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Deregulating Telecommunications in Internet Time

James B. Speta*

Abstract

The Telecommunications Act of 1996 has yielded more litigation and less local competition than its supporters expected or intended. Calls for its reform are multiplying. In this Article, Professor Speta diagnoses the 1996 Act's failings and prescribes a framework for reform. The successful deregulations of the transportation industries and of long-distance telecommunications (precedents the 1996 Act sought to follow) demonstrate that the Act should have taken additional steps to promote intermodal telecommunications competition. Transportation deregulation successfully prompted competition where (as in the case of airlines and trucking) multiple firms could compete on an intramodal basis or where (as in the case of railroads) the single firm was subject to intermodal competition from firms using other technologies. The 1996 Act's reliance on the unbundling of incumbent local telephone companies' networks reveals that its supporters thought that portions of the local wireline networks would remain bottlenecks. The lesson, therefore, is that the 1996 Act should have taken additional steps to create the conditions for intermodal competition.

Based on this analysis, Professor Speta outlines a new communications law that increases the possibilities for intermodal competition. Indeed, the glimmers of hope for local competition—cell phone substitution and voice-over-Internet-protocol (VoIP) telephony—are intermodal competitors. Although the 1996 Act did move in this direction and the Federal Communications Commission is vigorous on several fronts, more can be done. Spectrum reform (the most significant missed opportunity in the 1996 Act) and other steps would decrease legal and economic barriers to intermodal competition. The Article also addresses local and state control

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of telecommunications carriers, regulatory parity, universal service reform, and government funding of research and infrastructure, and it offers a technology-neutral regulatory scheme for VoIP. The proposed deregulatory agenda seeks a law capable of accommodating the speed and diversity of technological change in this "Internet time."

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I. Introduction

The Telecommunications Act of 1996 was both intended and expected to usher in a new era of competition in telephony and emerging data services. Advertised as the "most deregulatory [law] in history,"¹ the Act was designed to "fundamentally restructure[]"² local telecommunications—replacing long-monopolized markets with vigorous competition. Unfortunately, the Act has largely failed on its own terms. Its core provisions—opening the incumbent monopolists' networks to lease by other providers—have yielded more legal battles than competition.³ Key parts of this structure have been to the Supreme Court twice,⁴ and the D.C. Circuit has just reversed the FCC's third attempt to devise rules to implement the Act's network sharing scheme, the first two attempts having been struck down as well.⁵ Indeed, in recent years, the percentage of local markets served by new carriers purchasing pieces of the incumbents' networks has actually fallen.

And yet, despite the poor showing of the 1996 Act's unbundling regime, there are glimmers of hope for local telecommunications competition. Increasing numbers of young people are "cutting the cord"—relying on their

1. H.R. REP. NO. 104-204, at 48 (1996), *reprinted in* 1996 U.S.C.C.A.N. 10, 11.

2. *AT&T Corp. v. Iowa Utils. Bd.*, 525 U.S. 366, 371 (1999).

3. This proposition needs qualification, of course, which I will provide (*see infra* notes 129–46 and accompanying text), because there is substantial competition in some local markets, such as the large-business market. Nevertheless, there is substantial sentiment, justified in my view, that local competition has failed to develop in many local markets with the robustness expected in 1996.

4. *See generally* *Verizon Communications, Inc. v. FCC*, 535 U.S. 467 (2002) (upholding FCC's choice of pricing methodology for unbundling rules); *AT&T*, 525 U.S. 366 (upholding FCC jurisdiction to make unbundling rules under the 1996 Act but striking down central parts of those rules).

5. *See generally* *United States Telecom Ass'n v. FCC*, 359 F.3d 554 (D.C. Cir. 2004).

cell phones for all of their voice needs. And, with a giddiness not seen since before the Internet crash, cable and Internet companies—and even regulators—are touting voice-over-Internet-protocol (VoIP) services that could provide alternative phone service for the increasing number of broadband users. Finally, direct broadcast satellite has begun competing well against cable television companies.

These glimmers require a reassessment and reworking of communications law to ensure that, now, true competition can take hold. Although sixty-two years passed between the original 1934 Communications Act and its 1996 overhaul, and only eight since, technological developments and competitive markets now require a regulatory structure that can accommodate the rapid and unpredictable advances of "Internet time."⁶ Indeed, the 1996 Act's focus on fostering competition through the device of unbundling the incumbent's network seems incomplete at best.

This Article begins a reassessment of the 1996 Act and a comprehensive prescription for a new regulatory agenda. This reassessment necessarily begins with the precedents upon which Congress itself relied: deregulation of the transportation industries and of long-distance. Congress thought that the 1996 Act would prompt the same, relatively quick development of competition that followed these earlier deregulatory efforts. It is indisputable that, shortly after deregulation of the transportation industries, those markets began to behave much more competitively—with the benefits and detriments that usually accompany competitive markets. And long-distance markets became more competitive shortly following the Bell System's demise. This paper therefore compares these previous examples of deregulation to the 1996 Act's approach to local markets and, by so doing, identifies the piece missing from Congress's attempt to introduce competition into local telecommunications markets. If deregulation could produce competition in so many other markets, the 1996 Act's failure to prompt widespread local telecommunications competition demands some explanation.

The answer, or at least a significant part of the answer, is that the most significant prior efforts at deregulation—the elimination of traditional

6. There is no consensus on who coined the term "Internet time," but it is generally held that Internet time (for example, Internet technologies and business methods) moves four times as fast as real time. See MICHAEL A. CUSUMANO & DAVID B. YOFFIE, *COMPETING ON INTERNET TIME: LESSONS FROM NETSCAPE AND ITS BATTLE WITH MICROSOFT* 3 (1998) (describing the explosion in the development of the Internet in the 1990s). For an example of the difficulties the FCC faces in responding to events in Internet time, see Chairman Michael K. Powell, Remarks Before Cellular Telecommunications Internet Association's CTIA Wireless 2001, at <http://www.fcc.gov/Speeches/Powell/2001/spmkp101.html> (Mar. 20, 2001) (on file with the Washington and Lee Law Review).

regulation over transportation industries—shared a common presumption that the markets had become (or always were) structurally competitive. Once deregulated, the markets very quickly conformed to expectations and competition developed. In the case of trucking and airlines, the consensus and reality was that the markets were internally competitive. The elimination of legal entry barriers and other regulatory burdens permitted multiple trucking firms and airlines to compete freely, with the familiar results of lower prices and increased quantity. In the case of the railroads, a similar consensus prompted deregulation, although it was competition from other forms of transportation—such as trucks, air carriers, and water carriers—that rendered the market structurally competitive. In economics short-hand, the trucking and airline markets could support adequate intramodal competition while railroads were subject to intermodal competition. The development of competition in long-distance telecommunications was similar: the Justice Department prosecuted the case against the Bell System based on the conviction that technological change made competition in long-distance markets structurally possible.⁷ Other deregulatory efforts in natural gas and electricity showed a similar consensus, albeit limited in some regards.

What was different about the 1996 Act was Congress's conviction that local telecommunications markets likely would *not* be structurally competitive—at least not for a significant period of time. Congress assumed that certain elements of these local networks would remain bottlenecks that new entrants would not find economical to duplicate. The 1996 Act attempted to deal with this by creating the network-sharing provisions of the Act, which require the incumbent local telecommunications companies to lease portions of their networks to new local carriers.⁸ This was an attempt to create some intramodal competition at the retail level of local telecommunications, even if the underlying infrastructure remained monopolized. To say the least, no one has been satisfied with the implementation of these provisions, as almost no one is satisfied with the level of competition that has developed in local telecommunications markets.

7. Whether that competition is characterized as intermodal, because MCI used wireless long-distance technologies and AT&T used copper wires, or intramodal, because both soon switched to fiber optic technologies, is an interesting question, but not one relevant to this paper's project. For a discussion of the development of microwave for long-distance and its being the basis for the government's antitrust case, see *infra* notes 92–94 and accompanying text. For a discussion of the industry-wide transition to fiber optics, see generally JONATHAN M. KRAUSHAAR, FCC, FIBER DEPLOYMENT UPDATE-END OF YEAR 1998 (1999), available at http://www.fcc.gov/Bureaus/Common_Carrier/Reports/FCC-State_Link/Fiber/fiber98.pdf.

8. See 47 U.S.C. §§ 251–56 (2000) (establishing interconnectivity requirements). See generally *AT&T Corp. v. Iowa Utils. Bd.*, 525 U.S. 366, 388–90 (1999); *infra* note 128.

This inquiry yields more than an interesting historical comparison; it also demonstrates what ought to be done to promote local telecommunications now—to maximize the possibility that local competition will take hold and flourish. If Congress was right that new entrants into local telecommunications markets would not duplicate the incumbents' telephone wires, then the development of complete alternatives to those wires—that is, the development of true intermodal competition—ought to have been recognized as the best way to develop competition in local markets. To be sure, Congress made provision in the 1996 Act for the possibility of some intermodal competition, by affirming and expanding the incumbents' duties to interconnect with (many) other telecommunications carriers. And Congress took the important step of eliminating legal barriers to entry into all telecommunications markets,⁹ which was necessary for any intermodal competition to develop. But Congress did nothing further to assist the development of intermodal competition. Rather, it continued the historic, but increasingly irrelevant, regulatory divisions between services, based on the technologies used to deliver them.

What is needed today is a clear agenda to increase intermodal (and all other facilities-based) competition in local telecommunications markets. The glimmer of competition in many local markets is the prospect of intermodal competition—competition with the traditional telephone companies from wireless, cable, and even electric companies and competition with the traditional cable television services from satellite, wireless, and (maybe) the telephone companies. Already a substantial number of proposals exist that could form the core of such an agenda, and these ought to be the highest legislative and regulatory priorities. The FCC is working on some of these fronts, confronting both new technology and old law with admirable results. But much of its energy is also consumed by the failed experiment with compulsory access to local networks and by a series of legal battles foisted upon it by new services that do not neatly fit in old regulatory categories. More importantly, to avoid costly litigation and uncertainty, Congress should embody many of these proposals in new legislation. In particular, Congress ought to quickly adopt proposals that decrease the barriers to entry faced by wireless and cable competitors. These are the main hopes for true, effective local telecommunications competition.

This Article seeks to make the case for such a new agenda: for such deregulation that encourages the multiple technologies of the Internet and that is flexible enough for "Internet time." Part II provides a brief overview of

9. See 47 U.S.C. § 253 (2000) (forbidding state and local regulation that "prohibits or has the effect of prohibiting" any entity from providing telecommunications services).

earlier deregulatory statutes in the transportation industries, establishing the essentials of the model just described. Because no economic impediments existed in the underlying industry structure, legal deregulation quickly yielded competition. Part III extends the analysis to telecommunications, noting first that deregulation before the 1996 Act succeeded for the same basic reason as transportation deregulation—all agreed that the underlying markets had competitive shape. Second, the Part contrasts the passage of the 1996 Act with both the experience in transportation deregulation and with early telecommunications deregulation: despite general deregulatory rhetoric, Congress did not emphasize true facilities-based competition, nor has such competition substantially developed in local telephone markets. Part IV details how the unbundling regime itself has not succeeded, legally or economically, but how intermodal competition may be on the horizon for a variety of services. Part V provides the outlines of a comprehensive program to substantially increase the prospects for intermodal competition in local telecommunications services, the true hope for introducing competition. The Part details a number of specific proposals, such as spectrum reform, and also discusses a number of consequences that a focus on intermodal competition will have, for example, on universal service policy. Intermodal competition also raises the challenge of regulatory parity—ensuring that markets and not governments determine winning technologies and services—and this Part offers a framework for addressing parity arguments. At bottom, these individual proposals justify a wholesale rewriting of the Communications Act, and this Part offers a rough framework for doing so. Part VI concludes with some additional observations on the political possibilities of wholesale legislative reform, regulatory resources, judicial review, and codifying this "new" reform agenda.

II. The Market Structure of Deregulated Transportation Markets

A wide consensus exists that the legal deregulation of the transportation industries was rapidly followed by the more or less competitive provision of these services. This "Great Transformation of Regulated Industries Law"¹⁰ began with the substantial deregulation of railroads, trucking, and airlines in the 1970s and 1980s. "Deregulation," although it differed in these industries in many regards, had a common core, just as the regulation that preceded it was based upon a similar model. In particular, based upon common law notions of common carriage and the seminal Interstate Commerce Act of 1887 (ICA), the

10. Joseph D. Kearney & Thomas W. Merrill, *The Great Transformation of Regulated Industries Law*, 98 COLUM. L. REV. 1323 (1998).

transportation industries (and related industries, including telecommunications) had long been subject to administrative agency control over entry, exit, pricing, and other terms of service.¹¹ In general terms, deregulatory statutes eliminated entry controls and price regulation and permitted competitive markets to operate. Deregulatory statutes eliminated the quality of service regulation that attempted to specify what the consumer received while maintaining basic safety regulation.

Deregulation was generally followed by the rapid development of competition, as evidenced principally by lower prices and higher output. This section briefly reviews these deregulatory successes to demonstrate that the legal deregulation was preceded by, and in large part driven by, a consensus that the markets were structurally competitive. Because the elimination of regulation was premised on the view that these transportation markets were structurally competitive (or largely so), and because this presumption turned out to be correct (or largely so), the deregulation was quickly followed by competitive performance.¹²

It is useful to divide transportation deregulation into two different categories, with airline and trucking deregulation in a first category and railroad deregulation in a second. Trucking and airline markets were deregulated because a consensus emerged that these markets were internally competitive—that a significant number of trucking or air carriers could simultaneously operate in competition with one another, mimicking classically competitive markets. Railroad was deregulated not because of internal competition; indeed, deregulation led to quite substantial consolidation of railroads and the elimination of much rail route competition. But railroads faced effective competition from trucking in most markets, so deregulation was followed by declining prices and other indicia of competition.

11. See generally *id.* at 1327–30 (providing an overview of economic regulations); STEPHEN BREYER, *REGULATION AND ITS REFORM* (1982) (discussing the need for regulation, possible solutions, and reform); CHARLES F. PHILLIPS, JR., *THE REGULATION OF PUBLIC UTILITIES: THEORY AND PRACTICE* 10–35 (3d ed. 1993) (examining the significance and new environment of public utilities).

12. I do not claim to be tilling new ground with the argument that these successfully deregulated markets were structurally competitive; indeed, that would be inconsistent with my claim that substantial consensus recognized this fact even prior to the legislation's being passed. I will therefore proceed to retell the story in summary fashion, principally to establish the contrast with the 1996 Act. For more complete retellings, see, for example, Stephen G. Breyer, *Antitrust, Deregulation, and the Newly Liberated Marketplace*, 75 CAL. L. REV. 1005 (1987) (summarizing the risks and policy problems existing in deregulated industries); Kearney & Merrill, *supra* note 10.

A. Airline and Trucking Deregulation: Intramodal Competition

The Airline Deregulation Act of 1978,¹³ called by one leading commentator "the most significant piece of legislation in the field of transport regulation in the [previous] forty years,"¹⁴ began the process of deregulating the previously highly regulated transportation industries. Prior to its passage, air carriers were governed by the 1938 Civil Aeronautics Act¹⁵ and its controls on entry, exit, and rates.¹⁶ The statute borrowed its general agency-centered approach and many of its specific provisions from the Interstate Commerce Act's provisions regulating railroads.¹⁷ But, unlike the ICA, the principal justification for which was controlling the monopoly power of railroads,¹⁸ the 1938 Civil Aeronautics Act was based upon the notion that competition would be "destructive," both in the sense of failing to provide adequate service and in the sense of providing inadequate safety to the traveling public.¹⁹

The deregulatory legislation largely eliminated barriers to entry,²⁰ phased out barriers to exit,²¹ phased out price regulation,²² and, in fact, calendared the

13. Pub. L. No. 95-504, 92 Stat. 1705 (1978).

14. Paul Stephen Dempsey, *The Rise and Fall of the Civil Aeronautics Board—Opening Wide the Floodgates of Entry*, 11 TRANSP. L.J. 91, 93 (1979).

15. Civil Aeronautics Act of 1938, Pub. L. No. 75-706, 52 Stat. 973 (codified before repeal at 49 U.S.C. § 401 et seq. (1952)). For discussions of the origins of the 1938 Act, see generally Michael E. Levine, *Revisionism Revisited? Airline Deregulation and the Public Interest*, 44 LAW & CONTEMP. PROBS. 179 (1981); ROGER NOLL, REFORMING REGULATION (1971).

16. See generally SAMUEL B. RICHMOND, REGULATION AND COMPETITION IN AIR TRANSPORTATION 15-20 (1961) (discussing the Act and the Board which implements the Act).

17. See *infra* Part II.B (examining railroad deregulation). See generally Kearney & Merrill, *supra* note 10, at 1335 (comparing the 1938 Act to the Interstate Commerce Act).

18. See *infra* notes 53-55 and accompanying text (describing the burdens the ICA placed on railroads).

19. See, e.g., S. REP. NO. 75-686 (1937) (examining airline competition). The Senate stated:

The air lines . . . are engaged in intensive competition with each other and with . . . other carriers. This competition is being carried to an extreme which tends to undermine the financial stability of the carriers and jeopardize the maintenance of transportation facilities and service appropriate to the needs of commerce and required in the public interest and the national defense.

Id. at 2. Academic commentary of the time (that is, influenced by the Great Depression), "which mostly supported airline regulation on grounds similar to those being advanced to support the suppression of competition elsewhere in the economy, . . . took this view into the 1960s." Michael E. Levine, *Airline Competition in Deregulated Markets: Theory, Firm Strategy, and Public Policy*, 4 YALE J. ON REG. 393, 398 (1987).

20. Airline Deregulation Act of 1978, Pub. L. No. 95-504, § 12, 92 Stat. at 1716-18 (1978).

demise of the regulatory agency itself.²³ The consensus of academic research finds that the Act was quickly and wildly successful in creating a more or less competitive market in air service: prices fell, service improved (except where a city lost service entirely), and efficiency measures climbed. One early review concluded that the welfare gain to travelers through lower fares and increased service exceeded six billion dollars per year;²⁴ more recent work has concluded that the benefits from increased competition continue, even if certain developments (such as decreasing fuel prices and the development of more efficient jets) have made it more difficult to determine the magnitude of the benefits.²⁵ Following deregulation, almost all served routes experienced entry by multiple carriers, and, although entry declined in the mid-1990s following the ValuJet crash, entry by so-called low-cost carriers continued to increase.²⁶

Deregulation of airlines was prompted by a broad consensus—shared first by academics and later by leading regulators and legislators—that the market for air carriage was structurally competitive. (By structurally competitive, I simply mean that there are no important economic barriers to multiple entry and competition, such as economies of scale or scope or network effects.) As one commentator put it, "by the mid-1970's it was probably fair to say that no impartial academic observer of any standing doubted that the airline business, if unregulated, would reach something that more or less resembled a competitive

21. *Id.* § 19. As in the case of railroad deregulation, carriers' ability to exit a market was a contentious and important issue. It was contentious because the original regulatory paradigm maintained air service to many locations that did not generate enough traffic to justify service on purely economic criteria. In the familiar story of promoting internal cross-subsidies, the Civil Aeronautics Board (CAB) limited entry on profitable routes and required airlines to provide service on unprofitable routes. See Dempsey, *supra* note 14, at 111–14 (examining CAB's entry criteria in various markets). The legislation therefore required service for ten years following enactment to every market receiving service on the date of its passage. Nevertheless, after the period ended, many cities lost commercial air service, and virtually no city that was not previously served gained service. For evidence that some optimism exists that the development of smaller but more efficient jets could increase service to small or medium communities, see TRANSP. RESEARCH BD., ENTRY AND COMPETITION IN THE U.S. AIRLINE INDUSTRY 155–58 (1999), but no such developments have yet occurred.

22. Airline Deregulation Act of 1978 § 31.

23. The 1978 Act required the CAB to prepare a report in 1984 describing the effects of deregulation, 49 U.S.C. § 1551(c), (d) (Supp. 1981), but it scheduled the CAB to terminate, with its residual functions being passed to the Department of Transportation, in 1985. *Id.* § 1551.

24. See STEVEN MORRISON & CLIFFORD WINSTON, THE ECONOMIC EFFECTS OF AIRLINE DEREGULATION 1–2 (1986) (analyzing the impact of deregulation).

25. See, e.g., TRANSP. RESEARCH BD., *supra* note 21, at 61–63 (summarizing collected studies).

26. See *id.* at 40–42 (analyzing trends in market entry activity).

equilibrium."²⁷ This academic consensus was able to point to several significant pieces of evidence in the real world, most importantly the much lower prices and more frequent service prevailing on intrastate routes in California and Texas where state regulation permitted free entry.²⁸ Additionally, in the late 1970s and early 1980s, the air market became the principal example used by the new economics of market "contestability" to show that (under certain conditions argued to prevail in airline markets) even a carrier that had a natural monopoly over a market would price its service close to its cost. In other words, this argument suggested that even if a route was served by only a single carrier, that carrier was likely to price at cost and not at a monopoly level.²⁹

27. Levine, *supra* note 19, at 394.

28. See, e.g., Dempsey, *supra* note 14, at 116 (concluding that travelers accepted more crowded aircraft if prices were lower); Michael E. Levine, Note, *Is Regulation Necessary? California Air Transportation and National Regulatory Policy*, 74 YALE L.J. 1416, 1430-43 (1965) (analyzing California data). Other evidence included the success of air charter service, which provided much lower fares and proved that the traveling public would tolerate more-crowded planes in exchange for lower fares, until the CAB killed the market. See Levine, *supra* note 19, at 402 (noting CAB's elimination of the threatening non-scheduled carriers).

