Universal Service Cross Subsidies While Facilitating Competitive Entry*, 16 YALE J. ON REG. 1, 4 (1999).
310. *See* Doane et al., *supra* note 255, at 312.
311. *See* Robert D. Willig, *The Theory of Network Access Pricing*, *in* ISSUES IN PUB. UTIL. REG. 109 (Harry M. Trebing ed., 1979).
312. *See* Baumol, *supra* note 309, at 7.
313. The opportunity cost is assumed to be the foregone retail revenue.
314. These numbers are purely hypothetical and are analogous to a railroad example that Professor Baumol gives in his article. *See* Baumol, *supra* note 309, at 9–10.
315. *I.e.*, $30 – ($18 – $6) = $18.

only 33% of the incumbents' cost is associated with the last mile, then the price should only be $10.[316]

Another approach, streamlined and elegant, is advocated by Professor Jerry Hausman.[317] Hausman has criticized existing approaches to pricing, including Baumol's, in that they ignore the fact that telecommunications is a high fixed costs business with significant sunk costs.[318] He suggests that access be provided under contract in an unregulated manner—if the parties cannot come to resolution, then they would be subject to binding arbitration by an independent arbitration body unconnected to regulators.[319]

The power of Baumol's approach is that it will still be applicable even where regulation has created cross-subsidies, since new entrants will be allowed access to the network on the same terms as consumers.[320] However, it is more complicated in that it requires specific knowledge of the costs of bottleneck and non-bottleneck inputs. Hausman's negotiation-based approach, on the other hand, is simpler and well-suited to markets where there are no rate regulations or cross-subsidies that could distort incentives in negotiations between incumbents and new entrants.

Either pricing mechanism could work and would be vastly superior to what we have today. While Baumol's approach may be better for telephony, since there is substantial common carrier regulation under Title II, Hausman's may be more applicable to cable where only basic tier "cable service" is regulated under Title VI and cable modem "information service" is essentially unregulated under Title I.

If pricing is set efficiently, then the net result will be new entrants competing to offer consumers broadband services over the cable plant. Over time, two trends should emerge. One is a large content-rich net-

316. *I.e.*, $30 x 33%.

317. *See* Hausman, *supra* note 297.

318. *See* JERRY A. HAUSMAN, THE EFFECT OF SUNK COSTS IN TELECOMMUNICATIONS REGULATION 2 (1998), *available at* http://econ-www.mit.edu/faculty/download_pdf.php?id=258 (last visited Mar. 26, 2003) (on file with the *New York University Journal of Legislation and Public Policy*). Presumably, however, an incumbent will take into consideration its fixed costs when setting its price, such that ECPR should avoid this problem. However, if the price is regulated, then this may be difficult, depending on the granularity of data the incumbent has on costs and capital expenditures.

319. *See* Hausman, *supra* note 297, at 29.

320. *See* Baumol, *supra* note 309, at 11–16 (advocating use of this differential pricing). Note that this is more of an issue in telephony, where there is substantial rate regulation. Doane et al. have further refined the ECPR methodology into a Market-Determined ECPR (M-EPCR). *See supra* note 255, at 322–26.

work driven by common interconnectivity standards.[321] The second is a robust third-party market for consumer equipment beyond a limited number of cable modems—as has happened with telephones and computers. It is quite ironic today that cable, the medium that offers the most potential, is a closed system. Hopefully, someday consumers will be able to go shop for different flavors of cable boxes and peripherals the way they shop for consumer electronics.[322] The benefits in terms of cost and innovation will be enormous.

IV.
LEGAL AUTHORITY

A. Federal Authority

1. FCC

a. General Authority

The regime outlined may be economically desirable, but the question remains whether it is permissible under current law. Fortunately, it appears that it is. To begin with, Congress placed strong language in the Communications Act that would give the FCC wide latitude in implementing the recommendations.

As a starting point, it is important to remember that § 1 of the Act created the FCC "so as to make available . . . a rapid, efficient, Nationwide and world-wide wire and radio communications service with adequate facilities at reasonable charges."[323] Within this broad mandate, § 4(i) gives the FCC the power to "perform any and all acts, make

321. The more people have access to broadband, the more content will develop. Part of the reason "killer applications" have not emerged is that few people have access to high-speed connections, limiting the possible market. This is analogous to Gilder's law, which states that the value of a network rises exponentially with the number of users. *See* Mark A. Lemley and David McGowan, *Legal Implications of Network Economic Effects*, 86 CALIF. L. REV. 479, 551 (1998) (arguing that since network effects are important in telecommunications, regulators should "open the network to competition by compelling comparably efficient interconnection between all players").

322. The FCC has observed that "cable operators are favoring less powerful and less expensive set-top boxes. It is unclear how these modified plans will affect advance [sic] service offerings." FCC EIGHTH ANN. ASSESSMENT, *supra* note 104 ¶ 14. Note that this might be defensive engineering related to cable incumbents' desire to keep content "on network" since with such "thin boxes" more functionality is needed in other parts of the network (*e.g.*, nodes, head-ends). *Id*. The FCC appears sufficiently concerned about this issue to have "undertaken a proceeding to facilitate retail availability of these devices to consumers." *Id*. ¶ 37. "The Commission continues to evaluate its rules to determine whether changes are required to meet the statutory objective of creating a retail market for navigation devices." *Id*.