29. On the theory of contestable markets generally, see WILLIAM J. BAUMOL ET AL., *CONTESTABLE MARKETS AND THE THEORY OF INDUSTRY STRUCTURE* (1982); John C. Panzar & Robert D. Willig, *Free Entry and the Sustainability of Natural Monopoly*, 8 BELL J. ECON. 1 (1977). On the application to the airline industry, see ELIZABETH E. BAILEY ET AL., *DEREGULATING THE AIRLINES* 153-72 (1985); Elizabeth E. Bailey & John C. Panzar, *The Contestability of Airline Markets During the Transition to Deregulation*, 44 LAW & CONTEMP. PROBS. 125 (1981).

The essential argument is this: Where market participants can enter and exit costlessly at efficient scale, even a natural monopolist will price at cost because any attempt to price above cost will invite entry at an undercutting price that would take the entire market. Two summaries of the theory, reasonably accessible to lawyers, are Michael Spence, *Contestable Markets and the Theory of Industry Structure: A Review Article*, 21 J. ECON. LITERATURE 981 (1983), and Elizabeth E. Bailey & William J. Baumol, *Deregulation and the Theory of Contestable Markets*, 1 YALE J. ON REG. 111 (1984).

With respect to airline markets, the essential intuition can be seen in a grossly simplified example. Imagine a route (say Peoria to Chicago) on which demand is such that only a single airline will serve the route, for example because 125 people a day wish to fly from Peoria to Chicago, and the most efficient way to serve that demand is by a single 125-seat aircraft. That is, flying any bigger plane is more costly, as is flying multiple flights of smaller planes. This is the definition of a natural monopoly market. See WILLIAM W. SHARKEY, *THE THEORY OF NATURAL MONOPOLY* 19 (1982) (determining that where market demand is most efficiently served by a single carrier, natural monopoly obtains). If entry and exit from a market are costless, however, the single carrier serving the market cannot price above its cost, or another carrier will enter the market and undercut it. Entry and exit were hypothesized to be relatively costless in airline markets because other airlines had many planes on multiple routes and could divert a plane into a market in which the incumbent was charging above-cost fares and then withdraw from the market and put the plane to another use. See generally Bailey & Baumol, *supra*; Bailey & Panzar, *supra*.

Regulators, most famously Civil Aeronautics Board (CAB) Chairman Alfred Kahn (an economist), and legislators soon adopted this academic consensus and explicitly referred to it in the proceedings leading to the 1978 Act. The famous "Kennedy hearings" in 1975 were scripted to build to the conclusion that air carriers should be deregulated and included testimony from a number of academics.³⁰ And the committee reports as well as the floor testimony on the 1978 Act repeatedly referred to the consensus that airline markets were structurally competitive.³¹

The deregulation of trucking presents a case similar to that of airlines. Indeed, although the Motor Carrier Act of 1935³² adopted "utility-type regulation," few argued even then that the industry had any characteristics of natural monopoly.³³ Rather, industry stabilization, as well as the need to protect railroads from emergent competition, provided the bases for expanding the Interstate Commerce Commission's (ICC) jurisdiction to include motor carriers.³⁴ Between 1935 and the mid-1970s, the ICC followed these two purposes and largely forbade any entry into interstate trucking. "By protecting carriers from new competition and by keeping rates at a level where profits

30. See generally SENATE SUBCOMM. ON ADMINISTRATIVE PRACTICE & PROCEDURE, COMM. ON THE JUDICIARY, 94TH CONG., CIVIL AERONAUTICS BOARD PRACTICES AND PROCEDURES (1976). For a description of the Kennedy hearings, see BREYER, *supra* note 11, at 321-39.

31. The most forceful statements in 1978 came from Senator Kennedy, even though he was not the manager of the bill.

In my 16 years in the Senate, I have seldom come across a national economic problem of such apparent complexity and political sensitivity that has been studied by so many independent and diverse sources, yet prompted sets of recommendations that are so similar. Virtually every independent study undertaken in the last 20 years has concluded that less regulation is the appropriate policy . . . [T]he message has always been the same: namely, it is time to revitalize the airline industry with competition.

H.R. COMM. ON PUB. WORKS & TRANSP., 96TH CONG., LEGISLATIVE HISTORY OF THE AIRLINE DEREGULATION ACT OF 1978, at 971 (Comm. Print 1979); see also Air Service Improvement Act of 1978, H.R. REP. NO. 95-1211, at 2-3 (discussing favorable experience of low-fare carriers permitted unrestricted entry in Texas and California).

32. Act of Aug. 9, 1935, ch. 498, 49 Stat. 543. For general descriptions of the 1935 Act and its purposes, see, for example, Warren G. Magnuson, *The Motor Carrier Act of 1935: A Legislator Looks at the Law*, 31 GEO. WASH. L. REV. 37 (1962); William E. Thoms, *Rollin' on . . . to a Free Market: Motor Carrier Regulation 1935-1980*, 13 TRANSP. L.J. 43 (1983); Note, *Federal Regulation of Trucking: The Emerging Critique*, 63 COLUM. L. REV. 460, 461-501 (1963).

33. See Thoms, *supra* note 32, at 47-50 (explaining the arguments for regulation).

34. See, e.g., *id.* at 50 (describing why the ICC's jurisdiction was expanded); Paul Stephen Dempsey, *Entry Control Under the Interstate Commerce Act: A Comparative Analysis of the Statutory Criteria Governing Entry in Transportation*, 13 WAKE FOREST L. REV. 729, 730-40 (1977).

were guaranteed, the ICC helped assure the emergence of a trucking oligopoly.³⁵

Although the Motor Carrier Act of 1980 did not do away with the regulator, it did eliminate entry and exit restrictions and rate regulation.³⁶ And, again, significant academic commentary had argued that trucking involved no economies of scale or scope and few network effects—in other words, that multiple firms could readily compete against one another to provide service.³⁷ "By 1970, many commentators had remarked upon the inappropriateness of a utility model of regulation for a possibly competitive industry. Trucking just did not seem to have many of the characteristics of natural monopoly."³⁸ As was the case with airlines, the economists had several unregulated industry segments—including contract carriage, private carriage, agricultural commodities, and various Canadian provinces—that provided evidence that the market could be competitive.³⁹

Deregulation of the trucking industry quickly resulted in more competitive service. Most commentary has concluded that the decrease in prices reflected new competition and not merely a shift from nonprice to price competition.⁴⁰ Indeed, a comprehensive survey of the economic literature in 1992 concluded that consumers received significantly lower prices, a wider variety of service offerings, and a wider variety of companies engaged in trucking.⁴¹

35. Thoms, *supra* note 32, at 58.

36. See Paul Stephen Dempsey, *Congressional Intent and Agency Discretion—Never the Twain Shall Meet: The Motor Carrier Act of 1980*, 58 CHI.-KENT L. REV. 1, 3–10 (1981) (discussing traditional entry criteria from 1935 to 1977); Donald V. Harper, *Entry Control and the Motor Carrier Act of 1980*, 12 TRANSP. L.J. 51, 56–62 (1980) (examining entry control restrictions on common carriers). It did not, curiously, eliminate tariff-filing.

37. See generally Dudley F. Pegrum, *The Economic Basis of Public Policy for Motor Transport*, 28 LAND ECON. 244 (1952); James Sloss, *Regulation of Motor Freight Transportation: A Quantitative Evaluation of Policy*, 1 BELL J. ECON. & MGMT. SCI. 327 (1970); Joseph L. Steinfeld, Jr., *Regulation Versus Free Competition—The Current Battle Over Deregulation of Entry into the Motor Carrier Industry*, 45 ICC PRAC. J. 590 (1978).

38. Thoms, *supra* note 32, at 68; see also Sam Peltzman, *The Economic Theory of Regulation After a Decade of Deregulation*, in BROOKINGS PAPERS ON ECONOMIC ACTIVITY: MICROECONOMICS 1, 18 (Marten Neil Bailly & Clifford Winston eds., 1989) (noting academic consensus on the benefits of deregulation).

39. See Sloss, *supra* note 37, at 330–35 (using Canadian provinces as an example); Thoms, *supra* note 32, at 61, 66–68 (discussing exemptions from Motor Carrier Act generally).

40. See, e.g., Nancy L. Rose, *The Incidence of Regulatory Rents in the Motor Carrier Industry*, 16 RAND J. ECON. 299, 314 (1985) ("Share price data indicate that regulatory reforms significantly reduced the expected future profits of firms in the motor carrier industry. The results are consistent with the presence of monopoly profits for trucking firms in the pre-1978 regulatory environment.").

41. See JOHN RICHARD FELTON & DALE G. ANDERSON, REGULATION AND DEREGULATION OF

* * *

Three caveats are in order here, half way through the historical review of deregulation, lest the reader accuse me of telling an overly ambitious "Just So Story." First, there were, of course, causes for the deregulation of airlines and trucking other than the academic consensus that regulation was unnecessary in these markets—including the arguments that entry barriers in trucking were hurting minorities⁴² and that decreasing transportation prices would help fight the severe inflation of the times.⁴³ The political and economic history of the deregulatory statutes is complex, and many works have examined them in greater depth.⁴⁴ A few more ambitious works have attempted a synthesis of the deregulatory movement of the past thirty years.⁴⁵ The discussion both here and in the next subpart is designed only to show that, in cases where deregulation succeeded, there was reason to think that the markets were structurally competitive.

Second, the debate over the benefits of deregulation is not entirely one-sided, with some significant minority commentary continuing to question its benefits and to assert the need for new regulation.⁴⁶ My agenda here is not to

THE MOTOR CARRIER INDUSTRY 155–59 (1989) (evaluating the benefits of deregulation). See generally Office of Economics, ICC, *The U.S. Motor Carrier Industry Long After Deregulation* (1992).

42. See Thoms, *supra* note 32, at 68 ("Minority truckers felt left out of a system where all of the goodies were divided up in 1935.").

43. See, e.g., Harold T. Johnson, *Introduction to LEGISLATIVE HISTORY OF THE AIRLINE DEREGULATION ACT OF 1978*, *supra* note 31, at v ("This type of legislation can be a powerful weapon in the fight against inflation."); Thoms, *supra* note 32, at 70 (examining inflation during the 1970s). Thoms writes:

Beginning with the Ford administration and continuing through the Carter regime, inflation became the principal concern of the American political economy. Increased competition was considered to be a weapon to use against the inflationary forces surrounding us. Regulated industries, because of their controlled oligopolistic position, could pass on increased costs of equipment, fuel and labor by going to the appropriate regulatory agency and gaining permission to increase rates.

Id.

44. See generally BREYER, *supra* note 11; Kearney & Merrill, *supra* note 10; Noll, *supra* note 15; *infra* notes 71–89. My caveat, *supra* note 12, also notes the scope of this project.

45. In my view, the best is Kearney & Merrill, *supra* note 10; others include BREYER, *supra* note 11; MARTHA DERTHICK & PAUL J. QUIRK, *THE POLITICS OF DEREGULATION* (1985) (concluding that elite opinion favoring deregulation and implementation of the ideas of competition by an agency prior to legislation were the principal drivers of statutory change); Richard D. Cudahy, *Whither Deregulation: A Look at the Portents*, 58 N.Y.U. ANN. SURV. AM. L. 155 (2001) (examining deregulation and the California energy crisis).

46. See generally MICHAEL H. BELZER, *SWEATSHOPS ON WHEELS: WINNERS AND LOSERS IN TRUCKING DEREGULATION* (2000); Mark N. Cooper, *Freeing Public Policy from the*

debate the merits and demerits of competition.⁴⁷ Rather, my essential claim is that these industries, when deregulated, began to behave as competitive industries. Indeed, most of the criticism of the deregulatory statutes is actually criticism of the results of competition—that safety is inadequately provided for, that wages fall, and that service to small markets disappears.⁴⁸ I acknowledge significant economic and noneconomic reasons to regulate away from the result that purely unfettered competition might provide, though I would prefer to utilize direct safety regulation and explicit government subsidies to reach most of those results. (I return to this issue in the context of universal service policies for telecommunications later in the paper.⁴⁹)

Third, I do not wish to portray any of these markets as mirrors of the perfectly competitive markets described in microeconomics texts. Imperfections remain, most notably in air carriage due to the (largely unforeseen) development of hub and spoke systems and the related scarcity of gate and runway slots.⁵⁰ But the consensus evidence is that deregulation was followed by significant gains to competition.

B. Railroad Deregulation: Intermodal Competition

Railroads present a different case, for deregulation occurred simultaneously with a consolidation of the industry that left many major routes with only one rail carrier. With railroads, the consensus was not that railroading itself was competitive, but that competition from other forms of transportation largely controlled any market power that the remaining railroads could exercise. Indeed, such was the competition from other modes of

Deregulation Debate: The Airline Industry Comes of Age (and Should Be Accountable for Its Anticompetitive Behavior), 13 AIR & SPACE LAW., Spring 1999, at 1; Paul Stephen Dempsey, *Taxi Industry Regulation, Deregulation & Reregulation: The Paradox of Market Failure*, 24 TRANSP. L.J. 73 (1996).

47. My view, recorded elsewhere, is that this sort of extensive economic regulation is justified only in very narrow circumstances. See generally James B. Speta, *A Vision of Internet Openness by Government Fiat*, 96 NW. U. L. REV. 1553 (2002) (reviewing LAWRENCE LESSIG, *THE FUTURE OF IDEAS: THE FATE OF THE COMMONS IN A CONNECTED WORLD* (2001)).

48. See, e.g., BELZER, *supra* note 46, at 175–92 (discussing the benefits and harms of economic competition).

49. See *infra* notes 397–413 and accompanying text (asserting a need for a universal service policy).

50. See TRANSP. RESEARCH BD., *supra* note 21, at 65–67 (explaining the spread of hub and spoke systems); Cooper, *supra* note 46, at 23–25 (examining the effect of a hub and spoke network on regulatory concerns). See generally Daniel R. Polsby, *Airport Pricing of Aircraft Takeoff and Landing Slots: An Economic Critique of Federal Regulatory Policy*, 89 CAL. L. REV. 779 (2001).

transportation that two leading commentators have quipped: "The railroad industry is perhaps the only U.S. industry that has been, or ever will be, deregulated because of its poor financial performance under regulation."⁵¹ But it is clear that the government-financed bailout of Penn Central, together with the prospect of further railroad bankruptcies, created the impetus for government to do something to help railroads, and that "something" was deregulation.⁵²

The Interstate Commerce Act's model of extensive economic regulation has already been described.⁵³ By the 1970s, the principal feature of that regulation that hurt the railroads was the restriction on exit. Under the ICA, a railroad could neither discontinue nor abandon service on a particular route without ICC approval,⁵⁴ and such approval was rarely granted. Thus, "a large fraction of the nation's rail service was provided at an economic loss, with returns on investment for most major railroads falling below the returns of other U.S. nonfinancial corporations."⁵⁵ To address this problem, the various statutes deregulating rail carriers,⁵⁶ and in particular the Staggers Rail Act of 1980,⁵⁷

51. Curtis Grimm & Clifford Winston, *Competition in the Deregulated Railroad Industry: Sources, Effects, and Policy Issues*, in DEREGULATION OF NETWORK INDUSTRIES: WHAT'S NEXT? 41, 41 (Sam Peltzman & Clifford Winston eds., 2000).

52. See *id.* at 42 (evaluating railroad deregulation); see also William E. Thoms, *Clear Track for Deregulation: American Railroads, 1970-1980*, 12 TRANSP. L.J. 183, 212 (1982) (discussing the motive behind passing the Staggers Act). Thoms states:

The main concern for Congress in passing the Staggers Act was the financial condition of the railroads. This Congress was faced with the spectre of more bankruptcies. . . . But this time Congress faced an electorate worried about government spending. The idea of paying for another Conrail, much less buying up independent, solvent lines was too vexing.

Id.

53. See *supra* notes 13-19 and accompanying text (describing subsequent legislation's reliance on the ICA).

54. See Dempsey, *supra* note 34, at 732-34 (describing § 1(18) of the ICA).

55. Grimm & Winston, *supra* note 51, at 41; see also Richard C. Levin, *Railroad Rates, Profitability, and Welfare Under Deregulation*, 12 BELL J. ECON. 1, 3 (1981) ("attempt[ing] to predict the impact of rate flexibility on . . . the rail industry"). See generally THEODORE E. KEELER, *RAILROADS, FREIGHT, AND PUBLIC POLICY* (1983).

56. For a summary of the progression of these statutes, which include most significantly the Rail Passenger Service Act of 1970 (easing rail carrier exit from passenger carriage and creating Amtrak), the Regional Rail Reorganization Act of 1973 (the 3R Act) (creating Conrail as the successor to the bankrupt Penn Central system and easing route exit for Conrail), the Railroad Revitalization and Regulatory Reform Act of 1976 (the 4R Act) (easing rate regulation generally), and the Staggers Rail Act of 1980, see generally FRANK J. DOOLEY & WILLIAM E. THOMS, *RAILROAD LAW A DECADE AFTER DEREGULATION* 1-13 (1994).

57. Pub. L. No. 96-448, 94 Stat. 1895 (1980).

intended to assist the financial situation of the railroads by permitting consolidation and streamlining the railroads' exit from unprofitable routes.⁵⁸

Indeed, by contrast to airline and trucking deregulation, which were premised on the notion that these separate markets were internally competitive, no one expected that deregulation would lead to entry of new railroads. Everyone—on all sides of the deregulation debate—expected that it would cause more consolidation in rail service, with more routes being served by only one railroad, and substantial abandonment of rail routes.⁵⁹ These results were consistent with a competitive market because of the intermodal pressures to which railroads were subject. Somewhat ironically, the prior deregulation of air and trucking had put significant pressure on railroads, for, although unit costs for rail transportation were probably lower than those for air or trucking, the deregulated carriers were able to undercut rail significantly.⁶⁰

Congress recognized these competitive pressures⁶¹ and the academic work that had long argued that competition from other types of carriers would constrain the railroads' ability to price above cost.⁶² And, although the examples were fewer than in air and trucking, a few earlier ICC actions that decreased constraints on railroads nevertheless provided some evidence that wholesale deregulation might improve performance and would not hurt consumers.⁶³ The Staggers Act did not eliminate the regulator (that came in the

58. See Rodney D. Peterson, *Entry and Exit: An Economic Analysis of Statutory Changes in Rail Carrier Entry and Exit*, 13 TRANSP. L.J. 189, 210–20 (1984) (analyzing three major railroad deregulation acts). The Staggers Act also assisted entry, most significantly by requiring railroads to share trackage. *Id.* at 218.

59. See, e.g., H.R. REP. NO. 96-1035, at 44, *reprinted in* 1980 U.S.C.C.A.N. 3978, 3989 ("Restructuring would involve a consolidation and reduction of duplicate tracks and facilities, discontinuance of uneconomic service, rationalization of routes and terminal facilities, and improvement in operating efficiencies."); Christopher A. Velluro et al., *Deregulation, Mergers, and Cost Savings in Class I U.S. Railroads 1974–1986*, 1 J. ECON. & MGMT. STRATEGY 339, 341–47 (1992) (summarizing fifteen years of railroad mergers).

60. See Peterson, *supra* note 58, at 217 ("Results of both statutes caused further difficulties for railroads. Congress, by its partial deregulation of air and motor carriers, fostered additional entry, lower rates and fares.").

61. For example, the House Report repeatedly noted that the poor financial condition of the railroads was due to competition from trucking and water carriers (barges) and noted that "[b]oth motor carrier and water carrier competition have continued to take intercity transportation business away from the railroads. Today, the once dominant railroad industry accounts for but 36 percent of the inter-city ton miles of freight. In 1947 railroads had twice the market share." H.R. REP. NO. 96-1035, at 35, *reprinted in* 1980 U.S.C.C.A.N. 3978, 3980.

62. See H.R. REP. NO. 96-1035, at 35–40, *reprinted in* 1980 U.S.C.C.A.N. 3978, 3980–85 (discussing the history of freight rates).

63. See, e.g., Thoms, *supra* note 52, at 210 ("A definite philosophy change ranged at the ICC during the 1970s. With the Ford and Carter administrations enthusiasts for deregulation, and with air deregulation approaching, the ICC began to change its attitude. The Commission

1990s⁶⁴) nor did it eliminate all economic regulation. The Act retained rate control in markets, such as coal, in which shippers were thought to be captive to the railroads,⁶⁵ but it did increase the railroads' flexibility to raise rates.⁶⁶ Even in its retention of regulation for these markets, however, the legislation recognized intermodal competition as the appropriate measure of the railroads' market power.⁶⁷

All in all, railroad deregulation is considered to have resulted in a more competitive transportation market, notwithstanding the rail consolidation and route abandonment. For some years, there was a dispute about whether the fall in real rates was due to deregulation,⁶⁸ but later work showed that, after 1980, rates became more sensitive to the elasticity of demand for rail service and that deregulation was responsible for this result.⁶⁹

has applied in motor carrier cases a less protectionist policy, and this began to occur with railroads as well.").

64. See generally ICC Termination Act of 1995, Pub. L. No. 104-88, 109 Stat. 803 (codified in scattered sections of 47 U.S.C.).

65. The House Report stated that the new statute "provides the Commission with jurisdiction to determine rate reasonableness only when there is not effective competition." H.R. REP. NO. 96-1035, at 33, reprinted in 1980 U.S.C.C.A.N. 3978, 3978.