323. 47 U.S.C. § 151 (2000).

such rules and regulations, and issue such orders, not inconsistent with this Act, as may be necessary in the execution of its functions."[324]

In Title II of the Act, which governs common carriers, § 201(b) contains almost identical language and states that "the Commission may prescribe such rules and regulations as may be necessary in the public interest to carry out the provisions of this chapter."[325] In *AT&T Corp. v. Iowa Utilities Board*,[326] the Supreme Court relied on § 201(b) to uphold the FCC's authority to promulgate rules that set rates around ILEC unbundling and interconnection under § 251(c).[327] Writing for the Court, Justice Scalia bluntly stated that "201(b) *explicitly* gives the FCC jurisdiction to make rules governing matters to which the 1996 Act applies."[328] Under current law, cable companies are not common carriers[329] and cable modem services have been designated "information services" not "telecommunications services."[330] But given that § 4(i) contains substantially the same language of § 201(b) and applies to all communications companies, not just common carriers, it should be reasonable to conclude that the FCC has the authority to implement the proposed regime.[331] Indeed, some commentators have favored this approach in the traditional open access context.[332]

Given this expansive language, one possibility for the FCC would be to breathe new life into the moribund leased-access provisions[333] and allow broadband providers to lease cable bandwidth—something which the FCC has been surprisingly reluctant to do.[334]

In addition, the pricing methodology advocated should be well within the purview of the FCC. In *Verizon Communications v.*

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324. *Id*. § 154(i).
325. *Id*. § 201(b).
326. 525 U.S. 366 (1999).
327. *Id*.; *see also* 47 U.S.C. § 251(c) (mandating additional obligations).
328. AT&T v. Iowa Util. Bd., 525 U.S. 366, 380 (1999).
329. *See supra* note 60.
330. *See* FCC Classifies Cable Modem Service as "Information Service," *supra* note 94.
331. Note that some experts believe that § 201(b) applies beyond Title II and that a similar section, 303(r) in Title III (broadcasting), might also apply to the Act overall. *See*, *e.g*., Chen, *supra* note 181, at 712–13. This is quite plausible, given the statutory language says "Act," not "Title." 47 U.S.C. § 201(b).
332. *See*, *e.g.*, Augustino, *supra* note 6, at 674–77.
333. *See supra* note 44.
334. To explain this, one article relies on the FCC's own assessment that the leased access provisions apply only to traditional video programming. *See* Harold, *supra* note 69, at 750 n.139. Others contend that the FCC simply would not know how to implement the rules. *See* HAZLETT & BITTLINGMAYER, *supra* note 53, at 35.

FCC,[335] the Supreme Court upheld the FCC's TELRIC methodology. Justice Souter's opinion was quite detailed, even acknowledging that TELRIC may not be the most economically efficient algorithm.[336] In the end, however, the Court concluded under *Chevron* that "TELRIC appears to be a reasonable policy for now, and that is all that counts."[337] After *Verizon*, it is thus unlikely that the Court would strike down the Part III's pricing methodology, which is informed by economic analysis.

b. Specific Authority

Not only does the FCC have broad leeway under the general provisions of the Act, but also there is additional language within the statute that gives the FCC authority both in terms of video programming and advanced services. Under § 628, the Commission is mandated to "promote the public interest, convenience, and necessity by increasing competition and diversity in the multichannel video programming market . . . and to spur the development of communications technologies."[338]

With respect to advanced services, such as broadband access, § 706 of the Act also gives the FCC a responsibility to:

> encourage the deployment on a reasonable and timely basis of advanced telecommunications capability to all Americans . . . by utilizing, in a manner consistent with the public interest, convenience, and necessity, price cap regulation, regulatory forbearance, measures that promote competition in the local telecommunications market, or other regulating methods that remove barriers to infrastructure or investment.[339]

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335. 535 U.S. 467 (2002).

336. Justice Souter writes:

> Whether the FCC picked the best way to set these rates is the stuff of debate for economists and regulators versed in the technology of telecommunications and microeconomic pricing theory. The job of judges is to ask whether the Commission made choices reasonably within the pale of statutory possibility in deciding what and how items must be leased and the way to set rates for leasing them. The FCC's pricing and additional combination rules survive that scrutiny.

Id. at 539.

337. *Id.* at 523.

338. 47 U.S.C. § 548(a).

339. *Id*. § 157(a). "Advanced telecommunications capability" is further defined "without regard to any transmission media or technology, as high-speed, switched, broadband telecommunications capability that enables users to originate and receive high-quality voice, data, graphics, and video telecommunications using any technology." *Id*. § 157(c).

Moreover, if the Commission determines that this capability is not being deployed, it "shall take immediate action to accelerate deployment of such capability by removing barriers to infrastructure investment and by promoting competition in the telecommunications market."[340]

The proposal in Part III would fall under § 706. While not one of "price cap regulation" or "regulatory forbearance," it is clearly among "measures that promote competition in the local telecommunications market" as well as "other regulating methods that remove barriers to infrastructure investment." Thus, there is strong language in the governing statute—both general and specifically related to video programming and advanced services—that grants ample authority to the FCC to revamp the cable regulatory regime.

2. *Federal Trade Commission, Department of Justice*

There is another avenue of authority that exists under the antitrust law of which the FTC and the DOJ might avail themselves. Interestingly enough, the FCC could also act here, but as the AOL/Time Warner merger approval process illustrates,[341] the Commission tends to wait for other agencies to take the first step.[342]

The "essential facilities" doctrine, developed at common law, likely would be an important tool. The doctrine carves out an exception to the general rule that a firm has no obligation to deal with its competitors. It essentially states that under certain circumstances, a refusal to deal is subject to a monopolization claim under § 2 of the Sherman Act.[343]

In *MCI Communications v. AT&T*,[344] the United States Court of Appeals for the Seventh Circuit developed a four-part test to invoke the essential facilities doctrine, which requires a showing of "(1) control of the essential facility by the monopolist; (2) a competitor's inability practically or reasonably to duplicate the essential facility; (3)

340. *Id*. § 157(b). Note that in its latest Inquiry, the FCC determined that deployment was "reasonable and timely." *See* ADVANCED TELECOMMUNICATIONS, *supra* note 2, ¶ 1. But this determination rests entirely with the FCC.

341. *See* Harold, *supra* note 69.

342. *See*, *e.g.*, Chen, *supra* note 181, at 721–22 ("[T]he FCC is completing its fifth consecutive decade of forgoing its power to enforce the Clayton Act . . . [T]he FCC's antitrust enforcement powers are no less robust, at least in theory, than those of the FTC.").

343. For a recent overview of the doctrine, see ROBERT PITOFSKY, THE ESSENTIAL FACILITIES DOCTRINE UNDER UNITED STATES LAW (2002), *available at* http://www.ftc.gov/os/comments/intelpropertycomments/pitofskyrobert.pdf (last visited Mar. 26, 2003) (on file with the *New York University Journal of Legislation and Public Policy*).

344. 708 F.2d 1081 (7th Cir. 1983).

the denial of the use of the facility to a competitor; and (4) the feasibility of providing the facility."[345]

In the cable context all four parts of the test are met: (1) the cable operator has control of the bandwidth;[346] (2) it is financially infeasible for a new entrant to duplicate this infrastructure;[347] (3) cable operators have repeatedly denied use of the bandwidth;[348] (4) and it is technically feasible to provide the bandwidth.[349] As a consequence, there is a colorable antitrust claim against cable incumbents under the essential facilities doctrine. Note also that the doctrine is more likely to be used where there is specific anti-competitive intent to injure[350]—something that could be shown through the various tactics of the cable incumbents.[351]

Though the Supreme Court has never explicitly endorsed the essential facilities doctrine,[352] it is implicit in the cable context in the majority opinion in *Turner Broadcasting v. FCC* ("*Turner I*"),[353] which upheld the must-carry provisions.[354] Justice Stevens even makes explicit reference to the doctrine in his concurrence: "Cable operators' control of essential facilities provides a basis for intrusive regulation that would be inappropriate and perhaps impermissible for other communicative media . . . The must-carry mechanism is analogous to the relief that might be appropriate for a threatened violation of the antitrust laws. . . ."[355]

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345. *Id.* at 1132–33.
346. *See supra* Part II.B.
347. *See supra* note 201.
348. *See supra* note 252.
349. *See supra* notes 236–39.
350. *See*, *e.g.*, Pitofsky, *supra* note 343, at 8–10. Pitofsky also notes that refusal to deal coupled with anticompetitive intent can be enough to trigger antitrust liability, even absent proof that the input was an essential facility. *See id.* at 9.
351. *See supra* Part II.C.1.
352. *Cf.* AT&T v. Iowa Util. Bd., 525 U.S. 366, 428 (1999) (Breyer, J., concurring) ("[T]he provision describing which elements must be unbundled does not explicitly refer to the analogous 'essential facilities' doctrine (an antitrust doctrine that this Court has never adopted) . . . ."). Note, however, that Hausman and Sidak make the interesting point that the *Iowa Util. Bd*. majority did take note that the doctrine might be useful in interpreting the FCC's mandatory unbundling "necessary" and "impair" standards of the Telecommunications Act. Hausman and Sidak, *supra* note 61, at 467. Robert Pitofsky, former Chairman of the FTC, goes so far as to state that the "Supreme Court and lower courts have consistently applied the 'essential facilities' doctrine throughout this century in appropriate circumstances" and follows up with an analysis of cases where he believes the Supreme Court has used the doctrine. Pitofsky, *supra* note 343, at 1.
353. 512 U.S. 622 (1994).
354. *See infra* Part IV.C.1 for a discussion of the First Amendment implications of the must-carry provisions.
355. 512 U.S. 622, 670–72 (Stevens, J., concurring) (emphasis added).

Note that in the telephony context, Hausman and Sidak have even used the essential facilities doctrine as a foundation for their framework to decipher the "necessary" and "impair" standards in ILEC unbundling.[356]

Needless to say, the "essential facilities" route is only one avenue available in antitrust. Another is the fact that several cable incumbents are currently bundling video and Internet services in a manner that is potentially analogous to Microsoft's bundling of its web browser with its operating system.

Using the antitrust path to break up the cable monopoly should not be surprising. A recent JP Morgan report, obviously targeted toward potential cable investors, warns that:

> It doesn't seem far-fetched to us that the DOJ could accuse the cable industry of using its dominant position in the multi-channel video market to gain an unfair advantage in Internet access or voice. Nor would it surprise us if the ILECs were to accuse cable operators of creating bundles that are not replicable by others in the industry.[357]

The fundamental point is that if the FCC is unwilling to use its broad authority under the Telecommunications Act, then the DOJ and FTC could use established antitrust doctrine as a proxy for regulation.

3. Congress

If for some odd reason the panoply of tools discussed above—including broad authority under the Telecommunications Act as well as the antitrust laws—is still not enough to implement the proposal, then Congress has at least two choices. The more elegant option would be to place all of cable—including cable modems—squarely under Title VI, thereby avoiding today's bifurcated legal regime.[358] Congress could then revamp Title VI and specifically include legislation that authorizes the new regulatory framework to achieve its critical goals of diversity in video programming and deployment of advanced services. It should also further clarify that the federal government needs to take the lead on this issue.[359]

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356. More specifically, Hausman and Sidak have added a fifth part to the test that asks whether the "attempt by the ILEC to deny the CLEC access to the element in question would decrease competition in the output market for telecommunications services." *See* Hausman and Sidak, *supra* note 61, at 505.

357. JP MORGAN REPORT, *supra* note 1, at 90.

358. *See supra* Part I.B.

359. *See infra* Part IV.B.

A less elegant solution would be to place cable operators under Title II and treat them as common carriers subject to existing interconnection and nondiscrimination requirements that exist for ILECs. However, the proposal outlined in Part III does not implicate the vast range of common carrier obligations imposed on telephone companies, such as the filing of tariffs and retail rate setting.[360] Thus, even though the FCC can use its forbearance authority,[361] this strategy might be overkill.[362]

B. Federalism Issues

1. Statutory Language

The statutory language evinces a strong preference for federal regulation of cable. As discussed in Part I.B, today's cable regime is split between "information services" for cable modems and "cable services" for video programming. Cable modem access thus falls currently into Title I. Title I—effectively a residual title for categories that do not fit into the other titles of the Act—is governed under the FCC's ancillary authority to regulate telecommunications. As such, there is no role for state and local governments under the title's rubric.

Given that broadband access should provide the fundamental vehicle to new products and services, the analysis could very well stop here. But the approach outlined in Part III also does envision that new competitors might want to offer pure video programming. If we assume, *arguendo*, that at least in the short to medium term, this would not be done via cable modems, then Title VI should be analyzed as well.