66. See Thoms, *supra* note 52, at 213-15 (analyzing decreased rate regulation).

67. See 49 U.S.C. § 10701 (2000) (conditioning rate regulation on a finding of dominance); *id.* § 10707(a) (defining dominance with respect to competition from other railroads and from other modes of transportation); see also H.R. REP. NO. 96-1035, at 39, reprinted in 1980 U.S.C.C.A.N. 3978, 3984 (discussing the impact of competition). The committee stated:

The test of a transportation alternative is a sound one. If a shipper can rely on a transportation alternative, which could include another railroad, a barge, or a truck, at a transportation cost which is not substantially greater than the rail transportation cost, then competition is present. Competition will serve to hold down rates, and the railroad would not have market power.

Id.

68. Compare Kenneth D. Boyer, *The Costs of Price Regulation: Lessons from Railroad Deregulation*, 18 RAND J. ECON. 408, 411 (1987) (concluding that deregulation raised overall prices), with C. Barnekov & A. N. Kleit, *The Efficiency Effects of Railroad Deregulation in the United States*, 17 INT'L J. TRANSP. ECON. 21 (1990) (concluding that deregulation caused a relative price decline).

69. See CLIFFORD WINSTON ET AL., THE ECONOMIC EFFECTS OF SURFACE FREIGHT DEREGULATION 13 (1990) ("Deregulation appears to have changed both carrier and shipper behavior as policymakers intended. Carriers have taken significant steps to improve the efficiency of their operations and to set rates that are more responsive to competitive market conditions."); Wesley W. Wilson, *Market-Specific Effects of Rail Deregulation*, 42 J. INDUS. ECON. 1, 20 (1994) ("[W]hile differences exist across commodities (especially in the early periods of deregulation), the effect of deregulation on prices has generally been to lower them. With price decreases and cost savings from deregulation, welfare gains from deregulation are likely positive.").

* * *

It is probably gilding the lily to go on further, but the same point could be made with respect to deregulation of natural gas pipelines, wholesale electricity transmission, and a variety of other markets. Deregulation succeeded because none was needed—intra- or intermodal competition became possible and lifting regulatory barriers opened the market.⁷⁰

III. Telecommunications Deregulation: Computer I Through the 1996 Act

By contrast to the legislative action that deregulated the transportation industries in the 1970s and 1980s, those decades saw only limited deregulatory steps in telecommunications. These limited steps were taken either by the regulators or the antitrust enforcers without significant involvement of (indeed, with some resistance from) Congress. These moves in telecommunications, of course, were not taken in a vacuum, for the FCC and the antitrust division were influenced by the general change in thinking that favored deregulation and markets. Importantly, this "new" thinking affected not only these two executive institutions, but also the courts that reviewed the FCC's decisions and that prodded the agency toward competition on several important occasions.⁷¹ Given that the original Communications Act drew largely upon the Interstate Commerce Act for its regulatory principles,⁷² telecommunications law had long looked to transportation law. Many in the communications sector were now influenced by deregulation in transportation.⁷³

70. See, e.g., TIMOTHY J. BRENNAN ET AL., A SHOCK TO THE SYSTEM: RESTRUCTURING AMERICA'S ELECTRICITY INDUSTRY 61–63 (1996) (discussing Federal Energy Regulatory Commission orders opening long-distance transmission markets); PAUL W. MACAVOY, THE NATURAL GAS MARKET 10 (2000) ("[W]ith technical limits on pipe size, at approximately thirty-six inches in diameter, and demands growing to levels that allowed multiple companies, each with lines of that diameter, to serve a metropolitan region, entry and overlap of carriers grew widespread.").

71. See, e.g., Kearney & Merrill, *supra* note 10, at 1370 ("There can be no question that in some industries the courts have pried open doors to competition that legislators or regulators preferred to keep shut. . . . This has been especially true in . . . telecommunications."); Clifford Winston, *Economic Deregulation: Days of Reckoning for Microeconomists*, 31 J. ECON. LITERATURE 1263, 1264–66 (1993) ("[C]ongressional action was not the sole source of the deregulation movement and, in fact, was often the last step in the process."); Thomas S. Ulen, Book Review, 17 INT'L REV. L. & ECON. 293, 295 (1997) ("[M]ore typically, Congress keeps its distance from the regulators and allows the courts to hold the agencies accountable."). See generally Günter Knieps & Pablo T. Spiller, *Regulating by Partial Deregulation: The Case of Telecommunications*, 35 ADMIN. L. REV. 391 (1983).

72. See generally Glen O. Robinson, *Title I: The Federal Communications Act: An Essay on Origins and Regulatory Purpose*, in A LEGISLATIVE HISTORY OF THE COMMUNICATIONS ACT OF 1934, at 3 (Max D. Paglin ed. 1989).

73. See PETER TEMIN, THE FALL OF THE BELL SYSTEM: A STUDY IN PRICES AND POLITICS

The FCC's deregulatory actions during this time and the antitrust breakup of the Bell System provided examples of competition in telecommunications markets (or in closely related markets, such as for telecommunications equipment), and these examples were additional precedents for the 1996 Act's focus on introducing competition for local markets. In this Part, I first briefly review these telecommunications precedents to show again that the successes came where there was strong reason to believe that the markets were structurally competitive. Indeed, the FCC's deregulation of computer and customer equipment markets, for example, was based upon findings that the markets were internally competitive (intramodal), while the impetus for the long-distance portion of the government's case against AT&T was the development of a technology that promised intermodal competition.

Cable television provides a useful contrast to administrative attempts at deregulation in telephony, confirming the importance of intermodal competition and of using regulation where necessary to eliminate other barriers to entry. In 1992, Congress provided that states and municipalities could no longer grant exclusive franchises to cable operators. But, despite the lifting of that legal barrier, very little competition developed in cable markets until recently. In only a few areas did new cable companies install wires to provide intramodal competition. The more significant competition today is intermodal—from direct broadcast satellite (DBS). Even this intermodal competition, however, was possible only with regulation that affirmatively enabled DBS to offer a truly competitive multi-channel video product. Subpart B briefly reviews these episodes of cable competition.

In the final subpart of this Part, I look at the 1996 Act as a historic matter to show that both the economists and the legislators had significant doubt that the local telephone markets were structurally competitive. Everyone was hopeful that new telephone companies would enter to compete with incumbent local carriers, and some legislative leaders did tout the possibility that wireless or satellite or cable companies would provide this competition. But doubts about the viability of local competition were prominent, and these doubts explain both the Act's reliance on provisions "unbundling" elements of the incumbent carriers' networks and the Act's more limited steps to provide a framework for intermodal competition.

129, 344–45 (1987) (discussing the influence of deregulation on telecommunications).

A. The Pre-1996 Act Precedents

During the 1970s, prodded by the courts, the FCC took several steps that introduced competition to formerly monopolized telecommunications networks. The most significant deregulation came when the FCC used its authority to essentially define certain services out of the common carrier title of the Communications Act and therefore out of the agency's economic regulation. The FCC also began the process of liberalizing entry into long-distance markets, which was completed by the AT&T Consent Decree that settled the government's antitrust case against the Bell System.

1. Redefining the Network

In the 1970s, the FCC faced a variety of challenges brought about by the development of the computer and the integration of computer and telecommunications services. In response, the Commission began the famous *Computer Inquiries*, which resulted in two significant decisions concerning the scope of regulation under the Communications Act.⁷⁴ First, the agency held that computer processing services that employed telecommunications services would be considered "enhanced services" and not common carrier communications services. These services would therefore be outside of the traditional regulatory structure provided by Title II of the Communications Act.⁷⁵ Second, the Commission held that consumer premises equipment (CPE), such as telephones, fax machines, and other devices that hooked up to the telephone network, was also outside of the Act.⁷⁶ Each of these decisions⁷⁷ was based upon an explicit finding that the respective markets could be competitively supplied—that, apart from the power of the telecommunications company to control the market by limiting its provision of communications

74. The story of the Computer Inquiries is comprehensively reviewed in Robert Cannon, *The Legacy of the Federal Communications Commission's Computer Inquiries*, 55 FED. COMM. L.J. 167 (2003), and in James B. Speta, *A Common Carrier Approach to Internet Interconnection*, 54 FED. COMM. L.J. 225 (2002).

75. See Amendment of section 64.702 of the Commission's Rules and Regulations, *Final Decision*, 77 F.C.C. 2d 384, ¶¶ 16–26 (1980) [hereinafter *Final Decision*] (determining issues related to data processing).

76. See *id.* ¶ 144 (discussing the demand for various CPE products).

77. The FCC's decision to deregulate customer premises equipment was prompted by a series of court decisions questioning AT&T tariffs (approved by the FCC) that sought to prevent customers from using any but the carrier's own equipment. For this history, see, for example, Alfred E. Kahn, *Deregulation: Looking Backward and Looking Forward*, 7 YALE J. ON REG. 325, 327 (1990).

services, computer services and customer premises equipment could be provided by multiple companies in competition with one another.⁷⁸ And each of these decisions spawned serious competition—with lower prices and increased diversity of service offerings to consumers.⁷⁹ In subsequent years, both before and after the 1996 Act, the FCC continued to use the device of redefining the services subject to common carrier regulation, when it could find that these adjunct markets were competitive.⁸⁰

There can be little doubt that the FCC's definitional moves followed from its conviction that these services could be competitively provided and therefore should not be regulated, rather than from some pure interpretive exercise that simply happened to provide the happy result that these competitive services would not be subject to regulation.⁸¹ Although many computer-based services were "new," CPE and customer-premises wiring had long been considered common carrier services that were subject to economic regulation.⁸² Moreover, had it chosen to do so, the FCC had ample precedents to draw upon which would have placed the new computer-based services inside its jurisdiction. The ICC had long regulated terminals, docks, freight forwarders, and other "adjuncts" to railroad shipping.⁸³ The FCC could have similarly held that retail

78. See *Final Decision*, *supra* note 75, ¶ 109 ("There are literally thousands of unregulated computer service vendors offering competing services connected to the interstate telecommunications network. . . . [W]e have concluded that the enhanced services market is competitive. By removing this barrier the entire market for enhanced services should be even more competitive."). The decision stated:

The competitive potential of terminal equipment markets is reflected in the fact that there are hundreds of manufacturers and suppliers of modems, terminals, storage devices, front end processors, large and small central processing units, multiplexers, concentrators, and virtually innumerable related devices. While some segments of the CPE market may be more competitive than others, we have been given no evidence that, given certain modifications in the markets, any segment is inherently less competitive than another.

Id. ¶ 143.

79. See Cannon, *supra* note 74, at 175 (noting the FCC's concerns about the pure communications market's potential to become a monopoly).

80. See James B. Speta, *Maintaining Competition in Information Platforms: Vertical Restrictions in Emerging Telecommunications Markets*, 1 J. TELECOMM. & HIGH TECH. L. 185, 198–99 (2002) (discussing the FCC's decisions to take inside wiring and payphones out of the Act); see also 47 U.S.C. § 332 (2000) (establishing an independent regulatory system for commercial mobile services, based upon competition).

81. See Cannon, *supra* note 74, at 176–77 ("The Computer Inquiries policy had as its explicit goal the promotion of economic growth and innovation in the computer services market.").

82. *Id.* at 177.

83. See Jurgen Basedow, *Common Carriers: Continuity and Disintegration in U.S. Transportation Law*, 13 TRANSP. L.J. 1, 21 (1983) ("The [1906] Hepburn Act widened the range

computer services which depended on telecommunications services were themselves a new form of telecommunications service subject to regulation. The FCC's decision to invent the new regulatory category of enhanced services to exempt these from full economic regulation—for all of the economic benefit and regulatory confusion that choice has caused—was a policy choice for competition. And, by all accounts, competition successfully followed deregulation in customer premises equipment and enhanced computer services.⁸⁴

As the FCC was deciding that the common carrier companies (read: the Bell System) could not control the provision of all services and equipment related to the network, the courts were also prodding it to allow entry into even traditional communications services. In the so-called *Execunet* decisions, in particular, the courts pushed the Commission to justify its protection of the Bell System from competitive entry.⁸⁵ At issue was MCI's attempt to provide regular long-distance services by combining certain retail services it purchased from AT&T with its own long-distance networks.⁸⁶ The FCC was undoubtedly correct when it held that MCI's operating permits had been issued solely with the idea that it would provide private-network services to large business customers.⁸⁷ And the FCC was

of regulated activities performed by these carriers by extending the jurisdiction of the Interstate Commerce Commission . . . to terminal facilities, freight depots, and all services connected with receipt, delivery, transfer, or storage of goods.").

84. See, e.g., Jonathan Weinberg, *The Internet and "Telecommunications Services," Universal Service Mechanisms, Access Charges, and Other Flotsam of the Regulatory System*, 16 YALE J. ON REG. 211, 222 (1999) ("That approach was wildly successful in spurring innovation and competition in the enhanced-services marketplace.").

85. *MCI Telecomms. Corp. v. FCC*, 561 F.2d 365 (D.C. Cir. 1977) [hereinafter *Execunet I*]; *MCI Telecomms. Corp. v. FCC*, 580 F.2d 590 (D.C. Cir. 1978). The story of the *Execunet* decisions, including MCI's entry into regular retail long-distance service without explicit FCC approval, the FCC's resistance thereto, and the D.C. Circuit's insistence that MCI's authority be broadly construed (or the FCC explicitly justify AT&T's monopoly), is retold in Glen O. Robinson, *The Titanic Remembered: AT&T and the Changing World of Telecommunications*, 5 YALE J. ON REG. 517, 523–27 (1988).

86. See *Execunet I*, 561 F.2d at 367–68 (describing the cause of the *Execunet* litigation).

87. See *id.* at 368–70 (recounting the Commission's proceedings and findings). Glen Robinson (an FCC Commissioner during some of the relevant years) denies that the FCC had any particular intent as to the scope of MCI's services when it licensed MCI. See Robinson, *supra* note 85, at 523–24 (speculating about the FCC's motives). Robinson stated:

If God knew what the FCC meant in 1971, He didn't say; neither did the FCC. It seems that what the FCC originally had in mind was specialized services tailored to distinctive service needs of particular customers, as opposed to the homogenized services provided by MTS and WATS. . . . But this was never precisely stated in the FCC's decision.

also correct that its Communications Act precedents did not contemplate competition in such services. But after MCI demonstrated that it was technically feasible, the courts forced the agency to supply a *reason*—and, importantly, a reason grounded in economics—that MCI should not then have been permitted to provide these services.⁸⁸

This was the beginning of the end of AT&T's service monopoly. Nothing in the 1934 Act had changed, of course, and the courts would have been hard-pressed under traditional administrative law doctrines to reverse an FCC that adopted a vigorous and consistent defense of market protectionism. But the courts' prodding was enough to cause the FCC, in partial touch with the times, to begin to change its course.⁸⁹

2. The Bell Breakup

These precedents partially inspired Assistant Attorney General William Baxter's prosecution of the antitrust case against the integrated Bell System.⁹⁰ Indeed, the explicit theory presented by the government throughout the litigation was that "new technology [had] introduced new competitive opportunities into telecommunications markets,"⁹¹ particularly the long-distance and manufacturing markets. Thus, the government

Id. On this point, compare PETER W. HUBER ET AL., FEDERAL TELECOMMUNICATIONS LAW § 2.3.3.2 (2d ed. 1999) (disagreeing with Robinson). Huber stated:

MCI rushed to move far beyond private lines to a full-fledged, switched-access long-distance service available to all. This was not what the FCC had in mind when it licensed MCI in 1969 or when it issued its *Specialized Common Carriers* decision in 1971, but it was what the Court of Appeals for the D.C. Circuit desired in 1977, as it indicated in its imaginative *Execunet I* ruling.

Id.

88. See *Execunet I*, 561 F.2d at 379–80 (questioning whether AT&T should be granted a de jure monopoly).

89. See, e.g., Kearney & Merrill, *supra* note 10, at 1374 (summarizing the court's prompting of the FCC to change course); Knieps & Spiller, *supra* note 71, at 399, 412 (analyzing the impact of partial deregulation).

90. Although the case was filed in 1976, before Baxter came to the antitrust division, it did not move significantly forward until it was transferred to Judge Greene, and Baxter was then the lead prosecutor. See Joseph D. Kearney, *From the Fall of the Bell System to the Telecommunications Act: Regulation of Telecommunications Under Judge Greene*, 50 HASTINGS L.J. 1395, 1407–09 (1999) (discussing role of Judge Greene in moving case forward); Richard A. Posner, *Introduction to Baxter Symposium*, 51 STAN. L. REV. 1007, 1009 (1999) (discussing importance of Baxter in prosecution).

91. United States v. Western Elec. Co. & AT&T; Competitive Impact Statement in Connection with Proposed Modification of Final Judgment, 47 Fed. Reg. 7170, 7172 (1982).

alleged that these markets were structurally competitive and that only AT&T's "actions, based on its control over the local exchange monopolies, unreasonably impeded competition that technological developments increasingly made possible."⁹² In long-distance, the well-known story is that the new microwave transmission technology did not exhibit the same severe economies of scale that traditional in-ground copper trunks suffered.⁹³ The conclusion, drawn by many economists as well as MCI and the government, was that long-distance was competitive.⁹⁴ (The same conclusion did not apply to local service, both because microwave was a point-to-point service and because local traffic volume was too low to support multiple providers.)⁹⁵

The Bell breakup decree was not, of course, deregulation in the sense that it eliminated any legal barriers to entry or changed the amount of legal regulation to which long-distance service was subject. Long-distance carriers were still required to receive certificates of operating authority from the FCC and state regulators,⁹⁶ and the requirements of just, reasonable, and

92. In its Competitive Impact Statement, filed in connection with the Consent Decree's approval process, the Department summarized its positions:

At the time of the 1956 Judgment and thereafter, new technology was developing that introduced new competitive opportunities into telecommunications markets. As a result of research conducted in World War II and increased demand for telecommunications products and services after the war, various firms began to develop new means of providing telecommunications services and equipment. In the *AT&T Case*, the United States contended that, in response to these actual and potential new competitors in AT&T's traditional markets, AT&T took actions, based on its control over the local exchange monopolies, unreasonably impeding competition that technological developments increasingly made possible. These alleged actions, detailed at length in various pleadings the United States filed in the suit and summarized here, occurred in three relevant markets—intercity telecommunications services, customer-provided terminal equipment, and telecommunications equipment.

Id.; see also Kearney, *supra* note 90, at 1405–08 (examining the events preceding and during the litigation).

93. See, e.g., Jim Chen, *The Legal Process and Political Economy of Telecommunications Reform*, 97 COLUM. L. REV. 835, 843 (1997) ("Microwave transmission posed the most immediate threat to Bell, for its modest economies of scale invited corrosive entry onto AT&T's IX turf."); Leonard Waverman, *The Regulation of Intercity Telecommunications*, in *PROMOTING COMPETITION IN REGULATED MARKETS* 201, 232–33 (Almarin Phillips ed., 1975) (evaluating the probability of increased competition).

94. See, e.g., *id.* at 232–34 (analyzing the effect of increased competition on prices); Robinson, *supra* note 85, at 530–35 (discussing changing view of economists on need for regulation).

95. See Kearney, *supra* note 90, at 1409 (discussing this theory).

96. See 47 U.S.C. § 214(a) (2000) ("No carrier shall undertake the construction [or] . . . extension of any line, . . . unless and until there shall first have been obtained from the

nondiscriminatory rates, and of tariff-filing still applied.⁹⁷ Indeed, from a purely formalistic perspective, the decree required additional regulation because it required the FCC to regulate the local carriers' access charges and other terms of service to long-distance carriers.⁹⁸ And it added to the agency's regulation a layer involving the Decree court's interpretation of the Bell Companies' permitted and forbidden activities under the Decree.⁹⁹ The Decree did, however, decrease the economic barrier to entry into long-distance telecommunications markets by providing the means by which a carrier could enter that market without replicating for itself the local access networks controlled by the Bell Companies.¹⁰⁰ Entry occurred, and economists substantially agree that divestiture dramatically increased competition in long-distance markets.¹⁰¹

Commission a certificate.").

97. See *id.* §§ 201–03 (requiring charges to be just, reasonable, and non-discriminatory); see also *MCI Telecomms. Corp. v. AT&T*, 512 U.S. 218, 234 (1994) ("For better or worse, the Act establishes a rate-regulation, filed-tariff system for common-carrier communications, and the Commission's desire 'to "increase competition" cannot provide it authority to alter the well-established statutory filed rate requirements.'). The 1996 Act changed this, of course. See *infra* notes 115–20 and accompanying text (illustrating the desire to provide authority to promote competition).

98. See *United States v. AT&T Corp.*, 552 F. Supp. 131, 232 (D.D.C. 1982) (requiring Bell Operating Companies to provide service to other long-distance carriers that was equal to that provided to AT&T), *aff'd* *Maryland v. United States*, 460 U.S. 1001 (1983); see also, e.g., Ashutosh Bhagwat, *Unnatural Competition?: Applying the New Antitrust Learning to Foster Competition in the Local Exchange*, 50 HASTINGS L.J. 1479, 1483 (1999) (discussing FCC's implementation of access regime, requiring BOCs to file access tariffs).

99. Judge Greene's supervision of the Decree and of (at least a portion of) the telecommunications industry between 1982 and 1996 is comprehensively discussed in Kearney, *supra* note 90, at 1403–20. Judge Greene's superintendence has been much criticized. See generally PETER HUBER, *LAW AND DISORDER IN CYBERSPACE: ABOLISH THE FCC AND LET THE COMMON LAW RULE THE TELECOM* 98–99, 150–57 (1997) (discussing Judge Greene's role in implementing the Decree). Kearney largely defends Judge Greene. See Kearney, *supra* note 90, at 1403–20 (recounting Judge Greene's supervision of the case).

100. See *id.* at 1403–05, 1409–16, 1420 (examining the theories behind the lawsuit).

101. Not all economists agree, with Paul MacAvoy notably arguing that little competition existed for more than ten years after the Decree, because AT&T, MCI, and Sprint simply engaged in oligopolistic pricing. See generally PAUL W. MACAVOY, *THE FAILURE OF ANTITRUST AND REGULATION TO ESTABLISH COMPETITION IN LONG-DISTANCE TELEPHONE SERVICES* (1996); William E. Taylor & Lester D. Taylor, *Postdivestiture Long-Distance Competition in the United States*, 83 AM. ECON. REV. 185 (1993). The weight of evidence is against them, however. See Howard A. Shelanski & J. Gregory Sidak, *Antitrust Divestiture in Network Industries*, 68 U. CHI. L. REV. 1, 40 (2001) (discussing competition post-decree).

B. Cable Competition Precedents

Until recently, cable television has been entirely apart from telecommunications regulation, notwithstanding that one can find FCC statements from the early 1970s expressing the hope that cable television systems would begin to compete with telephone companies.¹⁰² Nevertheless, developments in cable television regulation in the 1980s and 1990s confirm some of the general lessons from early telephone deregulation. Cable television service, like local telephony, has long been considered a natural monopoly service. Fixed costs are high; multiple wires to the home risks stranded investment; economies of both scale and density apply.¹⁰³ In 1984 and again in 1992, Congress responded to this by imposing traditional rate regulation on cable television services; an FCC interpretation of the 1984 statute, however, left its provisions largely toothless.¹⁰⁴ Also, various other rules applicable to cable programmers—ranging from the must-carry and other programming rules to vertical and horizontal ownership limits (some of which have been repealed)—have been based upon the view that cable companies exercised significant market power in both the program-acquisition and retail video markets.¹⁰⁵

Legal barriers to entry into cable television markets were lifted in stages in the 1990s. Because cable companies extensively use public streets to install their cables, the 1984 Cable Act confirmed the right of municipalities to franchise cable operators, although it both limited local authority to deny renewals and capped the local franchise fee at 5% of a cable system's

102. See Applications of Telephone Companies for Section 214 Certificates for Channel Facilities Furnished to Affiliated Community Antenna Television Systems, *Final Report and Order*, 21 F.C.C.2d 307, ¶ 47 (1970) ("[T]here is a substantial expectation that broadband cables, in addition to CATV services, will make economically and technically possible a wide variety of new and different services involving the distribution of data, information storage and retrieval, and visual, facsimile and telemetry transmission of all kinds.").

103. See STUART MINOR BENJAMIN ET AL., TELECOMMUNICATIONS LAW AND POLICY 378 (2001) (noting that cable has "long [been] regulated as a natural monopoly," and discussing reasons that cable systems may be natural monopolies); see also *Omega Satellite Prods. Co. v. City of Indianapolis*, 694 F.2d 119, 126 (7th Cir. 1982) (Posner, J.) (same).

104. For a general history of these periods of rate regulation, see ROBERT W. CRANDALL & HAROLD FURCHTGOTT-ROTH, CABLE TV: REGULATION OR COMPETITION? 24-49 (1996). The 1984 Act required rate regulation of cable television systems unless those systems were subject to "effective competition." In implementing this statute, the FCC held that cable systems operating in areas where there were three broadcast signals were subject to "effective competition." "Since most cable systems operated in environments meeting that criterion, this standard effectively abolished rate regulation for all cable systems." BENJAMIN ET AL., *supra* note 103, at 413.

105. See *id.* at 441-74 (discussing the broadcast/cable relationship).

revenues.¹⁰⁶ Under this scheme, most municipalities granted exclusive franchises.¹⁰⁷ In 1992, Congress addressed the franchise as a legal barrier to entry and specifically provided that state and local governments could not grant exclusive franchises.¹⁰⁸ Nevertheless, the FCC had, in 1970, forbidden telephone companies to provide cable television service in their local territories,¹⁰⁹ and Congress continued this ban in the 1984 Cable Act. This ban continued until Bell Atlantic won a First Amendment challenge to this exclusion¹¹⁰ and the 1996 Act confirmed that telephone companies may offer video services.¹¹¹

Despite the absence of legal barriers to entry, only very few places in the United States have more than one cable television provider. Indeed, considering not only cable television services but any form of facilities-based competitor, the FCC recently concluded that "competition from a wire-based competitor [with cable companies for video programming] is limited to a very few markets."¹¹² In the past several years, significant competition with cable has come from DBS (on which more in Part IV), providing an example of intermodal competition similar to the development of microwave in long-distance.¹¹³ But competition by DBS came only as a result of specific

106. See 47 U.S.C. § 541(a) (2000) (granting franchising authority); *id.* § 542(b) (limiting fee to 5%); *id.* § 546 (addressing renewal expectancy).

107. See CRANDALL & FURCHTGOFF-ROTH, *supra* note 104, at 7 ("[C]able . . . developed as a municipally franchised service that was also subject to local government franchise fees, municipal or state regulation of rates, and various local service requirements such as free cable for schools and town halls.").

108. See 47 U.S.C. § 541(a)(1) (2000) ("[A] franchising authority may not grant an exclusive franchise.").

109. See Applications of Telephone Companies for Section 214 Certificates for Channel Facilities Furnished to Affiliated Community Antenna Television Systems, *Memorandum Opinion and Order*, 22 F.C.C.2d 746, 752 (1970) (concluding what is in the public interest).

110. See *Chesapeake & Potomac Tel. Co. v. United States*, 830 F. Supp. 909, 932 (E.D. Va. 1993) (concluding that § 533(b) violated the right to free expression), *aff'd*, 42 F.3d 181 (4th Cir. 1994), *vacated*, 516 U.S. 415 (1996).

111. See Telecommunications Act of 1996, Pub. L. No. 104-104, § 302(b)(1), 110 Stat. 56, 210 (repealing cable/telco entry ban, previously codified at 47 U.S.C. § 533(b)); see also 47 U.S.C. § 571 (2000) (establishing open video system regulations as one option for telephone companies offering video service); *id.* § 543(c)(4) (sunsetting rate regulation in 1999 for all tiers of cable service except for the "rebroadcast services" basic service (which no one buys anyway)).

112. Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming, *Tenth Annual Report*, 19 F.C.C.R. 1606, ¶ 78 (2004) [hereinafter *Tenth Annual MVPD Report*].

113. See *supra* notes 93-95 and accompanying text (reviewing the lesser economies of scale of microwave transmission technology).

regulatory moves that made cable programming networks and broadcast networks available through that service. In particular, in 1992, Congress required that cable companies make their affiliated programming channels available to satellite providers, and this ensured that DBS would have the content, such as HBO and ESPN, necessary to offer a competing service.¹¹⁴ And in 1999, following technological developments that permitted satellite providers to beam signals to selective locales, Congress established rules by which satellite providers could carry local broadcast channels—which was necessary to put DBS on equal footing with cable's content.¹¹⁵

C. The 1996 Act

The statements made in support of the 1996 Act very much mirrored the deregulatory rhetoric preceding the trucking, air, and railroad statutes, and Congress drew explicitly on these precedents and on the earlier development of competition in long-distance. The central House Report declared that the bill "promotes competition and reduces regulation in order to secure lower prices and higher quality services for American telecommunications consumers and encourage the rapid development of new telecommunications technologies."¹¹⁶ Adopting the rhetoric of markets, the Report declares that "services would be more widely available and at lower prices if telecommunications markets were competitive rather than regulated monopolies."¹¹⁷ And so the Report talks generally of "open[ing] all communications services to competition" and "lifting the shackles of monopoly regulation."¹¹⁸ Indeed, many of the legislation's supporters, and some of its opponents, drew an explicit comparison to the prior deregulatory statutes. Representative Klug's statement was typical of the supporters:

This bill . . . will usher in a new era of competition where the market instead will pick winners and losers, and ultimately the major winner in all of this will be consumers. It is the way that consumers won when we deregulated the airline industry in 1978, and it is the way that consumers

114. See James B. Speta, *The Vertical Dimension of Cable Open Access*, 71 U. COLO. L. REV. 975, 1006–07 (2002) (comparing Microsoft's attempt to restrict Netscape's access to its browser market with cable companies' attempts to restrict access to their wires).

115. See Christopher S. Yoo, *Vertical Integration and Media Regulation in the New Economy*, 19 YALE J. ON REG. 107, 228–29 (2002) (discussing the passage of the Satellite Home Viewer Improvement Amendments of 1999).

116. H.R. REP. NO. 104-204, at 47 (1996), *reprinted in* 1996 U.S.C.C.A.N. 10, 11.

117. *Id.* at 48.

118. *Id.*

won when we deregulated the trucking industry back in 1980. Those changes have resulted in savings of hundreds of billions of dollars to the economy.¹¹⁹

The 1996 Act removed many legal barriers to entry into communications markets. As to telecommunications, it preempted any state or local law that would "prohibit or have the effect of prohibiting the ability of any entity to provide 'telecommunications services.'"¹²⁰ The 1996 Act also gave the FCC the rather remarkable authority to completely deregulate telecommunications, by giving it the authority to "forbear" from any statutory provision that the agency found was unnecessary in light of the development of competition.¹²¹ As noted above, earlier federal legislation had forbidden state and local governments from restricting entry of multiple cable television companies, and the 1996 Act both repealed restrictions on telephone company entry into cable television service and eliminated much of the remaining rate regulation under which cable companies had operated.¹²²

119. 142 CONG. REC. 2208 (1996); see also H.R. REP. NO. 104-204, at 202 (1996), reprinted in 1996 U.S.C.A.N. 10, 95 ("Title II has its roots in the Interstate Commerce Act of 1887. Ironically, the railroad industry whose activities were governed by that century-old law was largely deregulated in 1980 by the Staggers Rail Act."); 141 CONG. REC. 15,341 (1995) (statement of Sen. McCain) (asserting the need for deregulation). McCain stated:

We need to have a deregulated industry. In the past, we have deregulated the airline industry, the trucking industry, the railroad industry in America, and there is very little doubt in my mind that world events, as well as national events, indicate very clearly and very strongly that the free enterprise system, unfettered by Government interference and regulation, not only prospers best but provides the best services for the citizens of any nation, including this one.

Id. But see 141 CONG. REC. 27,962 (1995) (statement of Sen. Dorgan) (saying that the "bill is set up pretty much like it is for airlines," but arguing that this would result in too many mergers).

120. 47 U.S.C. § 253(a) (2000). For a more extended discussion of § 253, see James B. Speta, *Competitive Neutrality in Right of Way Regulation: A Case Study in the Consequences of Convergence*, 35 CONN. L. REV. 763, 770-72 (2003).

121. See 47 U.S.C. § 160(a) (2000) ("[T]he Commission shall forbear from applying any regulation . . . to a telecommunications carrier or . . . service, . . . if the Commission determines that—(1) enforcement . . . is not necessary."). Congress also gave the FCC a statutory push in that direction, by requiring that it review its telecommunications regulations every two years and "modify or repeal" any that were no longer necessary "as the result of meaningful economic competition between providers of such service." *Id.* § 161. The D.C. Circuit has made clear that it will hold the FCC's feet to the fire in these biennial review proceedings, requiring it to justify existing regulations where evidence of competition has been presented. See *Fox Television Stations, Inc. v. FCC*, 280 F.3d 1027, 1038 (D.C. Cir. 2002) (finding FCC decisions not to eliminate rules in biennial review proceedings are subject to judicial review).

122. See *supra* Part III.A-B (discussing early regulations that the 1996 Act sought to modify or repeal).

The market as to which the 1996 Act intended the greatest change, however, was the historically monopolized local telecommunications market. Replacing laws under which "the majority of States restrict full and fair competition in the local exchange, . . . [the bill] reflects the Committee's belief that more competition, rather than more regulation, will benefit all consumers."¹²³ Indeed, Congress acknowledged that competition had already developed in many telecommunications markets—the local exchange was the last bastion of monopoly.¹²⁴ As Joseph Kearney has written, "[t]he hope underlying much of the Telecommunications Act of 1996 [was] that sufficient competition will develop in local telecommunications that this area of the industry will witness a transformation similar to the one that occurred in the long-distance segment over the last twenty-five years."¹²⁵

Congress was not convinced, however, that the mere elimination of regulation would spur competition in the local markets, and this was the genesis of the Act's so-called "local competition provisions."¹²⁶ Uncontroversially, the Act strengthened the requirement that all carriers interconnect with one another—a requirement necessary to permit a transition to a competitive market, so that incumbents cannot use embedded network size as a barrier to entry.¹²⁷ The Act also prohibited state and local laws that "prohibit or have the

123. H.R. REP. NO. 104-204, at 50 (1996), *reprinted in* 1996 U.S.C.C.A.N. 10, 14.

124. *See id.* at 49–51, *reprinted in* 1996 U.S.C.C.A.N. 10, 12–14 (recounting the history of local competition in the local exchange).

125. Joseph D. Kearney, *Will the FCC Go the Way of the ICC?*, 71 U. COLO. L. REV. 1153, 1178 (2000); *see also* Shelanski & Sidak, *supra* note 101, at 91 ("The break up now is widely acknowledged to have unleashed powerful forces of competition in long-distance telephone markets; to have induced policy makers to recognize (in the Telecommunications Act of 1996) that not even local telephone service is subject to natural monopoly."). *See generally* Alexander C. Larson, *Reforming Telecommunications Policy in Response to Entry into Local Exchange Markets*, 18 HASTINGS COMM. & ENT. L.J. 1 (1995).

126. *See* 47 U.S.C. §§ 251–56 (establishing the local competition provisions); Jerry A. Hausman & J. Gregory Sidak, *A Consumer-Welfare Approach to the Mandatory Unbundling of Telecommunications Networks*, 109 YALE L.J. 417, 426–34 (2000) (discussing the history of network unbundling). *See generally* Thomas G. Krattenmaker, *The Telecommunications Act of 1996*, 29 CONN. L. REV. 123, 138–41 (1996) (summarizing these provisions).

127. *See* Implementation of the Local Competition Provisions in the Telecommunications Act of 1996, *First Report and Order*, 11 F.C.C.R. 15499, ¶ 10 (1996) [hereinafter *Local Competition Provisions*] ("[A]bsent interconnection between the incumbent LEC and the entrant, the customer of the entrant would be unable to complete calls to subscribers served by the incumbent LEC."), *aff'd in part and rev'd in part*, AT&T Corp. v. Iowa Utils. Bd., 525 U.S. 366 (1999); Michael L. Katz & Carl Shapiro, *Network Externalities, Competition, and Compatibility*, 75 AM. ECON. REV. 424, 426–27 (1985) (explaining that where the value of a good depends upon the size of the network, new entrants face a barrier to entry); 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, 81–82 (2000) (stating that the Act's

effect of prohibiting" entry into telecommunications markets.¹²⁸ The Act, however, went further and required that incumbents unbundle their existing networks and lease those parts of their local networks to any requesting carrier that the new entrants would find economically inefficient to duplicate.¹²⁹ These requirements, which were born in part of a compromise between the BOCs and the long-distance carriers,¹³⁰ go substantially beyond a mere interconnection requirement. As implemented by the FCC, they require the incumbents to "cooperate, against their interests and for little if any profit, with those very competitors" who will seek to take away their local business.¹³¹

These unbundling requirements were introduced because of the concern that certain parts of the local telecommunications network could never be economically duplicated and that sharing of the incumbent's network was the only way to create a form of competition. William Baumol, a leading telecommunications economist, had published a book just before passage of the 1996 Act that advocated unbundling on just such a basis.¹³² His argument for

interconnection duties help overcome network effects).

128. 47 U.S.C. § 253(a) (2000); see Speta, *supra* note 120, at 776–80 (discussing state and local prohibitions).

129. For example, if it remained uneconomic for new entrants to string their own copper wires into individual homes to deliver the "last mile" of local phone service, then these provisions would require the incumbents to lease the incumbents' own local lines to the new entrants at "cost." See 47 U.S.C. § 251(c)(4) (2000) (imposing unbundling obligations); § 252(d) (setting substantive standards for unbundling prices); see also *AT&T Corp. v. Iowa Utils. Bd.*, 525 U.S. 366, 387–94 (1999) (discussing the Act's requirements concerning which elements must be leased); *Verizon Communications, Inc. v. FCC*, 535 U.S. 467, 476 (2002) (discussing rules for pricing these elements).

130. See Thomas W. Hazlett, *Explaining the Telecommunications Act of 1996: Comment on Thomas G. Krattenmaker*, 29 CONN. L. REV. 217, 225 (1997) ("The stand-off between the dominant vested players in the regulatory game was, naturally, resolved by compromise.").

131. Howard A. Shelanski, *A Comment on Competition and Controversy in Local Telecommunications*, 50 HASTINGS L.J. 1617, 1621 (1999). It is quite important to note here that Shelanski's comment is made against the backdrop of the FCC's selection of a forward-looking cost formula (TELRIC) that was designed to squeeze any monopoly profits out of the charges that incumbents would make for network elements. See *Verizon*, 535 U.S. at 501–28 (describing the standard). A different pricing standard, such as some implementation of the Efficient Component Pricing Rule (ECPR), could try to include in the charges sufficient monopoly profits that the incumbent would be indifferent between acting as a retailer or as a wholesaler. See, e.g., Daniel F. Spulber & Christopher S. Yoo, *Access to Networks: Economic and Constitutional Connections*, 88 CORNELL L. REV. 885, 900–07 (2003) (advocating a full-recovery price for access). On the other hand, such higher access prices are likely to result in only "soft competition," if any, because the incumbent does become indifferent to losing customers, and the new entrant is squeezed by high wholesale prices. See JEAN-JACQUES LAFFONT & JEAN TIROLE, *COMPETITION IN TELECOMMUNICATIONS* 207–09 (2000) (discussing "unbundling-based entry").

132. See WILLIAM J. BAUMOL & J. GREGORY SIDAK, *TOWARD COMPETITION IN LOCAL*

unbundling rules was based explicitly on the presumption "that the basic network functions [such as loops, switches, and signaling] rather than the LEC services constitute remaining bottlenecks."¹³³ Other commentators made similar arguments about the need for unbundling.¹³⁴ And both the FCC and numerous commentators have explained that the unbundling rules are designed to force incumbents to share economies of scale, scope, and density.¹³⁵ But if the local market is characterized by such economies, then these are the conditions of natural monopoly.¹³⁶ In other words, the unbundling provisions were included to allow retail competition to develop, notwithstanding that the

TELEPHONY 122 (1994) ("[T]he LEC networks should comprehensively unbundle the [basic network functions], each of which should be offered separately for sale at prices based on costs."). Baumol had consulted with AT&T and other telecommunications carriers on the 1996 Act. See William J. Baumol & Thomas W. Merrill, *Deregulatory Takings, Breach of the Regulatory Contract, and the Telecommunications Act of 1996*, 72 N.Y.U. L. REV. 1037, 1037 n.** (1997) (stating that Baumol was a consultant for AT&T).

133. BAUMOL & SIDA, *supra* note 132, at 122.

134. See, e.g., Craig D. Dingwall, *The Last Mile: A Race for Local Telecommunications Competition Policy*, 48 FED. COMM. L.J. 105, 120–21 (1995) (reviewing nascent unbundling policies); Krattenmaker, *supra* note 126, at 158–59 (explaining that unbundling requirements were included in the law because "[i]t is most likely that running a telecommunications wire to the home is a natural monopoly and so one ought to concentrate on regulating that monopoly or mitigating its ill effects"). Schwartz and Hoagg state:

Taken together, competition (with and without interconnection) and unbundling mean that the best customers are no longer captive, and that the BOCs must compete for them on the basis of product and services. While the erosion of telephone company revenues caused by competition and network unbundling has been small (probably less than two percent on average), this erosion will increase in places where it has begun, and spread to places where it has not yet begun.

Gail Garfield Schwartz & Jeffrey H. Hoagg, *Virtual Divestiture: Structural Reform of an RHC*, 44 FED. COMM. L.J. 285, 293 (1992).

135. See Local Competition Provisions, *supra* note 127, ¶¶ 315–16 (setting forth what incumbent LECs must provide new carriers), *aff'd in part and rev'd in part*, AT&T Corp. v. Iowa Utils. Bd., 525 U.S. 366 (1999).

136. That is, if local markets truly are characterized by economies of scale, scope, and density that are so severe that it is inefficient to duplicate infrastructure, then this is the natural monopoly condition that market demand is most efficiently met by a single supplier. See generally SHARKEY, *supra* note 29, at 24–30 (defining natural monopoly); W. KIP VISCUSI ET AL., *ECONOMICS OF REGULATION AND ANTITRUST* 337–44 (3d ed. 2000) (same). Some have made the argument that the unbundling rules are merely transitional rules that enable a competitor to enter an economic or advertising market while gradually building facilities, and this argument regards unbundling as largely a means for dissipating the incumbent's advantage of incumbency. See, e.g., Douglas Lichtman & Randal C. Picker, *Entry Policy in Local Telecommunications: Iowa Utilities & Verizon*, 2002 SUP. CT. REV. 41, 51–52 (examining three different formulations of the baseline for unbundling rules). But the more often heard rationale about dissipating economies of scale, scope, and density refers not to the incumbency advantage but to the economics of supply in the market.

incumbents might be wholesaling all or some of the facilities necessary for other competitors to provide service.