Even under Title VI, the federal government would have authority to develop and implement the regime. The title clearly states that its goal is to create a "*national* policy concerning cable communications."[363] What complicates the Title VI analysis somewhat is that unlike Title II, where state and local government is very narrowly limited to public rights-of-way management,[364] one of Title VI's purposes is to "establish franchise procedures and standards which

360. As Professor Jim Chen points out, interconnection and nondiscrimination alone do not constitute common carriage. *See* Chen, *supra* note 181, at 716–17.

361. 47 U.S.C. § 160 (2000).

362. Some commentators have examined the forbearance approach and deemed it feasible. *See*, *e.g.*, Harold, *supra* note 69, at 783–88; Augustino, *supra* note 6, at 674–75.

363. 47 U.S.C. § 521(1) (2000) (emphasis added).

364. Under Title II, state and local legal requirements cannot "prohibit or have the effect of prohibiting the ability of any entity to provide any interstate or intrastate telecommunications service." *Id*. § 253(a).

encourage the growth and development of cable systems and which assure that cable systems are responsive to the needs of the local community."[365]

But under the language of the Act itself, local governments have little authority beyond managing the local franchise process.[366] For example, the Act specifically states that "[n]o State or franchising authority may prohibit, condition, or restrict a cable system's use of any type of subscriber equipment or any transmission technology."[367] Moreover, local authority is narrowly limited to cable. For instance, a franchising authority may not affect the "provision of a telecommunications service by a cable operator"[368] or require a cable operator to "provide any telecommunications service or facilities."[369]

Nonetheless, commentators have tried to find local authority in the text of the Act.[370] For example, one has pointed to the fact that a local franchising authority is allowed to prohibit a franchise if it determines that "the acquisition of such a cable system may eliminate or reduce competition in the delivery of cable service in such jurisdiction."[371] However, this provision appears under § 613—covering Ownership Restrictions—and it is quite a stretch to read this as giving a local franchising authority power to set cable policy, except perhaps in the context of an acquisition.[372]

Also, it is very difficult to imagine a scenario under the Act where federal law could not preempt state or local law.

2. *Judicial Interpretation*

Courts have also interpreted cable laws with the federal government playing the leading role. In *Capital Cities Cable v. Crisp*,[373] the Supreme Court held an Oklahoma state ban on advertising alcoholic beverages on cable systems to be invalid, since "only federal preemption of state and local regulation can assure cable systems the breath-

365. 47 U.S.C. § 521(2).
366. *See id*. §§ 541–47.
367. *Id*. § 544(e).
368. *Id*. § 541(b)(3)(B).
369. *Id*. § 541(b)(3)(D).
370. *See*, *e.g.*, Maher, *supra* note 180, at 234–38.
371. *Id*. (quoting 47 U.S.C. § 533(d)(2)).
372. *Cf.* AT&T v. City of Portland, 43 F. Supp. 2d 1146, 1152 (D. Or. 1999) ("Local franchising authorities have the power to determine whether a change of ownership or control would 'eliminate or reduce competition.'").
373. 467 U.S. 691 (1984).

ing space to expand vigorously and provide a diverse range of program offerings."[374]

Recent Supreme Court opinions—notably *Iowa Utilities Board*,[375] *National Cable and Telecommunications Ass'n, Inc. v. Gulf Power Co.*,[376] and *Verizon*[377]—have uniformly favored broad authority for the FCC. *Iowa Utilities Board* is the most germane since it directly addressed federalism issues. As discussed earlier, the Court held that § 201(b) of the Act allows the FCC to establish rules for interconnection and unbundling.[378] However, what is telling is that the Court decided this despite specific language in the Act that authorizes State commissions to "establish any rates for interconnection, services or network elements"[379] and mandates that "[a]ny interconnection agreement adopted by negotiation or arbitration shall be submitted for approval to the State commission."[380] In his majority opinion, Justice Scalia—basing his reasoning on the broad language of the Act and a presumption that "a federal program administered by 50 independent state agencies is surpassing strange"—nevertheless held that § 201(b) supersedes these provisions.[381]

One refinement, however, is worth mentioning: the statutory framework potentially could allow a state regulatory commission to interpret federal law. In a footnote, Justice Scalia went out of his way to mention that the opinion assumes:

> [A] scheme in which Congress has broadly extended its law into the field of intrastate telecommunications, but in a few specified areas (ratemaking, interconnection agreements, etc.) has left the policy implications of that extension to be determined by state commissions, which—within the broad range of lawful policymaking left open to administrative agencies—are beyond federal control. Such a scheme is decidedly novel, and the attendant legal

374. *Id.* at 708. *See also* New York State Comm'n on Cable Television v. Fed. Communications Comm'n, 749 F.2d 804, 809 (D.C. Cir. 1984) (noting that the Commission had "exclusive authority over all operational aspects of cable communication, including technical standards and signal carriage").

375. 525 U.S. 366 (1999).

376. 534 U.S. 327 (2002).

377. 535 U.S. 467 (2002).

378. AT&T v. Iowa Util. Bd., 525 U.S. 366, 380 (1999).

379. 47 U.S.C. § 252(c)(2) (2000).

380. *Id*. § 252(e)(1).

381. 525 U.S. 366, 379 n.6. *See also id.* (positing as well that real issue at stake is whether federal courts or FCC will "draw the lines to which [state commissions] must hew. To be sure, the FCC's lines can be even more restrictive than those drawn by the courts—but it is hard to spark a passionate 'States' rights' debate over that detail").

> questions, such as whether federal courts must defer to state agency interpretations of federal law, are novel as well.[382]

Professor Philip Weiser has dubbed this approach one of "cooperative federalism."[383] The FCC could choose to employ it in the cable arena: once the federal regulatory regime is set, certain aspects of its implementation could then be delegated to the states. Potentially, this notion could dovetail nicely with the authority that "each State commission with regulatory jurisdiction over telecommunications services"[384] is given under § 706.[385]

The subtleties of "cooperative federalism" aside, the overarching message of *Iowa Utilities Board* is made very clear in the Court's conclusion:

> The 1996 Act can be read to grant (borrowing a phrase from incumbent GTE) "most promiscuous rights" to the FCC vis-à-vis the state commissions and to competing carriers vis-à-vis the incumbents—and the Commission has chosen in some instances to read it that way. *But Congress is well aware that the ambiguities it chooses to produce in a statute will be resolved by the implementing agency.*[386]

The courts have thus placed legal authority in the FCC's hands, but it is up to the Commission to exercise it wisely.

3. Policy

Policy considerations also favor federal regulation. At the outset, one must acknowledge the reality that when frustrated with inaction at the federal level, the battlefront shifts to the local level. This is precisely the genesis of the *AT&T Corp. v. City of Portland*[387] and *MediaOne Group, Inc. v. County of Henrico*[388] cases discussed in Part I.B. In addition, consumer groups are now moving to combat cable

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382. *Id.* at 385–86 n.10.

383. Phil Weiser, *Paradigm Changes in Telecommunications Regulation*, 71 U. COLO. L. REV. 819, 820–21 (2000).

384. 47 U.S.C. § 157(a).

385. One commentator has suggested a joint federal-state conference on advanced telecommunications capability to push forward the mandate of § 706, noting that such conferences are authorized under § 410(b) of the Act. *See* Rowe, *supra* note 8, at 403. Note that at least one commentator has tried to use § 706 to imply authority for local franchising authorities, but this is difficult to square with the text of § 706, which makes no mention of local authorities. *See* Maher, *supra* note 180, at 236–37.

386. AT&T v. Iowa Util. Bd., 525 U.S. 366, 397 (1999) (citation omitted) (emphasis added).

387. 43 F. Supp. 2d 1146 (1999).

388. 97 F. Supp. 2d 712 (2000). Local government action also initiated Comcast Cablevision v. Broward County, 124 F. Supp. 685 (S.D. Fla. 2000), discussed in the First Amendment context, *infra* Part IV.C.1.

monopolies at the local government level.[389] Nonetheless, allowing state and local laws to dictate cable regulation is, as a policy matter, unwise over the long-term.

As former FCC Chairman William Kennard indicates, somewhat dramatically:

> There are 30,000 local franchising authorities in the United States. If each and every one of them decided on their own technical standards for two-way communications on the cable infrastructure, there would be chaos. . . . [T]he Information Superhighway will not work if there are 30,000 technical standards or 30,000 regulatory structures for broadband. The market would be rocked by uncertainty; investment would be stymied."[390]

Beyond uniformity issues, there is also evidence that local governments might be impeding deployment of advanced services with restrictive rights-of-way management.[391] There is even the possibility that differences in laws among local communities may create equal protection issues, especially when it comes to access to advanced services.[392] In the end, as one commentator summed up: "Granting jurisdiction to the FCC is desirable for reasons beyond the very important fact that the Communications Act counsels such a result."[393]

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389. For example, the Consumer Federation of America opposed the AT&T–Comcast merger at a local level. *See* Press Release, Consumer Federation of America, Consumer Groups Open New Front in Battle Over Cable Monopolies (May 7, 2002), *available at* http://www.consumerfed.org/localATTComcastrelease.pdf (last visited Mar. 27, 2003) (on file with the *New York University Journal of Legislation and Public Policy*). Note that this is very similar to the movement in the 1980s to lobby state Public Utility Commissions (PUCs) to force ILECs to provide higher-speed connections. *See* Khanna and Aitken, *supra* note 254, at 355–56.

390. *See* William E. Kennard, Remarks Before the National Cable Television Association (June 15, 1999), *available at* http://www.fcc.gov/Speeches/Kennard/spwek921.html (last visited Mar. 26, 2003) (on file with the *New York University Journal of Legislation and Public Policy*).

391. *See*, *e.g.*, ADVANCED TELECOMMUNICATIONS, *supra* note 2, ¶¶ 166–68; Ketter, *supra* note 122.

392. *See* Inanaga, *supra* note 65, at 175 ("Due to the demand for open access law in different states and municipalities across the nation, consistent legislation is necessary to ensure the equal protection of all consumers.").

393. Christopher E. Duffy, Note, *The Statutory Classification of Cable-Delivered Internet Service*, 100 COLUM. L. REV. 1251, 1255 (2000). *See also* Esbin and Lutzger, *supra* note 88, at 25 (advocating "a very modest role for local governments in the realm of substantive telecommunications services and advanced services regulation").

C. Constitutional Issues

1. First Amendment

The regime developed in Part III is not only allowed, but also perhaps even mandated under the First Amendment of the United States Constitution.[394] There is significant Supreme Court precedent to support this claim.

In *Red Lion Broadcasting v. FCC,*[395] the Supreme Court upheld the "fairness doctrine"[396] as applied to broadcasters. The fact that broadcasting's spectrum is inherently limited drove much of the Court's analysis, reasoning that "[w]here there are substantially more individuals who want to broadcast than there are frequencies to allocate, it is idle to posit an unabridgeable First Amendment right comparable to the right of every individual to speak, write, or publish."[397]

Writing for the Court, Justice White went on to explain that the First Amendment is designed to protect not only the commercial speakers, but also the consumer:

> It is the *right of the viewers and listeners*, not the right of the broadcasters, which is paramount. . . .It is the purpose of the First Amendment to preserve an uninhibited marketplace of ideas in which truth will ultimately prevail, rather than to countenance monopolization of that market, whether it be by the Government itself or a private licensee. . . . It is the *right of the public* to receive suitable access to social, political, esthetic, moral, and other ideas and experience which is crucial here. That right may not constitutionally be abridged either by Congress or by the FCC.[398]

Cable has become the de facto "broadcast" medium for video programming and broadband access: rather than coming through the air, the signals are now arriving via a coaxial cable.[399] Under this reasoning, a new regulatory regime that breaks the cable monopoly

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394. *See* U.S. CONST. amend. I ("Congress shall make no law . . . abridging the freedom of speech". . . .).

395. 395 U.S. 367 (1969).

396. The fairness doctrine is summarized as "the requirement that discussion of public issues be presented on broadcast stations, and that each side of those issues must be given fair coverage." *Id.* at 369.

397. *Id.* at 388.

398. *Id.* at 390 (citations omitted) (emphasis added).