Needless to say, the unbundling provisions have been extraordinarily controversial and time-consuming to implement. Some of the processes' protraction is inherent in Congress's design, which required new entrants and incumbents to individually negotiate interconnection agreements, subject to arbitration in front of state public utility commissions if the parties could not reach agreement.¹³⁷ The idea was that voluntary, quasi market-based negotiations would provide a better starting point than an agency-centered administrative process.¹³⁸ But much of the delay has been regulatory: each of the FCC's rulemakings has been challenged, with central aspects of the FCC's rules twice going to the Supreme Court,¹³⁹ and almost every carrier request for unbundling has resulted in a contested proceeding first before a state commission and then on appeal to a federal district court.¹⁴⁰

Indeed, even today, more than eight years after the Act, the FCC's implementing rules are still substantially unsettled. The basic questions of how much of the incumbents' networks they must share with competitors and at what price have not yet come to rest. The Supreme Court has resolved that the FCC has authority to set the rules as to both matters,¹⁴¹ but

137. See 47 U.S.C. § 252 (2000) (establishing "[p]rocedures for negotiation, arbitration, and approval of agreements").

138. See generally *Verizon Communications, Inc. v. FCC*, 535 U.S. 467, 479, 488, 492 (2002) (noting how negotiation processes used in earlier deregulatory efforts were carried in to the 1996 Act).

139. See generally *id.* (challenging FCC's interconnection and unbundling pricing rules); *AT&T Corp. v. Iowa Utils. Bd.*, 525 U.S. 366 (1999) (challenging FCC's first local competition order on FCC jurisdiction to prescribe rules and on the scope of its unbundling rules); *United States Telecom Ass'n v. FCC*, 290 F.3d 415 (D.C. Cir. 2002) (vacating FCC's local competition order on remand from *AT&T Corp. v. Iowa Utils. Bd.*).

140. For a discussion of the somewhat odd system ("decidedly novel" in Justice Scalia's view, *AT&T*, 525 U.S. at 385 n.10 (1999)) under which (a) the FCC has rulemaking power, but (b) the state PUCs are charged with adjudicating the controversies under this federal statute, and (c) the state agency decisions are appealed to a federal district court, see Philip J. Weiser, *Federal Common Law, Cooperative Federalism, and the Enforcement of the Telecom Act*, 76 N.Y.U. L. REV. 1692, 1757-60 (2001). For representative court of appeals decisions addressing interconnection and unbundling proceedings, see *MCI Telecomm. Corp. v. U.S. W. Communications*, 204 F.3d 1262 (9th Cir. 2000) (reviewing arbitrated agreement, which included topics such as unbundling, co-location of remote switching units, and cost arrangements); *AT&T Communications Sys. v. Pac. Bell*, 203 F.3d 1183 (9th Cir. 2000) (reviewing arbitrated agreement under which competitor sought entry into ILEC market).

141. See *AT&T*, 525 U.S. at 378 (concluding that the FCC's authority encompasses §§ 251 and 252 of the Act).

the FCC's rules defining the elements to be unbundled have yet to survive judicial review. The agency's first rules required incumbents to provide any element that a new entrant requests; the Supreme Court held that this misinterpreted the statute,¹⁴² notwithstanding that the Court itself derided the statute as, "in many important respects[,] a model of ambiguity or indeed even self-contradiction."¹⁴³ When the FCC then promulgated a limited list of elements to be unbundled,¹⁴⁴ the D.C. Circuit struck down the rules because they applied nationwide—that is, without taking account of potentially different competitive conditions in different locales.¹⁴⁵ And when the FCC attempted to respond to the D.C. Circuit's criticism of nationwide rules by delegating to the state utility commissions, which under the Act resolve disputes in interconnection and unbundling negotiations, the authority to also determine which elements would be unbundled, the court said, "Again, regrettably, much of the resulting work is unlawful."¹⁴⁶

IV. *The Uncertain State of Telecommunications Competition*

Having just limped through the three years of wreckage wrought by the Internet meltdown, making firm predictions about the future of telecommunications technology, markets, and competition would seem a fool's errand. In fact, a communications revolution—in which broadband

142. See *id.* at 394–96. Gary Lawson has called the Supreme Court's decision in this regard remarkable as its first invalidation of agency rules under the very deferential second prong of *Chevron* review, in which an agency's interpretation of an ambiguous statute must be accepted by the courts if the interpretation is reasonable. See GARY LAWSON, *FEDERAL ADMINISTRATIVE LAW* 643 (2d ed. 2001) (stating that this case was "the first step two loss that an agency ever suffered in the Supreme Court"); see also *Chevron U.S.A., Inc. v. Nat'l Res. Def. Council, Inc.*, 467 U.S. 837, 842–43 (1984) (creating *Chevron* two-step analysis).

143. *AT&T*, 525 U.S. at 397 (recognizing the statute's ambiguity). The Court stated:
It would be gross understatement to say that the 1996 Act is not a model of clarity. It is in many important respects a model of ambiguity or indeed even self-contradiction. That is most unfortunate for a piece of legislation that profoundly affects a crucial segment of the economy worth tens of billions of dollars.

Id.

144. See Implementation of the Local Competition Provisions of the Telecommunications Act of 1996, *Third Report and Order and Fourth Further Notice of Proposed Rulemaking*, 15 F.C.C.R. 3696, ¶¶ 162–64 (1999) (listing the network elements to be unbundled).

145. See *United States Telecom Ass'n v. FCC*, 290 F.3d 415, 422–24 (D.C. Cir. 2002) (finding problems with a national mandate).

146. *United States Telecom Ass'n v. FCC*, 359 F.3d 554, 561 (D.C. Cir. 2004).

will be ubiquitous, competition abundant, and services cheap—has been predicted in some quarters for more than twenty years.¹⁴⁷ Nevertheless, an accurate summary of central characteristics can be briefly stated. On the whole, substantial frustration continues with the state of local competition, with editorial pages and prospective competitors alleging that the local telephone companies still "enjoy near-monopolies in their service territories."¹⁴⁸ The recent release of a General Accounting Office (GAO) survey of cable rates unleashed a similar wave of sentiment that, in the words of Senator John McCain, due to the lack of competition, "consumers . . . continue to be fleeced by their cable operators."¹⁴⁹

To justify this Article's call for fundamental change in the regulatory landscape, this Part surveys the current state of local competition. First, except in relatively dense business markets, little intramodal competition has developed to incumbent telephone companies in their traditional markets. Despite its prominence in the legislation and subsequent implementation, the 1996 Act's experiment with unbundled network elements has been something of a failure, with relatively few markets showing effective competition. Cable overbuilding is also virtually nonexistent. On the other hand, in high-speed Internet access, where incumbent telephone companies and cable companies both offer service, these two companies are increasingly competing with one another. Second, some solid prospects for intermodal competition are on the horizon. In fact, DBS already provides some real competition to cable. In telephony, competition is nascent, but wireless and Internet telephony look increasingly like promising substitutes. Indeed, it is hard not to get caught up in the excitement over VoIP telephony. Wireless and VoIP are the "glimmers of hope" that justify another reworking of communications policy. Third, despite these "glimmers," some scenarios exist in which nascent competition might be cut off—either because of

147. It should be no slight to Ithiel de Sola Pool's far-seeing work that his predictions of "digital and broadband, . . . pluralistic and competitive communications systems" that expand human culture have not yet been fully realized. ITHIEL DE SOLA POOL, *TECHNOLOGIES OF FREEDOM* 226, 229 (1983).

148. *Call Baby Bells to Account*, L.A. TIMES, Nov. 13, 2003, at B16; see also, e.g., Reza Dibadj, *Competitive Debacle in Local Telephony: Is the 1996 Telecommunications Act to Blame?*, 81 WASH. U. L.Q., 1, 12 (2003) (comparing the role of competition in long-distance and local telephony); Sanford Nowlin, *Battling the Bells*, *Telecom Champion*; *Phone Company CEO Fights for Access to SBC's Networks*, SAN ANTONIO-EXPRESS NEWS, May 22, 2003, at 1D (discussing competitors' battles with SBC).

149. Leon Lazaroff, *Cable Rates Still Sore Subject; Report Says Competition Benefits Few*, CHI. TRIB., Oct. 25, 2003, at C1. See generally U.S. GENERAL ACCOUNTING OFFICE, *ISSUES RELATED TO COMPETITION AND SUBSCRIBER RATES IN THE CABLE TELEVISION INDUSTRY*, GAO-04-8 (Oct. 2003) [hereinafter GAO REPORT], available at <http://www.gao.gov/new.items/d048.pdf>.

technological and market developments or by the strategic action of companies, or both.

A. Limited Wireline (Intramodal) Competition

The objective data reveal that some substantial telephone competition has developed in big business and dense urban markets;¹⁵⁰ notably, however, that competition was developing even before the 1996 Act.¹⁵¹ Overall, competitors are providing about 15% of switched local access lines.¹⁵² In residential markets, and especially in suburban and rural markets, the percentages are lower.¹⁵³ More significantly, most of this service—approximately 80%—is provided by competitors leasing the incumbents' local loops.¹⁵⁴ As a result, the long-term viability of the service is entirely contingent on the availability and pricing of these incumbents' elements.¹⁵⁵ Reflecting this, most analysts agree that competitive local exchange carriers face an uncertain business future.¹⁵⁶

150. See INDUS. ANALYSIS & TECH. DIV., FCC, LOCAL TELEPHONE COMPETITION: STATUS AS OF DECEMBER 31, 2002, at 1–2 (2003) (summarizing recent changes), available at http://www.fcc.gov/Bureaus/Common_Carrier/Reports/FCC-State_Link/IAD/lcom0603.pdf; see also Nicholas Economides, *US Telecommunications Today*, in IS MANAGEMENT HANDBOOK 19 (Carol V. Brown & Heikki Topi eds., 2003) (“[O]ver six years after the signing of the Act by President Clinton, entry in the local exchange has been small.”).

151. See Dingwall, *supra* note 134, at 108–12 (comparing long-distance and local competition).

152. See INDUS. ANALYSIS & TECH. DIV., FCC, LOCAL TELEPHONE COMPETITION: STATUS AS OF JUNE 30, 2003, at 1–2 (2003) (summarizing changes in competition), available at http://www.fcc.gov/Bureaus/Common_Carrier/Reports/FCC-State_Link/IAD/lcom1203.pdf.

153. See INDUS. ANALYSIS & TECH. DIV., *supra* note 150, at 2–3 (summarizing recent data).

154. See *id.* at tbl. 3 (reporting number of end-user lines acquired from other carriers).

155. See, e.g., CONSUMER FED’N OF AM., COMPETITION AT THE CROSSROADS: CAN PUBLIC UTILITY COMMISSION SAVE LOCAL PHONE COMPETITION 7–9 (2003) (looking at the major states where “the stakes for competition and consumers are huge”), available at http://www.consumerfed.org/unep_200310.pdf. As Laffont and Tirole explain, the price at which the element is made available to the entrant entirely determines the shape of the competition between the entrant and the incumbent. See LAFFONT & TIROLE, *supra* note 131, at 129–35 (examining various aspects of access pricing).

156. See Donny Jackson, *Reports: FCC Votes for Interim UNE Rules*, TELEPHONY ONLINE, at <http://www.telephonyonline.com/microsites/newsarticle.asp?mode=print&newsarticleid=2727632&releaseid=&srid=11357&magazineid=7&siteid=3> (July 23, 2004) (considering the prospects for competitive local exchange carriers) (on file with the Washington and Lee Law Review). Jackson states:

Some sources indicated the rates for existing CLEC customers would increase automatically by 15% under that scenario, while others believe special-access rates will apply. Either option would have a ‘drastic’ negative impact on CLECs,

In cable markets, the FCC has stopped tracking so-called cable overbuilders as a separate category, reflecting that they are present in only a very few locales.¹⁵⁷ The few local telephone companies that entered the video service market have largely exited.¹⁵⁸ Nationwide, fewer than 2% of all customers of multi-channel video service purchase from a wireline carrier other than the incumbent cable operator.¹⁵⁹ The largest cable overbuilder, RCN, recently announced that it is seeking bankruptcy protection.¹⁶⁰

The story is somewhat better (and worse) in the local high-speed Internet access markets. Unlike in telephone, these markets now largely have two competitors—the cable companies providing cable modem service and the incumbents providing DSL service.¹⁶¹ Nonincumbent provision of DSL, which largely depended on leasing loops in any event, has been falling in share of the market, and third-provider entry has been falling and is, as noted above, threatened by uncertainty.¹⁶² The cable companies and the incumbent DSL providers seem to be competing, at least for the initial

according to a letter sent yesterday to Powell by five equity firms with investments in competitive carriers.

Id. See generally Edie Herman et al., *White House Won't Seek an Appeal of the UNE Decision*, COMMUNICATIONS DAILY, June 10, 2004, 2004 WL 60706285 (summarizing analyst reports suggesting that CLEC prices would significantly rise).

157. See *Tenth Annual MVPD Report*, *supra* note 112, ¶ 78 ("Competition from a wire-based competitor such as a BSP is limited to a very few markets.").

158. See *id.* ¶¶ 112–15 (evaluating LEC experience over the past decade).

159. See *id.* ¶¶ 11–13 (examining competition's effects on cable television).

160. See *Bankruptcy Filing in the Cards for RCN*, CHI. TRIB., Feb. 18, 2004, at 47 (announcing RCN's plan to file bankruptcy).

161. See INDUS. ANALYSIS & TECH. DIV., FCC, HIGH-SPEED SERVICES FOR INTERNET ACCESS: STATUS AS OF DECEMBER 31, 2002, at 3 (2003) (finding that incumbent share of DSL service increased to 95% of market), available at http://www.fcc.gov/Bureaus/Common_Carrier/Reports/FCC-State_Link/IAD/hspd0603.pdf.

162. *Id.* The only exception to a duopoly market is the few areas in which a second cable company has built its own network, but this accounts for only several percent of the market. See *id.* at 4–5 (indicating where high-speed providers are located). Some other possibilities started but then faded. In the late 1990s, Sprint introduced in some areas a wireless high-speed Internet access service, and there was much discussion about the possibility of using various wireless services for such high-speed services. See Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming, *Ninth Annual Report*, 17 F.C.C.R. 26,901, ¶¶ 13–14 (2002) [hereinafter *Ninth Annual MVPD Report*] (evaluating particular distribution technologies in the video program delivery market); Speta, *supra* note 127, at 58–60 (examining multichannel and local multipoint distribution systems). Sprint discontinued its service and no significant others have been deployed.

acquisition of customers, by offering initial discounts on installation and service.¹⁶³

Alternatives to cable and DSL are limited. Due to their longer delays and more limited capacity, satellite-based services, which are provided by the DBS companies, are considered viable only in rural areas where DSL and cable do not reach.¹⁶⁴ Several companies, in particular Sprint, deployed fixed wireless platforms for Internet access in 2000 and early 2001, but those services have largely folded.¹⁶⁵ There are suggestions at the FCC and in the markets of a reinvigoration of fixed wireless, but these offerings are only just emerging again.¹⁶⁶ In other words, in the vast majority of markets, the incumbent telephone company and the incumbent cable company are the only providers of high-speed Internet access.

B. Intermodal Competition in Video Markets

Although incumbent cable operators still have an overwhelming 75% share of the market,¹⁶⁷ competition from direct broadcast satellite has been increasing in recent years, and the double-digit growth rates for DBS far surpass cable's single-digit rates.¹⁶⁸ Moreover, in areas where the satellite providers offer local broadcast channels, competition between cable and DBS is more vigorous.¹⁶⁹ The FCC reports a DirecTV claim that "approximately 70%" of their new customers were former cable customers, which suggests

163. See Jim Hu, *SBC Sees Surge in DSL Subscribers*, CNET NEWS.COM, <http://news.com.com/2100-1034-5094331.html> (Oct. 21, 2003) (discussing SBC's increase in broadband customers) (on file with the Washington and Lee Law Review).

164. See, e.g., *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 Section 706 of the Telecommunications Act of 1996, Third Report*, 17 F.C.C.R. 2844, ¶ 78 (2002) (examining projections for subscribers to high-speed satellite systems).

165. See *supra* note 162 (describing Sprint's experience in the late 1990s).

166. See Paul Davidson, *Inventive Wireless Providers Go Rural*, USA TODAY, July 14, 2004, (explaining how new wireless technology is using fixed wireless technology to provide Internet access in remote areas), available at http://www.usatoday.com/tech/news/2004-07-14-wireless_x.htm; Nick Wingfield, *Technology (A Special Report)—Tomorrow's Wi-Fi: It's Called WiMax—and Its Promoters Say Broadband Will Never Be the Same*, WALL ST. J., May 24, 2004, at R8 (discussing the technology and potential impact of WiMax).

167. See *Tenth Annual MVPD Report*, *supra* note 112, ¶ 6 (finding a decline in purchasing cable from a franchise operator).

168. See *id.* ¶¶ 45–50 (examining the demand for video-on-demand and HDTV services).

169. *Id.*

head-to-head competition.¹⁷⁰ In 2002, the Consumer Federation of America (CFA) declared that DBS had "failed" to provide "intermodal competition" to cable,¹⁷¹ and this analysis provided the basis for Professor Reza Dibadj's proposal that cable be subject to unbundling and resale obligations similar to those the 1996 Act applied to incumbent telephone companies.¹⁷² But the data relied upon in the CFA study largely predates the availability of local broadcast channels on satellite, and the GAO has more recently concluded that cable companies act to improve service, increase channel packages, and generally respond to DBS's offerings where local channels are available.¹⁷³ This is competition on the service dimension instead of the price dimension, but the GAO has also found that incumbent cable companies' prices are between 15% and 41% lower in cities in which an overbuilder operates.¹⁷⁴ With the FCC poised to issue licenses for additional DBS providers, competition may expand further.¹⁷⁵

On the other hand, the DBS providers assert that they are constrained by their available bandwidth as to the number of markets in which they can offer local broadcast channels.¹⁷⁶ Perhaps most telling, cable rates continue to rise far faster than the general rate of consumer inflation.¹⁷⁷

170. See *id.* ¶ 65 (reporting on the subscribership of DBS services).

171. See generally MARK COOPER, CONSUMER FED'N OF AM., *THE FAILURE OF INTERMODAL COMPETITION IN CABLE MARKETS* (2002) (asserting the shortcomings of intermodal competition), available at <http://www.consumerfed.org/intercomp.20020423.pdf>.

172. See Reza Dibadj, *Toward Meaningful Cable Competition: Getting Beyond the Monopoly Morass*, 6 N.Y.U. J. LEGIS. & PUB. POL'Y 245, 267–71 (2003) (surveying the national cable market and consumer satisfaction).

173. See GAO REPORT, *supra* note 149, at 3–4 ("Competition from wire-based and DBS operators leads to lower cable rates and improved quality and service among cable operators."); *Tenth Annual MVPD Report*, *supra* note 112, ¶ 11 (exploring competition's effect on prices).

174. See U.S. GENERAL ACCOUNTING OFFICE, *WIRE-BASED COMPETITION BENEFITED CONSUMERS IN SELECTED MARKETS*, GAO-04-241, at 4 (Feb. 2004) (summarizing results of study), available at <http://www.gao.gov/new.items/d04241.pdf>. The GAO study employed a case-study methodology, selecting six cities in which overbuilders operated, and does not purport to be generalizable to other areas. *Id.* at 2. Yet it is strong evidence that competition will occur on the price dimension as well.

175. See *Tenth Annual MVPD Report*, *supra* note 112, ¶¶ 62–64 (detailing current and prospective license holders).

176. See *id.* ¶ 12 (explaining developing technology's impact on cable offerings).

177. See GAO REPORT, *supra* note 149, at 20 (providing a variety of factors that contributed to cable rate increases); *Tenth Annual MVPD Report*, *supra* note 112, ¶ 4 (summarizing the telecommunication events of the 1993–2003 decade).

C. Coming (?) Intermodal Competition in Telephony

Competition may be increasing for voice telephone services, coming from two directions—cell phone companies and Internet telephony. Cell phone competition is a story of relatively gradual change, while VoIP could create a rapid break in the competitive landscape. These are the types of intermodal competition that changes in regulation should seek to exploit. In fact, both the history of telecommunications competition and current marketplace developments suggest that one looking to find significant competitors for traditional wireline services should look to intermodal services. As noted above, it was a wireless service (microwave) that provided the first viable competition to AT&T's Long Lines and that led the United States to seek and achieve the breakup of the integrated Bell System.¹⁷⁸ That episode is concluded, as all long-distance has moved to fiber optics,¹⁷⁹ but DBS provides a current example.¹⁸⁰ And, although currently limited to only 2–3% of all consumers, the number of people who will completely give up their wireline voice service in favor of a wireless phone is expected to rise as telephone number portability rules take effect.¹⁸¹

Moreover, short of complete substitution, in some limited parts of the telephone market "[t]here is much evidence . . . that consumers are substituting wireless service for traditional wireline communications."¹⁸² For example, due to the ubiquity of wireless telephones, the payphone market is declining rapidly, the demand for second telephone lines is significantly depressed, and up to 20% of all long-distance access has migrated to wireless because of the ability to "bucket-price" instead of charge by the minute.¹⁸³ Overall, the FCC concludes that "this is due to the declining cost and widespread use of wireless service. In fact, a number of analysts argue that wireless service is cheaper than

178. See *supra* notes 90–101 and accompanying text (discussing the Bell breakup).

179. See LINDA BLAKE & JIM LANDEY, FCC, TRENDS IN THE U.S. INTERNATIONAL TELECOMMUNICATIONS INDUSTRY, tbls. 3–5 (2001) (showing that satellite use is largely restricted to a limited amount of international service and some services that are not sensitive to the greater delays in satellite transmissions), available at http://www.fcc.gov/Bureaus/Common_Carrier/Reports/FCC-State_Link/Intl/itltd97.pdf.

180. See *supra* notes 113–15 and accompanying text (describing DBS's competition with cable).

181. Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993, Annual Report and Analysis of Competitive Market Conditions with Respect to Commercial Mobile Services, *Eighth Report*, 18 F.C.C.R. 14,783, ¶¶ 101–06 (2003) [hereinafter *Eighth Report*].

182. *Id.* ¶ 102.

183. See *id.* ¶¶ 103–04 (discussing the trend towards wireless phones); see also Speta, *supra* note 120, at 794 (analyzing data from 2000 and 2001).

wireline."¹⁸⁴ Indeed, it has been true for some time that the deployment of wireless telephone systems, measured on a per-line basis, has been cheaper than the creation of new wireline systems, as demonstrated by the worldwide deployment of those systems in less developed countries.¹⁸⁵ In the Internet access markets, a variety of wireless solutions have become available, including Wi-Fi hotspots, higher-speed access through cell phone companies, and DBS-based satellite services.¹⁸⁶ It is not clear, however, that any of these are (yet) substitutes for the high-speed services sold by the cable and DSL providers.¹⁸⁷

Perhaps because the news has been so bad for so long in the telecommunications industry, a significant buzz has recently developed over the prospects for competition presented by VoIP, with the Financial Times dubbing it "America's chance for a free market in telephony."¹⁸⁸ FCC Chairman Michael Powell has described VoIP as potentially bringing a "degree of choice for consumers never before seen in the residential voice market."¹⁸⁹ Although cable companies have provided limited telephone service for several years (with approximately three million subscribers as of June 30, 2003),¹⁹⁰ VoIP promises to make that service much less costly to provide. As a result, every significant cable company has announced a roll-out of VoIP to come within the next year.¹⁹¹ But it is not only the cable companies that are offering the technology;

184. *Eighth Report*, *supra* note 181, ¶ 104.

185. *See, e.g.*, Peter Haynes, *The End of the Line: A Survey of Telecommunications*, *ECONOMIST*, Oct. 23, 1993, at 1, 7 (examining the possibilities for expansion in places like China, Eastern Europe, and the former Soviet Union).

186. *See Eighth Report*, *supra* note 181, ¶¶ 124–84 (evaluating mobile service data).

187. Indeed, it is unlikely that they are because the technical characteristics are not comparable. Wi-Fi hotspots are currently quite localized, and even the fastest cell phone data services are a small fraction of the speed of cable and DSL broadband. *See, e.g., id.* ¶¶ 180–84 (explaining Wi-Fi technology). These services are focused on the mobile markets and not on the fixed residential or business markets. Satellite services are not as fast and experience delays. *See Speta*, *supra* note 127, at 60 (discussing satellite technology's competition with cable television video service).

188. *America's Chance for a Free Market in Telephony*, *FIN. TIMES*, Jan. 6, 2004, at 19.

189. Michael K. Powell, Written Statement on Voice over Internet Protocol (VoIP) Before the S. Comm. on Commerce, Sci., & Transp. 6 (Feb. 24, 2004), available at http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-244231A1.pdf.

190. *See INDUS. ANALYSIS & TECH. DIV.*, *supra* note 152, at 2 tbl. 5 (reporting number of end-user switched access lines).

191. *See, e.g.*, Peter Grant & Shawn Young, *Time Warner Cable Expands Net-Phone Plan*, *WALL ST. J.*, Dec. 9, 2003, at A19 (discussing Time Warner's plans to use the Internet to provide telephone service); Matt Richtel, *Time Warner Deal Raises Ante in Cable's Bid for Phone Market*, *N.Y. TIMES*, Dec. 9, 2003, at A1 ("In addition to Time Warner Cable, the cable giants Comcast, Cox Communications and Cablevision have started deployment of Internet phone services, with plans to expand those services in 2004.").

AT&T, SBC, and Qwest are all announcing new residential or business VoIP offerings.¹⁹² In fact, the established telephone companies are playing catch-up to a certain degree, as Internet-based telephony has long been available to those willing to initiate their calls from their computers¹⁹³ and as new starts-ups such as Vonage deploy new boxes that attach to broadband connections and allow a consumer to have a traditional telephone handset.¹⁹⁴

The development means that "[t]he issue is now front and center—after a decade of fits and starts—because Internet telephony finally appears ready to go mainstream."¹⁹⁵ If VoIP is successful, it would certainly increase the competitive pressure facing local telephone companies in voice markets. To a certain extent, the level of competition will be constrained by the level of competition in broadband Internet services. Because VoIP must be provided over broadband, the price of that service includes the price of the broadband line. But, even if competition among Internet access networks is imperfect,¹⁹⁶ the availability of Internet telephony increases the level of competition with traditional voice telephone companies.

D. Or (Maybe) Less Competition

The optimistic view of coming competition in the local telecommunications market may, however, tell only half of the story. The optimistic view is that technological developments and the passage of time will inevitably increase competition among communications platforms.

192. See, e.g., *AT&T to Expand VoIP Service*, WASH. POST, Dec. 12, 2003, at E02 ("AT&T said it plans to sell Internet-based phone service to residential customers in the first quarter of next year to keep pace with competitors that are rolling out the service. A similar offering of voice-over-Internet protocol service for businesses, available since 1997, will be expanded."); *Technology Briefing: Telecommunications: SBC to Sell Internet Calling Service to Businesses*, N.Y. TIMES, Nov. 21, 2003, at C2 (publicizing SBC's efforts to sell Internet calling and data services); Shawn Young, 'Naked DSL,' *Qwest to Offer Web Service Separate from Phone*, WALL ST. J., Feb. 25, 2004, at D1 (reviewing Qwest's plans to offer DSL to its customers).

193. See Jonathan Moules, *Online Upstarts Target the Titans*, FIN. TIMES, Nov. 20, 2003, at 9 ("Internet protocol (IP) telephony, or the transmission of voice, fax and instant messaging over networks that use the internet's 'packet-switching' technology, is not new. However, for home users, it has been largely a hobbyist's pursuit for those with the time and patience to connect calls over personal computers.").

194. See Glenn Fleishman, *An Internet Extension to Your Telephone Twin*, N.Y. TIMES, Aug. 28, 2003, at G3 (explaining how the SIP phone works).

195. Yuki Noguchi, *Identity Crisis: Internet Services Challenge Definition of "Phone Company"*, WASH. POST, Oct. 23, 2003, at E01.

196. See *supra* notes 148–67 and accompanying text (evaluating competition in Internet access markets).

Competitive telecommunications markets do not, however, always stay that way, and technological advance might result in lower levels of effective competition as well as greater. As a historical matter, in the early days of telephone service, competing local companies existed in many cities, until AT&T invented the "killer application" of long-distance (which was protected by patents) and refused to share it with its rivals.¹⁹⁷ Similarly, broadcast television was an (imperfectly) competitive market, with three networks and sometimes independent stations competing in most local markets.¹⁹⁸ The advent of cable, however, with vastly superior distribution technology because of the number of channels it supplied, introduced a monopoly element into video markets.¹⁹⁹

Relevant to the emerging digital broadband world, some commentators and the FCC have expressed concern that the development of more sophisticated interactive television services could diminish whatever ability digital broadcast and satellite have to compete with cable television systems. Interactive television (ITV) requires sufficient downstream capacity to provide a high-quality video stream and an efficient upstream channel to return the user's selections.²⁰⁰ Only cable systems have both of these characteristics, and, indeed, the cable companies themselves seem to see interactive services as the logical next step in trying to win the market back from the satellite companies.²⁰¹ If this scenario occurs, even the current level of competition in video and Internet may take a step backwards. As the FCC put it in a 2001 notice of inquiry into interactive television services (which is, of course, still pending): "If it turns out that only one delivery platform in each geographic area has the capability to provide the most attractive ITV services package, and if the platform provider is vertically integrated with an ITV service provider, then there would be the potential for anticompetitive behavior."²⁰² These

197. Robinson, *supra* note 72, at 7–8.

198. BENJAMIN ET AL., *supra* note 103, at 441–43.

199. *Id.*

200. See, e.g., Nondiscrimination in the Distribution of Interactive Television Services over Cable, *Notice of Inquiry*, 16 F.C.C.R. 1321, ¶ 6 (2001) (characterizing ITV service).

201. See Dustin Goot, *Video May Kill the Satellite's Star*, WIRED NEWS, <http://www.wired.com/news/digiwood/0,1412,56729,00.html> (Dec. 6, 2002) ("Broadband Plus, formerly the Western Cable Show, opened this week with a call to arms from the chairman of the California Cable and Telecommunications Association: Cable companies must 'stop the bleeding that's going to DBS (satellite).'" (on file with the Washington and Lee Law Review)).

202. *Notice of Inquiry*, *supra* note 200, ¶ 1; see also Hernan Galperin & François Bar, *The Regulation of Interactive Television in the United States and the European Union*, 55 FED. COMM. L.J. 61, 74 (2002) ("The lack of a credible competitor to discipline cable operators opens several avenues for discriminatory behavior in favor of affiliated programmers and ITV service producers.").

concerns may or may not materialize. It is relatively easy to envision the alternatives to the cable companies cornering the market on interactive television, and the telephone companies are beginning to work closely with satellite providers to market bundles of voice, video, and high-speed Internet services to compete with cable companies.²⁰³ Broadband terrestrial wireless platforms could also provide interactive packet video. The installation of substantially more fiber optics in local telecommunications networks would permit VDSL services that too would provide interactive video.²⁰⁴ Also, a new set-top box could combine DSL service with satellite video to provide ITV equivalency. But, again, many of these alternatives are not in the offing.

Wireless services is another area in which technological and market developments could roll back the current level of competition.²⁰⁵ Wireless telephony to date has been one of the truly competitive telecommunications markets.²⁰⁶ Some consolidation has begun, and with AT&T Wireless merging with Cingular, more is coming.²⁰⁷ But multi-media services and interactive services are coming to wireless telephones as well, and the experience in Japan with NTT DoCoMo's i-Mode service shows that a company that first brings a new service to market may be able to build an internal network effect that locks customers into the service, decreasing competition among the platforms.²⁰⁸

Neither of these scenarios is certain of course, and traditional regulatory tools may suffice to handle them if they develop (though of course competition would be a superior result to new regulation). Moreover, it is important to evaluate carefully the types of anticompetitive behavior that arise in any monopolistic market. In monopoly, prices are higher and output is constrained, which certainly harms consumers as a theoretical matter. But a static monopoly may only reflect sequential competition for the market, rather than a durable

203. See, e.g., *SBC To Sell TV Packages*, CHI. TRIB., Mar. 4, 2004, at C2 (discussing SBC's bundling plans).

204. See Speta, *supra* note 127, at 54 (noting that fiber optics would allow DSL services).

205. The new technology actually creates a *new* market, one in which there are fewer companies providing service. This new market may or may not eliminate the old market, but if the new technology encompasses or supplants the old, it may.

206. See *supra* notes 178–96 and accompanying text (describing competition in wireless telephony).

207. See Dan Thanh Dang, *Wireless Customers Could Dial up Better Service if Companies Merge but Loss of Competition Might Bring Higher Costs*, BALT. SUN, Jan. 22, 2004, at 1A (analyzing possible mergers in the wireless industry). This consolidation has as much to do with the nearly-complete transition from a local to national wireless telephone market. And antitrust seems likely enough to ensure that consolidation does not threaten competition (though, as is discussed later, spectrum reform would do even more).

208. See Speta, *supra* note 80, at 208–10 (describing a first-mover's ability to limit later competition).

monopoly harming consumers.²⁰⁹ Moreover, only in certain types of markets will the monopolist have an incentive to leverage or to otherwise discriminate against producers in related markets. It is these scenarios that present greater threats to innovation and to free communications values and therefore warrant special attention.

V. Learning the Lesson: Setting a New Agenda for Local Competition

If Congress had considered the precedents of airline, trucking, and railroad deregulation from the perspective of what market characteristics had preceded deregulation, the 1996 Act might have pursued a different course for introducing competition into local telecommunications markets. Given that Congress apparently did not believe that competitors would duplicate the essential elements of the incumbents' networks, this line of reasoning should have led to the conclusion that complete intramodal competition (the airline and trucking model) would not in fact develop, or at least would not develop soon. The unbundling provisions take as their premise that, unlike independent trucking companies and airlines that provide their own end-to-end networks, new entrants into telecommunications markets will rely upon elements owned by the incumbent who maintains a monopoly over a part of the network. In short, the 1996 Act reveals a concern that true intramodal competition could not develop. This conclusion, combined with the lesson learned from transportation deregulation, means Congress should have done more to promote the development of intermodal competition—competition to the incumbent telephone companies (and the incumbent cable companies) from providers who would use fundamentally different network technologies.

Lest I be thought too harsh on Congress, let me be clear that there is much that is good in the 1996 Act, and indeed, some features of the Act do advance intermodal competition. The lifting of legal barriers to entry into telecommunications markets and the explicit provisions requiring interconnection were undoubtedly necessary to help competition and, in these regards, were similar to all of the earlier, successful deregulatory efforts.²¹⁰ Many members of Congress expressed hope that wireless and cable companies would compete with wireline telephone companies.²¹¹ I am not even

209. See Shelanski & Sidak, *supra* note 101, at 10–15 (discussing competition for the market).

210. See *supra* notes 116–18 and accompanying text (explaining how the Act drew on prior deregulatory statutes).

211. See *supra* note 119 and accompanying text (quoting Senators McCain and Dorgan).

particularly critical of the unbundling requirements, for they are an at least somewhat effective way to introduce a limited form of competition into local markets and, as implemented by the FCC, a very effective way to limit the incumbents' ability to monopoly-price in important markets.²¹² In this regard, too, I think that the federalization of much of local telecommunications regulation is a good result of the 1996 Act.²¹³

Rather, I think that the 1996 Act could have done much more to increase the possibility of true facilities-based competition (especially intermodal), and I think that Congress should now consider making these additions to the Communications Act. Indeed, the current developments described in Part IV suggest that serious intermodal competition may be in the offing. Reform of wireless policy is the largest missed opportunity for developing intermodal competition, and a number of proposals, ranging from the uncontroversial to the radical, are gaining currency. The FCC is acting where it can to advance spectrum reform, but legislative direction and confirmation of FCC plans would, as in the case of transportation deregulation, accelerate the process and ensure that reforms are safe from judicial challenge. This Part, therefore, reviews a number of telecommunications reform proposals that are being discussed and some that are not (but should be) and places them within the general agenda of promoting facilities-based and intermodal competition.²¹⁴

Indeed, my principal aim is to attempt a new, comprehensive agenda for telecommunications policy based on the promotion of true facilities-based competition and, in particular, intermodal competition. As should become increasingly clear, however, I regard the important development for telecommunications competition to be facilities-based competition among carriers—whether that competition is intra- or intermodal. Only true facilities-based competition will eliminate the nearly intractable problems of

212. Indeed, this may be their most important characteristic, and the effective price controls over DSL service may be the principal limit on the pricing by the cable and incumbent telephone companies for high-speed Internet access service.

213. This result may not have been Congress's intent, *see* Weiser, *supra* note 140, at 1720–23 (discussing the prospects of agency lawmaking), but the Supreme Court has held that the inclusion of the local competition provisions in Title II of the Act essentially gave the FCC regulatory control over many of the most significant aspects of local markets, such as interconnection and element pricing. *See* AT&T Corp. v. Iowa Utils. Bd., 525 U.S. 366, 377–86 (1999) (discussing the extent of the FCC's authority). Of course, the FCC still does not have control over local retail rates for basic telephone services. I return to the topic of increasing federal control over certain aspects of telecommunications regulation *infra* notes 313–15 and accompanying text.

214. For examples of proposals addressing the reform of the unbundling regime, see Hausman & Sidak, *supra* note 126; Spulber & Yoo, *supra* note 131. I set these to the side until the end of this Part.

interconnection pricing and of bottleneck infrastructure providers attempting to leverage their carrier services into other markets. The imperative of intermodal or facilities-based competition is already recognized in some circles.²¹⁵ This Part extends the general imperative to an agenda and to specific policy proposals.

These proposals can be grouped into helpful categories. First, communications regulation should focus on eliminating legal and economic barriers to entry where it can. Regulation completely prohibiting entry for economic reasons has largely passed from the scene, and as noted in telephone and cable markets, federal law already forbids legal exclusions. But, in wireless, aspects of the current regime actually do create legal barriers to entry. Moreover, legal choices can also change the economics of a particular industry by making services more or less expensive to bring to market. Thus, a second priority for a new communications agenda is to seriously consider ways in which legal reform could decrease the costs of bringing services to market. In a variety of areas, including wireless policy, right of way management, and local franchising, legal reform could have this effect. Third, the communications law itself should be reformed to take account of the accelerating pace and diversity of service deployment. VoIP, for all its prospects, has already endured significant regulatory uncertainty, and significant FCC proceedings are just commencing. The statute should be changed to ensure that the regulatory response to new services is dictated by their economic character and not by their resemblance to more familiar services. The FCC is already trying to do this, but it operates within the confines of the current statute.

These changes—some radical and some less so—will have consequences, of course, and will require a rethinking of other aspects of telecommunications law. As an initial matter, a more competitive telecommunications marketplace justifies increased government investment in basic telecommunications research. Some have called for the government itself to build the broadband networks of the future; I think that private enterprise, funded by universal service subsidies where necessary, has proved itself more reliable and presents fewer potentially anticompetitive problems. Second, universal service will require a new approach. One of the main concerns with leaving VoIP unregulated is the potential damage to the revenues raised (today, only from telephone companies) for universal service. If universal service funds must be raised through an industry-specific tax, instead of being provided from the

215. See Jim Chen, *Subsidized Rural Telephony and the Public Interest: A Case Study in Cooperative Federalism and Its Pitfalls*, 2 J. TELECOMM. & HIGH TECH. L. 307, 343 (2003) (discussing wireless as providing particularly effective competition in rural areas).

general federal revenue, then taxing customer access to networks is the only competitively neutral manner in which to raise funds. This does mean taxing Internet access, but it hardly seems necessary to continue to subsidize the Internet by treating it special, as compared to telecommunications. Finally, this new regulatory approach raises the question of what to do about the unbundling rules. If they are not working and if intermodal competition is likely to take off, then it might seem obvious that they should be repealed. Although I am generally optimistic about the chances of increased competition in local markets, I am not yet convinced. Mandatory unbundling should itself continue, but the pricing rules should be changed to reflect the increased risks of a developing competitive environment.

A. Wireless Policy

A fairly widespread consensus already exists, at least in academic and regulatory circles, that significant spectrum reform is necessary, although there is significantly less consensus about what shape the reform should take. Commentators have noted spectrum reform as a significant missed opportunity in the 1996 Act,²¹⁶ but most of this commentary focuses on the need to reallocate spectrum from low-value to higher value uses, such as the need for additional cell phone service, or on the manner in which administrative spectrum allocation has protected incumbents against new entry into wireless services.²¹⁷ In other words, this commentary focuses on matters internal to spectrum policy without integrating it into the larger telecommunications competition picture. Perhaps tellingly, the FCC's reorganization after the 1996 Act to emphasize market competition left it with two *different* telecommunications bureaus—the Wireline Competition Bureau and the Wireless Telecommunications Bureau—a regulatory separation that continues today.²¹⁸ The agenda I suggest views wireline and wireless competition not as

216. See, e.g., Thomas W. Hazlett, *Physical Scarcity, Rent Seeking, and the First Amendment*, 97 COLUM. L. REV. 905, 905–06 (1997) ("Despite ambitious rhetoric regarding the scope of liberalization in telecommunications markets, the omnibus 1996 Telecommunications Act did shockingly little to disturb age-old regulatory arrangements in radio and television broadcasting."); Krattenmaker, *supra* note 126, at 157 ("The new Act does very little to reform broadcasting law and policy in helpful ways. Censorship is not repealed, but rather is extended. The horrors of spectrum allocation for television are not ameliorated, but compounded.").

217. E.g., Hazlett, *supra* note 216, at 907–08 (focusing on new entry into broadcast-type services); Krattenmaker, *supra* note 126, at 157–58 (exploring how consumers might protect themselves from a cable monopoly).

218. See FCC, ABOUT THE FCC, at <http://www.fcc.gov/aboutus.html> (last visited Sept. 13, 2004) (listing bureaus) (on file with the Washington and Lee Law Review).

separate matters, but as overlapping parts of a larger telecommunications market. The important, developing possibility for wireless services is the manner in which they can provide competition for existing wireline services, such as telephone, Internet, and cable television service.²¹⁹

The FCC has taken some important steps to increase available spectrum, by relocating a limited number of services to higher spectrum bands, by authorizing so-called flexible use spectrum bands, and by increasing the amount of spectrum in which low-power devices may operate without licenses.²²⁰ The FCC has also begun to authorize more exotic solutions, such as limited ultra-wideband devices, which can (sometimes) operate on already-allocated frequencies without additional interference.²²¹ The FCC also commissioned a task force to review spectrum policy; its report called for a radical overhaul of the regulatory regime.²²²

Nevertheless, the FCC likely cannot, on its own, make any significant amount of additional spectrum available. The largest single user of spectrum is the federal government itself, principally controlled by the Departments of Commerce and Defense.²²³ Attempts at interagency consultation have not resulted in significant spectrum transfers from any part of the federal government to the FCC so that the FCC could make it available to the public.²²⁴

219. Of course, wireless permits mobile communications, and the markets therefore cannot completely overlap. See Speta, *supra* note 120, at 797 n.244 (examining wireline and wireless technology competition).