399. FCC Commissioner Martin even uses this reasoning to argue against mandating digital tuners in television sets and to advocate an approach that integrates digital broadcast and cable reception. *See* Review of the Commission's Rules and Policies Affecting the Conversion to Digital Television, FCC (Aug. 8, 2002) (dissenting statement of Comm'r Kevin J. Martin), *available at* http://www.fcc.gov. (last visited Feb. 21, 2003) (on file with the *New York University Journal of Legislation and Public Policy*).

where it counts[400] should be welcomed by the First Amendment since it would restore the rights of consumers to have access to a variety of points of view.

In *Turner Broadcasting System, Inc. v. FCC* ("*Turner I*"),[401] the Court upheld the 1992 Cable Act's must-carry provisions, but declined to apply the broadcast standards articulated in *Red Lion*. Writing for the Court, Justice Kennedy stated that:

> The broadcast cases are inapposite in the present context because cable television does not suffer from the inherent limitations that characterize the broadcast medium. Indeed, given the rapid advances in fiber optics and digital compression technology, soon there may be no practical limitation on the number of speakers who may use the cable medium.[402]

While this may have been true in 1994—before the widespread acceptance of the Internet—it can be seriously questioned today. Cable operators are placing a plethora of limitations on the "number of speakers who may use the cable medium."[403] In fact, the cable operator controls access to the entire spectrum of bandwidth flowing into one's home, be it video or broadband access. They have the power to place more onerous restrictions than that of an individual broadcaster who has control over an allocated portion of the spectrum.

However, Justice Kennedy, writing for the Court, did decline to apply strict scrutiny, observing the "bottleneck monopoly power exercised by cable operators"[404] and commenting that:

> [S]imply by virtue of its ownership of the essential pathway for cable speech, a cable operator can prevent its subscribers from obtaining access to programming it chooses to exclude. A cable operator, unlike speakers in other media, can thus *silence the voice of competing speakers with a mere flick of the switch. The potential for abuse of this private power over a central avenue of communication cannot be overlooked*.[405]

The Court concluded by instructing the District Court to apply the *United States v. O'Brien*[406] intermediate level scrutiny test used for content-neutral restrictions that impose an incidental burden on speech.[407] A content-neutral regulation is permissible if it furthers an

400. *See supra* note 305.
401. 512 U.S. 622 (1994).
402. *Id.* at 638–39.
403. *See supra* notes 283–285.
404. *Turner I*, 512 U.S. at 661.
405. *Id.* at 656–57 (emphasis added).
406. 391 U.S. 367 (1968).
407. *See Turner I*, 512 U.S. at 661–62.

important or substantial governmental interest and if the incidental restriction on alleged First Amendment freedoms is no greater than is essential to the furtherance of that interest.[408]

Three years later, the case returned to the Supreme Court in *Turner Broadcasting v. FCC* ("*Turner II*").[409] The essential inquiry was simply whether the *O'Brien* test had been met, and after an unusually extensive look at the factual record, the Court concluded that it had. Under the first part of the test, the Court reasoned that a substantial governmental interest exists since "[m]ust-carry ensures that a number of local broadcasters retain cable carriage, with the concomitant audience access and advertising revenues needed to support the multiplicity of stations."[410] As to the second part of *O'Brien*, the Court declined to engage in least-restrictive alternative analysis, and reasoned that since the data show the burdens of must carry are not significant, the regulation is not "substantially overbroad."[411]

Assuming, *arguendo*, that the approach developed in Part III is not mandated under the First Amendment, a very serious threshold issue arises as to whether there are any First Amendment rights that attach to cable companies as commercial speakers in this context. To begin with, the proposal is different from any must-carry regulation, since the cable operator receives compensation in exchange for use of the bottleneck input. Ironically, this is akin to the "leased-access regime" that the cable operators themselves suggested in *Turner II* as an alternative to must-carry.[412] More broadly, since the approach does not purport to prefer one speaker over another, it is difficult to see how cable operators would have a First Amendment claim.

Even Justice O'Connor, who questions the constitutionality of the must-carry rules, has noted that:

> Setting aside any possible Takings Clause issues, it stands to reason that if Congress may demand that telephone companies operate as common carriers, it can ask the same of cable companies; *such an approach would not suffer from the defect of preferring one speaker to another*.[413]

If, under some overly creative interpretation, one were to assume that somehow the proposed regulatory regime favors one speaker over another, and subject it to intermediate scrutiny, it should still pass consti-

408. *See id.* at 662 (quoting *O'Brien*, 391 U.S. at 377).
409. 520 U.S. 180 (1997).
410. *Id*. at 213.
411. *Id*. at 214–16.
412. *See id*. at 221.
413. *Turner I*, 512 U.S. at 684 (O'Connor, J., dissenting in part and concurring in part) (emphasis added).

tutional muster. The government interest under the first prong of the *O'Brien* test is extremely powerful: unlike *Turner I* and *Turner II* where the interest was protection of broadcasters, here the substantial interests are Congress' explicit §§ 628 and 706 mandates.[414] The second prong of *O'Brien* is also satisfied given that in order to foster meaningful competition, several competitors need to exist in the market; as a consequence, providing access to different portions of bandwidth to new competitors is necessary and not overbroad. Simply put, unless different entrants are given bandwidth to provide products and services, there can be no competition and Congress' mandate will remain unfulfilled.

Finally, it is important to distinguish two cases that have garnered a lot of attention, but only obfuscate the real issues. The first is *Time Warner v. FCC,*[415] where the United States Court of Appeals for the District of Columbia reversed and remanded the FCC's restrictions on horizontal[416] and vertical[417] cable ownership. The court reasoned that the regulations did not survive intermediate scrutiny. But the court's conclusion is predicated upon the fact that the FCC seems not to have gathered even a modest record to support the limits. Indeed, the opinion is filled with numerous admonitions to the FCC.[418] The upshot here is not that horizontal and vertical limits are per se unconstitutional, but that the FCC needs at least to build some sort of factual basis to state where it derived its numerical limits.