220. See FCC, Spectrum Policy Task Force, *Report*, ET Docket No. 02-135, at 7-12 (2002) [hereinafter *Task Force Report*] (summarizing these developments), available at http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-228542A1.pdf; see also Ellen P. Goodman, *Spectrum Rights in the Telecosm to Come*, 41 SAN DIEGO L. REV. 269, 287-88 (2004) (discussing the FCC's creation of a common pool of unlicensed frequencies). Goodman stated:

Consistent with the intangible, unpropertied qualities of spectrum, the FCC has set aside some frequencies as a common pool resource in the form of unlicensed spectrum. Rather than granting exclusive or even group rights to such frequencies, the FCC has opened the bands for low-power transmissions by operators or members of the public without mandating licensing or coordination.

Id.

221. See Revision of the Commission's Rules Regarding Ultra-Wideband Transmission Systems, *Memorandum Opinion and Order and Further Notice of Proposed Rule Making*, 18 F.C.C.R. 3857, ¶¶ 7-152 (2003) (considering petitions regarding ultra-wideband systems).

222. See generally *Task Force Report*, *supra* note 220.

223. See JANICE OBUCHOWSKI, NAT'L TELECOMMS. & INFO. ADMIN., U.S. SPECTRUM MANAGEMENT POLICY: AN AGENDA FOR THE FUTURE 23 (1991) (addressing concerns about access to federal spectrum).

224. See *Task Force Report*, *supra* note 220, at 9-11 (evaluating spectrum use and reform considerations).

Moreover, any global change in the method of spectrum allocation, so that spectrum could be made available for uses that are in greater demand, would require trenching on some powerful incumbents. As Thomas Hazlett and others have extensively noted, those incumbent interests have, to date, prevented any real change in spectrum policy.²²⁵

Reform of spectrum policy, in my view, has several important components. First, at a minimum, spectrum policy ought to be reformed to reduce the manner in which current policy continues to act as a legal barrier to entry—by requiring companies proposing innovative services to receive explicit government approval to offer them. Second, spectrum policy should focus on making significant amounts of new spectrum available. Third, the most substantial amount of this new spectrum should be made available by auctioning genuine property rights in the spectrum, while maintaining and increasing the number of unlicensed bands.

1. Eliminating Legal Barriers to Entry into Spectrum Markets

Most of the currently useable spectrum continues to be restricted to use by particular kinds of services. This, of course, is the historic command and control method of spectrum allocation adopted by the Radio Act of 1927 and continued into the Communications Act of 1934, where licenses were granted to specific companies (who could not transfer the licenses without regulatory approval), to offer specific services, on specific frequencies, at specific powers, and in specific locations.²²⁶ Today, some spectrum licenses permit so-called "flexible uses," whereby the licensee is authorized to provide a wide range of services.²²⁷ And the FCC has made available increasing amounts of spectrum for "unlicensed" use that permits anyone operating within broad parameters to provide new services.²²⁸

225. See Hazlett, *supra* note 216, at 907–12 (discussing how incumbent broadcasters stymied proposed reform in the 1996 Act); Stuart Minor Benjamin, *The Logic of Scarcity: Idle Spectrum as a First Amendment Violation*, 52 DUKE L.J. 1, 11–20 (2002) (discussing lobbying and legislation overturning FCC's attempts to authorize low power FM stations).

226. For an overview of this regulatory structure, see BENJAMIN ET AL., *supra* note 103, at 9–34.

227. See, e.g., Service Rules for the 746–764 and 776–794 MHz Bands and Revisions to Part 27 of the Commission's Rules, *First Report and Order*, 15 F.C.C.R. 8634, ¶ 4 (2000) [hereinafter Service Rules] ("Because the record indicates a wide range of possible technical approaches to serving the expanding demand for wireless services, we have sought to establish an open regulatory framework with the potential to accommodate both existing and future technologies."); *Task Force Report*, *supra* note 220, at 10–12 (summarizing other proceedings).

228. See *id.* at 54 (encouraging the additional designation of spectrum for unlicensed use).

Nevertheless, truly new services that do not fit comfortably within the unlicensed bands²²⁹ or the few flexible use bands still need to petition the FCC to create new license categories or to amend old ones. It is simply not possible for a new entrant to buy a cell phone or radio station license and convert its use to a new technology—and over 90% of commercially viable spectrum is still tied up in limited use licenses.²³⁰ Subject to the debate over whether broadcast television serves an important universal service function (on which more discussed below) spectrum licenses should be granted without restriction as to the service that the licensee will provide. In the past, restricting services to particular bands may have served the important function of coordinating equipment companies with service companies—for example, by ensuring that radio manufacturers would know which channels their equipment must be prepared to receive. With radios becoming more flexible and with internal processors becoming cheaper, such a coordination function may be less important. New devices may be able to pick up services on any frequency, using a wide variety of protocols.²³¹

2. Making More Spectrum Available

The consensus in favor of spectrum reform is driven in large part by agreement that significant demand exists for additional spectrum. The FCC's report declares: "Increasing demand for spectrum-based services and devices are straining longstanding, and outmoded, spectrum policies."²³² For example, analysts suggest that one major reason behind the Cingular takeover of AT&T Wireless was that neither company had sufficient spectrum, standing alone, to provide adequate service quality to increasing numbers of customers.²³³ A variety of new services, ranging from increasing Wi-Fi (or Wi-Fi-like hotspots)

229. The unlicensed bands are either very high frequency or require very low power transmission, which limits the types of applications that can be accommodated. See, e.g., *id.* at 55 (discussing difficulty of wireless ISPs meeting power limits in unlicensed spectra).

230. See EVAN KWEREL & JOHN WILLIAMS, FCC, A PROPOSAL FOR A RAPID TRANSITION TO MARKET ALLOCATION OF SPECTRUM: OPP WORKING PAPER NO. 38, at 1, <http://www.fcc.gov/osp/workingp/html> (Nov. 2002) ("Currently, only about seven percent of the most valuable spectrum (in 300 MHz–3000 MHz range) is available for market allocation, *i.e.*, is flexibly allocated and exclusively and exhaustively licensed.") (on file with the Washington and Lee Law Review).

231. See Yochai Benkler, *Some Economics of Wireless Communications*, 16 HARV. J.L. & TECH. 25, 75 (2002) (comparing the security features of open and closed networks).

232. *Task Force Report*, *supra* note 220, at 11.

233. See Dang, *supra* note 207 (reporting on AT&T Wireless's attempts to find a buyer).

to fixed wireless high-speed Internet could come to market with additional spectrum.²³⁴

The current prospects for additional spectrum to be made available for flexible, market-driven uses are uncertain at best. In 2000 and 2002, the FCC reallocated certain of the largely unused UHF television channels (52–69) to new, flexible use licenses.²³⁵ But, 60% of the remaining, most viable spectrum is currently allocated to other government uses and, therefore, is not within the FCC's jurisdiction to retask.²³⁶ Some of that spectrum is allocated to defense, public safety, and other public necessities and could not be reallocated in all events, but much of the government spectrum is only lightly used.²³⁷ Of course, some commentators argue that the spectrum currently used by the government should be privatized as well, such that the government would have to purchase, or acquire by eminent domain, any spectrum that it needs for public uses—just as it must acquire land and buildings.²³⁸ They generally recognize that this solution will be difficult to adopt politically, unless governments as a whole gain revenues by granting them the ability to sell the spectrum they currently use.²³⁹ Apart from political impediments, this proposal is undoubtedly the most efficient, for it replaces the current regime, in which governments do not have significant incentives to economize on the use of their spectrum, with one in which governments at least implicitly feel the opportunity costs of those uses.²⁴⁰ The Congress should act to retask spectrum from government to private uses and to permit the FCC to make the spectrum available for any use.

234. See *Tenth Annual MVPD Report*, *supra* note 112, ¶ 102 (noting that "MSOs are currently undertaking significant cable system upgrades, including digital build-outs").

235. See *Service Rules*, *supra* note 227, ¶ 4 (reallocating channels). See generally *Reallocation and Service Rules for the 698–746 MHz Spectrum Band (Television Channels 52–59)*, *Report and Order*, 17 F.C.C.R. 1022 (2002).

236. KWEREL & WILLIAMS, *supra* note 230, at 28 ("Restructuring spectrum not under exclusive FCC jurisdiction will be particularly difficult, requiring concurrence by the NTIA and potentially other government agencies now operating in those bands. . . . Deleting government and shared bands reduces the spectrum total by approximately 60%.").

237. See *Task Force Report*, *supra* note 220, at 11 (reiterating the need to consider national security and public safety when making spectrum use proposals).

238. E.g., KWEREL & WILLIAMS, *supra* note 230, at 29 ("[W]e think that government users should acquire spectrum at market prices the same way they acquire other inputs such as oil, real estate and computer equipment.").

239. See *id.* ("[I]n the transition to a market system, government spectrum users are likely to be net sellers of spectrum, creating an initial cash surplus above the cost of replacing their current wireless communications services."). Kwerel and Williams do not offer any statistical or economic analysis to support their intuition, and given the current difficulties in state and federal budgets, it seems unlikely that government will be willing to risk it.

240. *Id.*

Broadcast television is a particularly ripe area for spectrum reform, to increase its availability for other uses. Today, the need to make available additional spectrum is one of the principal motivators behind the FCC's desire to accelerate the transition to digital television.²⁴¹ When television stations have converted to digital transmission and 85% of consumers have adopted digital receivers, then the television stations must surrender their former analog licenses, which occupy some of the most technically desirable spectrum. The original 1995 legislation that confirmed the mandatory transition from analog to digital television initially required that the analog licenses be surrendered in 2006, but a 1997 amendment added the specific adoption thresholds.²⁴² Currently, 75% of television stations are broadcasting at least one digital signal,²⁴³ but no one believes that sufficient numbers of consumers will have purchased digital receivers such that the licenses will be surrendered in 2006.²⁴⁴

At a minimum, Congress should legislate a firm deadline for the DTV transition. Ken Ferree, the chief of the FCC's media bureau, recently advanced a proposal that would essentially force television companies to surrender their analog licenses in 2009. The broadcasters did not respond favorably, to say the least.²⁴⁵ Congressional action would circumvent a long regulatory and court battle and move this spectrum into better uses.

Notwithstanding the broadcast industry's efforts to deploy digital TV and the FCC's efforts to encourage the transition, the need for additional spectrum raises the question of why over-the-air television transmission remains sensible at all. Today, nearly 90% of all television households receive video service from cable or DBS providers,²⁴⁶ and the transition to digital is unlikely to make

241. See FCC, DIGITAL TELEVISION FACT SHEET, <http://www.fcc.gov/cgb/consumerfacts/digitaltv.html> (last modified July 15, 2003) ("Converting to DTV will also free up parts of the scarce and valuable broadcast airwaves, allowing those portions of the airwaves to be used for other important services, such as advanced wireless and public safety services.") (on file with the Washington and Lee Law Review).

242. See 47 U.S.C. § 309(j)(14)(B) (2000) (extending the date beyond 2006 if necessary).

243. See DTV Build-Out: Requests for Extension of the Digital Television Construction Deadline; Commercial Television Stations Comply with May 1, 2002 Deadline, *Order*, 18 F.C.C.R. 22,705, ¶¶ 3-6 (2003) (examining the current DTV licenses).

244. See Edmund Sanders, *Trinity Broadcasting Seeks FCC's Forgiveness on Digital Deadline by Threatening Sanctions Against Delinquent Stations, the Agency is Trying to Speed up the Slow Rollout to DTV*, L.A. TIMES, Jan. 24, 2003, at C1 ("Congress has set a target date of 2006 to complete the switch to digital television, though few expect that schedule will be met.").

245. See Ted Hearn, *Ferree Plan No Picnic for Cable, Either; MSOs May Have as Many Problems with DTV Plan as Broadcasters*, MULTICHANNEL NEWS, Apr. 26, 2004, at 79, LEXIS, Multichannel News File ("The Ferree plan [for a firm give-back of analog licenses in 2009] has been controversial from the start, especially with broadcasters.").

246. See *supra* notes 167-77 and accompanying text (discussing competition in video markets).

broadcast TV a significantly more effective competitor. Even if all of the spectrum currently allocated to these licenses were used for television service, broadcast would still provide only about one-quarter as many channels as cable or DBS. More importantly, the FCC, with Congress's approval, has decided that digital television license holders need only provide a single television channel on each license, instead of the four or five channels each license could accommodate.²⁴⁷ Under this rule, the licensees may use the balance of their spectrum allocation for nonbroadcast services.²⁴⁸ This freedom for broadcasters could be reversed, which might increase the number of broadcast channels, but the FCC's decision was based precisely on the market demand for such data services,²⁴⁹ and the vigor with which the broadcasters have sought must-carry rights for digital television suggests (at least weakly) their continued concern that the broadcast medium, standing alone, will not be competitive.²⁵⁰ Admittedly, DTV will provide better quality reception than analog broadcasting, and this increase in quality will make broadcasting more competitive with cable and satellite, but most analysts believe that few customers will move back to receiving over-the-air broadcasts exclusively.²⁵¹

Thinking about broadcasting from the perspective of total communications competition suggests that television broadcast should be eliminated entirely (or more accurately in my view, that the market ought to be permitted to eliminate it entirely). Economist Thomas Hazlett, long a critic of spectrum allocation policy, has made this argument, and the efficiency of other platforms to provide video cannot reasonably be doubted.²⁵² Subject to a universal service policy, such a result seems tolerable.²⁵³

247. See *Advanced Television Systems and Their Impact upon the Existing Television Broadcast Service, Fifth Report and Order*, 12 F.C.C.R. 12809, ¶ 28 (1997) (holding that each television broadcaster need only provide one channel of digital television service); *id.* ¶ 32 (expecting that television stations will provide nonbroadcast services over the remainder of the spectrum).

248. *Id.* ¶¶ 4–7 (asserting the benefits of spectrum recovery).

249. *Id.* ¶ 29 ("[W]e recognize the benefit of permitting broadcasters the opportunity to develop additional revenue streams from innovative digital services.").

250. See *Carriage of Digital Television Broadcast Signals, First Report and Order and Further Notice of Proposed Rulemaking*, 16 F.C.C.R. 2598, ¶ 1 (2001) (concluding tentatively against, but calling for additional comment on, must-carry for digital television signals). Broadcasters would seek must-carry rights even if broadcast is competitive because such rights would maximize their competitive position, especially in the program supply market.

251. See *Tenth Annual MVPD Report*, *supra* note 112, ¶ 103 (relating, but not endorsing, these views).

252. See Hazlett, *supra* note 216, at 935–40 (expressing criticisms of the current system).

253. See *infra* notes 398–414 and accompanying text (asserting the need for a universal service policy).

3. Propertizing the Spectrum

Assuming that incumbent interests could be overcome and Congress authorized the FCC to make significant changes in spectrum policy, there remains the question of direction of the spectrum reform. Many commentators, building on the seminal work of Ronald Coase,²⁵⁴ suggest complete propertization of the spectrum—allowing private ownership and free trading, as well as private definition of the types of service that will be offered on each slice.²⁵⁵ Others advocate a "commons" approach, whereby any device meeting certain technical characteristics is allowed to operate. In a commons model, the spectrum is not owned, and interference is prevented *ex ante* through the specification of appropriate hardware and operating protocols, instead of through ownership of noninterference rights.²⁵⁶ These approaches share a common goal of permitting the introduction of new uses and services without administrative approval, but they differ radically in the implementation. The two approaches can be combined to a limited degree by, for example, propertizing some spectrum bands and opening others to commons use²⁵⁷ or creating property rights to spectrum that are always subject to use by any other device that does not interfere with the incumbent.²⁵⁸ But their essential outlines are fundamentally opposed.

254. R. H. Coase, *The Federal Communications Commission*, 2 J.L. & ECON. 1 (1959).

255. See generally Thomas W. Hazlett, *The Wireless Craze, the Unlimited Bandwidth Myth, the Spectrum Auction Faux Pas, and the Punchline to Ronald Coase's "Big Joke": An Essay on Airwave Allocation Policy*, 14 HARV. J.L. & TECH. 335 (2001); Pablo T. Spiller & Carlo Cardilli, *Towards a Property Rights Approach to Communications Spectrum*, 16 YALE J. ON REG. 53 (1999); Lawrence J. White, *"Propertyizing" the Electromagnetic Spectrum: Why It's Important and How to Begin*, 9 MEDIA L. & POL'Y 19 (2000).

256. See, e.g., LAWRENCE LESSIG, *THE FUTURE OF IDEAS: THE FATE OF THE COMMONS IN A CONNECTED WORLD* 241 (2001) (encouraging regulation that will maintain the "commons" nature of spectrum); Benkler, *supra* note 231, at 75 (advocating the creation of "a commons of sufficient magnitude and stability to allow a credible investment effort . . . in building the tools that can take advantage of an ownerless wireless infrastructure"). For a good summary of the debate, see generally Stuart Minor Benjamin, *Spectrum Abundance and the Choice Between Private and Public Control*, 78 N.Y.U. L. REV. 2007 (2003).

257. Both Benkler and Lessig make this proposal in their most recent works. See Benkler, *supra* note 231, at 83 ("What we need is a relatively large-scale experiment in both markets."); LESSIG, *supra* note 256, at 242 ("We should be setting aside broad swaths of spectrum as a commons, intermixed with spectrum as property.").

258. See generally Gerald R. Faulhaber & David J. Farber, *Spectrum Management: Property Rights, Markets, and the Commons*, in *RETHINKING RIGHTS AND REGULATIONS: INSTITUTIONAL RESPONSES TO NEW COMMUNICATION TECHNOLOGIES* 193 (Lorrie Faith Cranor & Steven S. Wildman eds., 2003) (asserting that a property rights market-based regime can increase efficiency and decrease costs).

The need for the development of intermodal competition to the traditional wireline services provides some guidance in selecting among the various spectrum reform proposals. On the one hand, a propertized spectrum makes it easier for a service provider to provide a new service. A provider that owns spectrum rights can more easily internalize all of the coordination problems that a new service may entail, such as equipment standards, operating protocols, and interconnection with other networks. Even more importantly, a spectrum owner captures all of the returns from monitoring spectrum use. Both owned and unowned spectrum have the problem of unauthorized users. The commons model critically depends upon all devices using the commons conforming to certain technical characteristics that limit their interference with one another.²⁵⁹ While equipment certification processes can ensure compliance by most users, other users will have the incentive to cheat on the implementation of these protocols or to modify the commercially available equipment to increase its power or effectiveness.²⁶⁰ The analogy to Internet hackers and spammers is obvious. In a commons, however, no party can internalize returns from policing the users of the commons to limit cheating; it is a classic free-rider problem. Government enforcement can deter cheating, but private spectrum owners will efficiently police their own spectrum, for they bear all of the costs from unauthorized uses and garner all of the benefits from eliminating those uses.

On the other hand, spectrum commons eliminates one barrier to entry into a market entirely—the need to acquire spectrum rights on which to operate a service. Commons might permit equipment companies to introduce communications services without themselves becoming or partnering with more traditional communications companies—a further introduction of supplier diversity into communications markets. And open spectrum commons might further diversify the types of infrastructure deployed in at least some communications markets. Commons advocates focus on technological solutions that tend to be quite different from those employed by current spectrum owners—that is, the use of low-powered, high-processing power devices that are programmed, essentially, not to interfere with one another or with other uses.²⁶¹

259. Benkler, *supra* note 231, at 79–80.

260. See generally Durga P. Satapathy & Jon M. Peha, *Spectrum Sharing Without Licenses: Opportunities and Dangers*, in INTERCONNECTION AND THE INTERNET: SELECTED PAPERS FROM THE 1996 TELECOMMUNICATIONS POLICY RESEARCH CONFERENCE 49 (Gregory L. Rosston & David Waterman eds., 1997) (discussing possibility of equipment cheating on usage rules in unlicensed bands).

261. This description is only half accurate, for one of the important features of these devices is that their high processing power permits them to better filter among multiple received signals. In other words, while they do interfere less by virtue of their low power and use of specific protocols, they also do not experience interference at the same level of sensitivity as

On balance, I think that the imperative to introduce intermodal competition to wireline services suggests the propertization of significant sections of the existing spectrum. Property rights simply provide more efficient coordination and policing incentives. And as to voice and other delay-sensitive services, the low-power distributed services envisioned by commons advocates are not likely to provide the quality of service that makes them reasonable competitors to wireline services. The currently preferred architecture for these services relies too heavily on multiple hops between devices and an Internet-like routing structure that has proved inadequate in the context of the wireline Internet for these types of services.²⁶² Although some of these issues are the subject of continuing innovation, the expectation is that they are fairly far down the road.²⁶³ Moreover, I am not convinced that propertizing the spectrum would eliminate, or even significantly decrease, the deployment of such new devices and services, although I do think that Congress and the FCC should significantly expand the spectrum available for unlicensed uses.²⁶⁴ Even if spectrum were propertized, equipment manufacturers, or coalitions of manufacturers formed through the standards-setting process, could purchase spectrum and act as, or hire, band managers.²⁶⁵ If

more typical wireless devices.