The second case is *Comcast Cablevision v. Broward County*,[419] where the United States District Court for the Southern District of Florida invalidated an open access ordinance on First Amendment grounds by subjecting it to strict scrutiny.[420] The court, however, made a number of surprising and untenable leaps of logic. The first is that it immediately assumed that any "regulation of cable operators implicates both the Free Speech and Free Press clauses of the First

414. *See supra* notes 338–339.

415. 240 F.3d 1126 (D.C. Cir. 2001), *cert. denied* 534 U.S. 1054 (2001).

416. A multiple system operator (MSO) may not serve more than 30% of national cable subscribers. *See* 47 C.F.R. § 76.503 (2002).

417. An MSO may not fill more than 40% of channel capacity with affiliated programming. *See* 47 C.F.R. § 76.504 (2002).

418. *See, e.g.*, *Time Warner*, 240 F.3d at 1132 ("The Commission's own findings amount to precious little."); *id*. at 1133 ("[T]he FCC has put forth no evidence at all that indicates the prospects for collusion."); *id*. at 1137 ("Far from satisfying this [intermediate scrutiny] test, the FCC seems to have plucked the 40% limit out of thin air.").

419. 124 F. Supp. 2d 685 (S.D. Fla. 2000).

420. *See id*. at 697.

Amendment"[421]—thereby ignoring that a regulation that does not favor one speaker over another might not infringe on cable operators' rights, let alone that cable subscribers' rights might be violated if they do not have open access.

The second is that by conflating the markets for narrowband and broadband access, the court incorrectly asserted that "[c]able operators control no bottleneck monopoly over access to the Internet."[422] The court went on to state that the Broward County ordinance "threaten [sic] to diminish the free flow of information and ideas"[423] since Internet information services might be "offensive to the operator and its subscribers."[424] It would appear, however, that exactly the reverse is true: by not allowing other operators access to the Internet, the cable operator is restricting the choice of options subscribers have to access the Internet. Indeed, much of First Amendment jurisprudence is designed precisely to protect unpopular forms of expression.[425] Finally, the court reasoned that the ordinance would fail intermediate scrutiny, again apparently due to the fact that "[c]able possesses no monopoly power with respect to Internet access."[426] As discussed extensively in Part II, however, cable does indeed possess a monopoly, so the court's reasoning is unconvincing.

As the Supreme Court noted in *Turner I*, "[a]t the heart of the First Amendment lies the principle that each person should decide for him or herself the ideas and beliefs deserving of expression, consideration, and adherence."[427] The proposed regulatory regime is one step toward achieving this ideal.

2. *Takings*

Another constitutional challenge might arise under the Takings Clause of the United States Constitution.[428] Justice O'Connor raises

421. *Id.* at 690–91.
422. *Id.* at 696.
423. *Id.* at 697.
424. *Id.*
425. For instance, the court was concerned that the Internet is becoming a forum for different hate groups. *See id.* at 697 n.4. What the court seems to ignore, however, is that the First Amendment exists precisely to protect such speech, no matter how distasteful the message.
426. *Id.*
427. 512 U.S. at 641 (1994). *See also* Associated Press v. United States, 326 U.S. 1, 20 (1945) (holding that First Amendment "rests on the assumption that the widest possible dissemination of information from diverse and antagonistic sources is essential to the welfare of the public").
428. *See* U.S. CONST. amend. V ("nor shall private property be taken for public use, without just compensation").

the possibility in her *Turner I* dissent.[429] In the telephony context, Gregory Sidak and Daniel Spulber argue than the 1996 Act's unbundling requirements for ILECs might present a taking based on an implicit "regulatory contract" that existed between the telephone companies and the government prior to deregulation.[430]

However, the latest Supreme Court pronouncement on the subject—*Verizon Communications v. FCC*,[431] where ILECs challenged the FCC's mandatory unbundling requirements—would suggest that the proposed framework will withstand possible Takings claims. In *Verizon*, the Court did not even think that any "such serious [Takings] question was in the offing"[432] since the ILECs did not "argue that any particular, actual TELRIC rate is 'so unjust as to be confiscatory,' that is, 'as threatening an incumbent's 'financial integrity.' '"[433] The Court then noted that "this Court has never considered a takings challenge on a rate setting methodology without being presented with specific rate orders alleged to be confiscatory,"[434] and concluded that the ILECs had failed "to present any evidence that the decision to adopt TELRIC was arbitrary, opportunistic, or undertaken with a confiscatory purpose."[435]

The *Verizon* case comports with longstanding precedent, dating back to the nineteenth century.[436] In *Munn v. Illinois*,[437] the Supreme

429. *See Turner I*, 512 U.S. at 684.

430. *See* J. Gregory Sidak and Daniel F. Spulber, *Deregulatory Takings and Breach of the Regulatory Contract*, 71 N.Y.U. L. REV. 851, 879 (1996) ("Moreover, if regulated rates do not compensate the incumbent for the cost of providing access and unbundled service, including the opportunity costs of alternative uses for the facilities used to supply access, then a taking will have occurred."). *But see* Herbert Hovenkamp, *The Takings Clause and Improvident Regulatory Bargains*, 108 YALE L.J. 801 (1999) (reviewing J. GREGORY SIDAK AND DANIEL F. SPULBER, DEREGULATORY TAKINGS AND THE REGULATORY CONTRACT: THE COMPETITIVE TRANSFORMATION OF NETWORK INDUSTRIES IN THE UNITED STATES (1997)) (critiquing Sidak and Spulber's central thesis).

431. 535 U.S. 467 (2002).

432. *Id*. at 523.

433. *Id.* Note that the Court quoted from Duquesne Light Co. v. Barasch, 488 U.S. 299 (1989), where a group of electrical utilities challenged a Pennsylvania law that set rates without taking into account expenditures that the utilities had made in anticipation of building new power plants that ended up not being built. The Duquesne Court held that the state law did not effectuate a taking because the rate order was "reasonable." *See id.* at 310.

434. *Verizon Communications*, 535 U.S. at 472.

435. *Id.* at 527–28. In fact, the court did not even deem it necessary to invoke the doctrine of constitutional avoidance.

436. Indeed, strangely enough, several of the cases that Sidak and Spulber cite are from the now discredited Lochner era. *See* Spidak and Spulber, *supra* note 430, at 901–05. Note also that they rely on Supreme Court precedent that any physical invasion without just compensation is a violation of the Takings Clause. *See id*. at 946

Court upheld the state legislature's ability to set the rate for grain storage. Chief Justice Waite, noting that the operators had a "virtual monopoly," quoted Lord Ellenborough's statement that rate regulation is permissible since if an entity "will take the benefit of that monopoly, he must, as an equivalent, perform the duty attached to it on reasonable terms."[438] Later in its opinion, the Court made an even more sweeping assessment, noting that "[t]he controlling fact is the power to regulate at all. If that exists, the right to establish the maximum charge, as one of the means of regulation, is implied."[439]

Given that the cable companies will be receiving compensation in return for use of different elements in their portions of the bandwidth, any claim under the Takings Clause would be very difficult to sustain.

CONCLUSION

The approach outlined in this paper might appear novel for some, but that is precisely what it is designed to do: provoke the dialogue around new regulatory frameworks. As Professor Phil Weiser has succinctly pointed out, "[n]o one said telecommunications regulation was for the faint of heart."[440]

The stakes are simply too high. The railroads in the nineteenth century and the interstate highway system in the twentieth century were critical to America asserting its leadership role. Developing the potential of our telecommunications networks will be at least as important.[441] The "information superhighway" will not blossom as long

(quoting Loretto v. Teleprompter Manhattan CATV Corp., 458 U.S. 419, 441 (1982)). Unbundling involves a physical collocation of equipment. However, unlike the situation in Loretto—where the statute only allowed the property owner a token $1—the entity whose facility is being "occupied" does receive a rate of compensation.

437. 94 U.S. 113 (1876).

438. *Id.* at 127–28.

439. *Id.* at 134.

440. Weiser, *supra* note 383, at 847.

441. FCC Commissioner Copps does not mince his words when he writes that:

> Broadband is rapidly becoming a key component of our nation's systems of education, commerce, employment, health, government and entertainment. The transformative potential of broadband technologies is, I believe, akin to the major infrastructure developments that built America to greatness. I believe that when the history of our times is written, the broadband transformation will be discussed in the same vein as the building of the roads and ports and harbors that made commerce possible in pre-Civil War America; as the Transcontinental railroads that made us a continental power in the late Nineteenth century; as the national highway system that opened the way for rapid transportation and demographic migration in the last century; and as the first great telecommunications revolution that brought telephone service to the far corners of America, a job mostly, but not yet totally, completed.

as society is prevented from using the cable infrastructure as a meaningful "on-ramp."

Beyond the specific tribulations of the cable industry, two points bear emphasis. The first is the central role government plays in articulating and administering regulation that promotes competition. While many criticisms of regulation in general[442] and the FCC in particular[443] are well-founded, calling for a wholesale abandonment of the regulatory regime, as some well-known commentators have called for,[444] would be unwise. Especially in an era where corporate scandals have made market failures glaringly apparent and often even shattered confidence in "the system," regulatory agencies must evolve to better protect consumers and competition.[445] In doing so, they are effectively protecting capitalism.[446]

The second is that the framework might be strengthened and broadened beyond the cable industry to other areas in telecommunications. The industries regulated by the FCC generate about $1 trillion in annual revenue, or about one-tenth of the GDP.[447] Yet the FCC Chairman candidly admits that the telecommunications industry is in a state of "utter crisis."[448] Hopefully, the approach outlined can help

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ADVANCED TELECOMMUNICATIONS, *supra* note 2, at 1 (dissenting statement of Commr Michael Copps) (Feb. 6, 2002).

442. *See, e.g.*, George J. Stigler, *The Theory of Economic Regulation*, BELL J. OF ECON. AND MGMT. SCI. at 3 (1971). In this classic article, Stigler argues that the political process taints regulation by protecting industry interests.

443. *See, e.g.*, Pulley, *supra* note 65, at 78, 80 (writing that the FCC moves "slooooowly" and that "[t]his is an agency that has spent a decade fumbling, albeit with good intentions"); *see also* HAZLETT & BITTLINGMAYER, *supra* note 53, at 34–37 (discussing FCC fiascos, including leased access and video dialtone/open video systems).

444. *See, e.g.*, PETER HUBER, LAW AND DISORDER IN CYBERSPACE: ABOLISH THE FCC AND LET COMMON LAW RULE THE TELECOSM (1997); David J. Buerger, *Enough is Enough: Why It's Time to Get Rid of the FCC*, NETWORK WORLD, June 5, 1995, at 65.

445. *See* Weiser, *supra* note 383, at 838 ("[I]t seems appropriate to envision a regulatory regime premised on enforcing pro-competitive and pro-consumer mandates, not on limiting entry and exit and regulating rates.").

446. *See, e.g.*, Kurt Eichenwald, *Could Capitalists Actually Bring Down Capitalism?*, N.Y. TIMES, June 30, 2002, § 4 (The Week in Review), at 1.

447. *See* Pulley, *supra* note 65, at 78.

448. Yochi Dreazen, *FCC's Powell Says Telecom "Crisis" May Allow a Bell to Buy WorldCom*, WALL ST. J., July 15, 2002, at A1. In testimony before Congress, Chairman Powell added that:

> [T]he telecommunications industry is riding on very stormy seas. This is an industry where nearly 500,000 people in the United States alone have lost their jobs and approximately $2 trillion of market value has been lost in the last 2 years. By some estimates, the sector is struggling under the weight of nearly $1 trillion in debt.

contribute to the debate around what to do next in telecommunications generally. Beyond telecommunications, the ideas could perhaps even be deployed in other regulated industries where proper allocation of scarce resources is essential for regulatory success. The goal has been to contribute to the developing understanding of the intersection between regulation and competition, using the cable industry as an illustrative vehicle.

Powell Senate Statement, *supra* note 4, at i. *See also* Geoffrey Colvin, *When Scandal Isn't Sexy*, FORTUNE, June 10, 2002, at 56 (commenting that the massive telecom meltdown was not covered in the press because the industry is "old, sprawling, and incomprehensible to most people").