262. See Benkler, *supra* note 231, at 38–47 (describing network and technical characteristics of open wireless networks); see also Marjory S. Blumenthal & David D. Clark, *Rethinking the Design of the Internet: The End-to-End Arguments vs. The Brave New World*, in COMMUNICATIONS POLICY IN TRANSITION: THE INTERNET AND BEYOND 91, 94 (Benjamin M. Compaine & Shane Greenstein eds., 2001) (describing how the Internet's first in time routing structure is not optimal for delay-sensitive services); Speta, *supra* note 47, at 1561 (reviewing THE FUTURE OF IDEAS' analysis of network architecture).

263. Task Force Report, *supra* note 220, at 23–24.

264. See Speta, *supra* note 47, at 1562 (reviewing Lessig's view of Spectrum rights).

265. But see Benkler, *supra* note 231, at 65 n.47 (objecting to band managers on the grounds that "collective action problems are similar to those associated with gathering the property rights necessary for a highway or public park"). But competing equipment manufacturers routinely overcome those collective action problems in standards setting processes, which often include the aggregation and exchange of intellectual property. See, e.g., Mark A. Lemley, *Intellectual Property Rights and Standard-Setting Organizations*, 90 CAL. L. REV. 1889, 1903–07 (2002) (studying the IP policies of forty-three standard-setting organizations). The formation of the mesh network that Benkler envisions itself requires significant coordination that would be subject to collective action problems. These networks only work if equipment standards are carefully coordinated, and an individual manufacturer would have an incentive to cheat. Moreover, an effective service probably requires robust and reliable, coordinated interconnection points to other networks. Benkler also asserts that "if the spectrum used for open wireless networks is owned by some segment of the equipment makers, the owners are likely to have the opportunity and incentive to make entry by non-owning competitors difficult." Benkler, *supra* note 231, at 65 n.47. But there is no reference to why, if enough spectrum were available, this would be the case or even why the manufacturers would have any incentive to try. See Speta, *supra* note 47, at 1577–78 (asserting that regulation should be tied to an economic theory of preventive rational foreclosure); Speta, *supra* note 114, at 1010

enough spectrum were made available to the market, acquiring operating rights would not be a significant burden.²⁶⁶

4. Addressing Media Concentration

Some of the proposals above are open to the criticism that they will further feed the trend towards media concentration, both on a vertical and horizontal basis. Many have been critical of the 1996 Act's eliminating the pre-existing ownership caps on radio licenses, which resulted in substantial consolidation in the radio market.²⁶⁷ The FCC's proposals to liberalize ownership and cross-ownership rules touching television markets created a firestorm of protest that has not subsided. FCC Commissioner Michael Copps has been eloquent in arguing that media concentration threatens "fundamental values and democratic virtues—things like localism, diversity, competition and maintaining the multiplicity of voices and choices that undergird our precious marketplace of ideas and that sustain American democracy."²⁶⁸ He is far from alone.²⁶⁹

Although fewer than 15% of people currently watch television over the broadcast airwaves, the combination of broadcast licenses with must-carry rules ensures that broadcasters are a substantial, independent source of programming on cable systems. Unless other aspects of communications reform yielded increased competition to cable and satellite companies, eliminating or further diminishing broadcasters increases the risk that cable and satellite companies would have increased control over media delivery. The big television networks may persist as sources of shows for cable because, despite their declining viewership, they still provide much of the most popular programming.²⁷⁰ But a

(arguing that even infrastructure monopolists will not discriminate against new services).

266. See Faulhaber & Farber, *supra* note 258, at 214–15 (discussing the effects of increasing available spectrum).

267. See Telecommunications Act of 1996, Pub. L. No. 104-104, § 202, 110 Stat. 56, 110 (requiring the elimination of "any provisions limiting the number of AM or FM broadcast stations which may be owned or controlled by one entity nationally").

268. Commissioner Michael J. Copps, Statement at USC Media Consolidation Forum 2 (Apr. 28, 2003), available at http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-233924A1.pdf. See generally Michael J. Copps, *The "Vast Wasteland" Revisited: Headed for More of the Same?*, 55 FED. COMM. L.J. 473 (2003) [hereinafter Copps, *The "Vast Wasteland" Revisited*] (arguing that there is more cause for concern over the content of television programs now than there was in 1961).

269. See generally Kerri Smith, *The FCC Under Attack*, 2003 DUKE L. & TECH. REV. 19.

270. See *Tenth Annual MVPD Report*, *supra* note 112, ¶ 26 (reporting that broadcast networks continued to have 49% of viewers during prime time and 45% of viewers during the day time).

number of independent broadcasters depend upon must-carry, and must-carry's granting all broadcasters a fallback access right shifts the economic balance toward broadcasters in their negotiations with cable companies.

There is, of course, a significant debate over the definition of "media" markets—whether only traditional video services should be included within the market or whether the market must also include books, magazines and newspapers, the Internet, radio, video rental stores, and any other means by which a person might send or receive a message. Judge Posner raised the issue over ten years ago in just these terms, and the D.C. Circuit's recent skepticism toward ownership limits has been based in part on its view that the FCC has not adequately defined the scope of competing services.²⁷¹ The FCC has tried to account for this in its recent media concentration rules;²⁷² but the Third Circuit specifically found fault with its attempt to develop a new media-diversity index that took account of "all" media.²⁷³

I believe, however, that policies that permit and encourage the entry of new facilities-based carriers, combined with antitrust scrutiny of mergers and structural limits on cable or satellite companies where market power persists, is a superior alternative to creating broadcast licenses simply to control cable companies. Antitrust scrutiny in particular should be more vigorous. After the 1996 Act, consolidation in radio occurred with minimal antitrust scrutiny,²⁷⁴ and many have argued that the biggest companies now exert market power.²⁷⁵ Broadcast radio is currently without a significant intermodal competitor. Even

271. See *supra* notes 145–46 and accompanying text (summarizing the court's 2004 decision).

272. See 2002 Biennial Regulatory Review—Review of the Commission's Broadcast Ownership Rules and Other Rules Adopted Pursuant to Section 202 of the Telecommunications Act of 1996, *Report and Order and Notice of Proposed Rulemaking*, 18 F.C.C.R. 13,620, ¶¶ 111–28 (2003) (discussing significant advances in media, compression, and Internet technology), *aff'd in part and rev'd in part*, *Prometheus Radio Project v. FCC*, 373 F.3d 372 (3d Cir. 2004).

273. See *Prometheus Radio Project v. FCC*, 373 F.3d 372, 402–12 (3d Cir. 2004) (remanding this aspect of the FCC's rules).

274. See, e.g., Copps, *The "Vast Wasteland" Revisited*, *supra* note 268, at 475 (noting that "[t]here are thirty-four percent fewer radio station owners than there were before protections were loosened"); Anastasia Bednarski, Note, *From Diversity to Duplication: Mega-Mergers and the Failure of the Marketplace Model Under the Telecommunications Act of 1996*, 55 FED. COMM. L.J. 273, 280 (2003) (summarizing the liberals' and the conservatives' perspectives on a marketplace model of radio regulation).

275. See, e.g., Edward D. Cavanagh, *De-Regulation of the Air Waves: Is Antitrust Enough?*, 17 ST. JOHN'S J. LEGAL COMMENT. 67, 71–74 (2003) (analyzing radio mergers from an antitrust perspective); Sarah Elizabeth Leeper, Comment, *The Game of Radiopoly: An Antitrust Perspective of Consolidation in the Radio Industry*, 52 FED. COMM. L.J. 473, 481–83 (2000) (discussing arguments).

the biggest of the new satellite radio services, of which there are only two, is affiliated with Clear Channel, the largest terrestrial radio company.²⁷⁶ Wireline services, such as Internet radio, provide competition which is limited by their lack of mobility. If satellite radio does not develop as an intermodal competitor and concern over market power continues, then other policies could encourage competition. The allocation of new digital radio licenses should not proceed in the same manner as the allocation of digital television licenses—with new operating authority being allocated only to incumbents—but rather by markets.²⁷⁷ Moreover, level competition policy, which I discuss more fully in the next subpart, suggests that developing Internet radio solutions should not be subject to different intellectual property burdens—that is, higher licensing fees—than broadcasters.²⁷⁸

Structural regulation of cable or DBS, by requiring them to provide unaffiliated programming for example, is more difficult, for it faces heightened judicial review under the First Amendment. It was only by five-to-four margins that the Supreme Court found must-carry consistent with the First Amendment, and that was on the grounds that the regulation was not content-based but rather was designed to preserve free broadcasting for those who could not afford pay services.²⁷⁹ The Supreme

276. See Ben Charny, *Satellite Network Gets Insurance Static*, CNET NEWS.COM, http://news.com.com/2100-1033_3-5061174.html (Aug. 7, 2003) (reporting 700,000 current subscribers) (on file with the Washington and Lee Law Review). XM Radio, the largest of the new services, see *id.*, describes Clear Channel as a strategic investor and partner. XM Satellite Radio, *Strategic Partners*, http://www.xmradio.com/corporate_info/strategic_partners_category.jsp?category=investment (last visited Sept. 13, 2004) (on file with the Washington and Lee Law Review). Clear Channel has owned as much as 19% of XM. See generally Gregory L. White & John Lippman, *Media: Satellite Radio Gets a Lift from Ford and GM*, WALL ST. J., June 16, 1999, at B1.

277. See generally Digital Audio Broadcasting Systems and Their Impact on the Terrestrial Radio Broadcast Service, *First Report and Order*, 17 F.C.C.R. 19,990 (2002) (explaining how digital radio is to be introduced by incumbent broadcasters).

278. The Digital Millennium Copyright Act required webcasters to pay royalties on their play of music recordings, while broadcast radio is exempt from royalty payments. See generally Kimberly L. Craft, *The Webcasting Music Revolution Is Ready to Begin, as Soon as We Figure Out the Copyright Law: The Story of the Music Industry at War with Itself*, 24 HASTINGS COMM. & ENT. L.J. 1 (2001). These differentials are justified on intellectual property grounds—that webcast music is more likely to be pirated than the lower-fidelity broadcast radio. See *id.* at 4–5 (discussing the recording process). The debate, however, has not focused on the competition dimension, which puts new, intermodal competitors at a disadvantage to incumbents.

279. See *Turner Broad. Sys., Inc. v. FCC*, 520 U.S. 180, 224–25 (1997) (5–4) (deferring to congressional determinations of economically preferred interests); *Turner Broad. Sys., Inc. v. FCC*, 512 U.S. 622, 630–34 (1994) (5–4) (describing the legislative history of the must-carry provisions).

Court has otherwise found that cable operators are entitled to full First Amendment rights in their selection of programming,²⁸⁰ and the D.C. Circuit precedents strongly suggest that structural limitations on cable operators (such as vertical, horizontal, and cross-ownership limits) will be subject to First Amendment scrutiny.²⁸¹ In a controversial decision, one federal district court struck down cable open access regulation on the grounds that it violated the First Amendment.²⁸²

Nevertheless, so long as it is based upon well-founded concerns for monopoly power and the use of that monopoly power to control access to information, regulation that even-handedly grants access rights to content providers or that limits certain ownership concentrations would probably be sustained. The courts have never held that the First Amendment forbade the imposition of common carrier requirements on telephone companies, under which those companies were required to provide service to anyone that requested it (no matter what the content of their conversations).²⁸³ To be sure, the courts have sometimes held that common carrier rules only apply to those companies that have already decided to do business with all comers,²⁸⁴ and it might be possible to argue that the nondiscrimination requirement is therefore only an antifraud rule. "[T]he First Amendment does not shield fraud."²⁸⁵ But Justice O'Connor's dissent in the first must-carry case, representing four justices who would have struck down the rules as inconsistent with the First Amendment, suggests that even-handed

280. See *Turner*, 512 U.S. at 628–30 (reviewing the development of cable programming).

281. See *Fox Television Stations, Inc. v. FCC*, 280 F.3d 1027, 1045–47 (D.C. Cir. 2002) (addressing the First Amendment to cable broadcast cross ownership rules); *Time Warner Entm't Co. v. FCC*, 240 F.3d 1126, 1135 (D.C. Cir. 2001) (implying that the First Amendment may place restraints on horizontal and vertical concentration limits).

282. See *Comcast Cablevision v. Broward County*, 124 F. Supp. 2d 685, 698 (S.D. Fla. 2000) (striking down local open access ordinance); see also William E. Lee, *Cable Modem Service and the First Amendment: Adventures in a "Doctrinal Wasteland,"* 16 HARV. J.L. & TECH. 125, 147–57 (2002) (criticizing decision). See generally Yochai Benkler, *Through the Looking Glass: Alice and the Constitutional Foundations of the Public Domain*, 66 L. & CONTEMP. PROBS., Winter 2003, at 173.

283. See 47 U.S.C. § 201(a) (2000) (establishing the duty to provide service); § 202(a) (requiring service provision on a non-discriminatory basis).

284. See *Southwestern Bell Tel. Co. v. FCC*, 19 F.3d 1475, 1480 (D.C. Cir. 1994) (identifying the two-part test to determine common carriage); *Nat'l Ass'n of Regulatory Util. Comm'rs v. FCC*, 525 F.2d 630, 641 (D.C. Cir. 1976) ("What appears to be essential to the quasi-public character implicit in the common carrier concept is that the carrier 'undertakes to carry for all people indifferently.'"); *Nat'l Ass'n of Regulatory Util. Comm'rs v. FCC*, 533 F.2d 601, 608 (D.C. Cir. 1976) (same).

285. *Illinois ex rel. Madigan v. Telemarketing Assocs., Inc.*, 538 U.S. 600, 612 (2003).

access requirements would, in these Justices' view, be more likely to survive.

Congress might also conceivably obligate cable operators to act as common carriers for some of their channels, with those channels being open to all through some sort of lottery system or time-sharing arrangement. 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.²⁸⁶

At bottom, I am in favor of interconnection rules that require providers of network services to deliver the content of unaffiliated entities, but a cautious approach to other forms of structural regulation must prevail. In many cases, structural regulation of distribution monopolies will be unnecessary, for even a monopolist will have the incentive to distribute content that its customers want to receive.²⁸⁷ Nevertheless, the statute should grant the regulator authority to make structural rules (on an even-handed basis) where economic theory and available evidence suggest that there is a need for control,²⁸⁸ such as occurred (successfully) with the 1992 rules that required cable companies to stop withholding the content that was necessary for DBS to come to market.²⁸⁹

B. Decreasing Economic Barriers to Entry

Although federal legislation has already eliminated state and local governments' ability explicitly to franchise only a single telecommunications or cable provider,²⁹⁰ Congress and the FCC could take additional steps to change the

286. *Turner Broad. Sys., Inc. v. FCC*, 512 U.S. 622, 684 (1994) (5-4) (O'Connor, J., concurring in part and dissenting in part).

287. See generally Speta, *supra* note 127 (making this argument in the context of cable open access regulations).

288. For a good summary of the current economics applicable to the question of strategic foreclosure, see Joseph Farrell & Philip J. Weiser, *Modularity, Vertical Integration, and Open Access Policies: Towards a Convergence of Antitrust and Regulation in the Internet Age*, 17 HARV. J.L. & TECH. 85, 95-102 (2003).

289. See *supra* notes 104-14 and accompanying text (discussing cable regulation).

290. See 47 U.S.C. § 253(a) (preempting state and local rules that "prohibit or have the effect of prohibiting" the ability of any entity to provide telecommunications services); § 332(d)(3) (forbidding state and local franchising of commercial mobile services carriers); § 541(a) (forbidding exclusive municipal franchising of cable operators); *Final Decision*, *supra* note 75, ¶ 147 (forbidding state and local regulation of consumer premises equipment); Inquiry Concerning High-Speed Access to the Internet over Cable and Other Facilities, *Declaratory Ruling and Notice of Proposed Rulemaking*, 17 F.C.C.R. 4798, ¶¶ 34-69 (2002) [hereinafter

economic barriers to entry into communications markets.²⁹¹ The 1996 Act federalized significant parts of local telecommunications regulation that was previously within state or local jurisdiction; nevertheless, certain aspects of state and local regulation remain that could profitably be eliminated. Additionally, some current regulation puts new entrants at an economic disadvantage relative to incumbent providers. This subpart discusses several steps that could decrease barriers to entry, and it addresses the related argument, advanced by incumbents and others, that "parity" ought to be a guiding regulatory principle.

1. Decreasing the Economic Costs of State and Local Telecommunications Regulation

Some local regulation continues to create economic barriers both to entry and to a level competitive playing field among platforms. These regulations ought to be reformed, either by the federalization of the entire area or by establishing federal standards that ensure that competition can develop. For example, although states and local government may not explicitly restrict entry into communications services through limited franchising, they retain substantial authority over rights of way and tower siting, and any new entrant, except satellite carriers, will need access either to rights of way for wireline placement or to towers for radio placements.²⁹² As to rights of way, states and municipalities have sometimes imposed burdensome disclosure, planning, and permitting conditions on access, and worse, many courts have granted them authority to charge fees that are a percentage of a carrier's revenues (instead of a function of the cost of right of way). Both of these features increase the costs of entry.²⁹³ Moreover, because the incumbent wireline carrier and all wireless

High-Speed Access Declaratory Ruling] (defining Internet access as an interstate information access service within the exclusive jurisdiction of the FCC), *aff'd in part and rev'd in part*, *Brand X Internet Servs. v. FCC*, 345 F.3d 1120 (9th Cir. 2003).

291. General spectrum reform is an important way to decrease barriers to entry in its own right. See *supra* notes 252–56 and accompanying text (examining opposing perspectives on spectrum reform).

292. See 47 U.S.C. § 253(c) (2000) (preserving local control over right of way); § 332(c)(7) (same); Speta, *supra* note 120, at 764–70 (discussing right of way). See generally David W. Hughes, *When NIMBYs Attack: The Heights to Which Communities Will Climb To Prevent the Siting of Wireless Towers*, 23 J. CORP. L. 469 (1998) (discussing tower siting).

293. See Barbara S. Esbin & Gary S. Lutzker, *Poles, Holes, and Cable Open Access: Where the Global Information Superhighway Meets the Local Right-of-Way*, 10 COMMLAW CONSPPECTUS 23, 44–45 (2001) (reviewing some court decisions regarding municipalities' fees); Speta, *supra* note 120, at 772 (addressing the exclusive franchise rights granted for over eighty years). Those defending municipalities' pricing right of way use above cost do not dispute that it raises the costs of entry into telecommunications markets. See generally William Malone,

carriers generally operate without paying for right of way, it tips the competitive balance against new wireline services.²⁹⁴

As to tower siting, the current federal rules on tower siting are inadequate in two regards. By contrast to right of way, the difficulty of municipal pricing for access is not present because a wireless carrier is likely to have sufficient alternatives that the municipality will not be able to charge an above-economic-cost rate. Unlike streets, which are uniquely suited as corridors for the installation of wireline facilities and which are owned exclusively by municipalities, private property is generally substitutable for public property as a location for wireless towers.

The issue, rather, is cities' use of zoning regulations to exclude towers that city leaders or residents consider unsightly.²⁹⁵ The current federal law essentially permits municipalities to exclude any second or third towers in places in which any current wireless carrier is providing service,²⁹⁶ and this decreases the possibility of intramodal competition among wireless carriers. Municipalities should be permitted to force companies to share towers where such sharing is feasible, and a federal statute confirming access to towers which is similar to the current statute that confirms access to utility poles would decrease some of the economic costs of entry facing a new wireless carrier.²⁹⁷

Municipalities' Right to Full Compensation for Telecommunications Providers' Uses of the Public Rights-of-Way, 107 DICK. L. REV. 623 (2003) (analyzing the municipality's role in telecommunications regulation).

294. See Speta, *supra* note 120, at 770–75 (examining the procompetition nature of the 1996 Act). As I discuss, the right of way fee should capture the true economic costs of right of way use, including both hard costs such as the costs to repair the streets and softer costs such as traffic congestion costs. A too low rent—that is, one below economic cost—distorts the competitive balance in the market as well. *Id.* at 770.

295. See generally Robert B. Foster & Mitchell A. Carrel, *Towers of Babble: The Continuing Struggle over Wireless Siting Issues Under the Telecommunications Act of 1996*, 31 URB. LAW. 849 (1999).

296. 47 U.S.C. § 332(c)(7) (2000) (preserving local zoning authority); see also Foster & Carrel, *supra* note 294, at 852 (discussing § 704's prohibition of regulation which effectively prevents personal wireless service).

297. See 47 U.S.C. § 224 (2000) (establishing federal utility pole access requirements); see also § 251(b)(4) (requiring all local exchange carriers "to afford access to the poles, ducts, conduits, and rights-of-way of such carrier to competing providers of telecommunications services on rates, terms, and conditions that are consistent with section 224"); Implementation of Section 703(e) of the Telecommunications Act of 1996, *Report and Order*, 13 F.C.C.R. 6777, ¶ 2 (1998) ("The purpose of Section 224 of the Communications Act is to ensure that the deployment of communications networks and the development of competition are not impeded by private ownership and control of the scarce infrastructure and rights-of-way that many communications providers must use in order to reach customers."), *aff'd in part, rev'd in part*, *Gulf Power Co. v. FCC*, 208 F.3d 1263 (11th Cir. 2000), *rev'd*, *Nat'l Cable & Telecomms. Ass'n v. Gulf Power Co.*, 534 U.S. 327 (2002).

Indeed, such a statute would probably eliminate the need for municipalities to force sharing.²⁹⁸ But, where sharing is not feasible, federal law should not permit the exclusion of multiple towers on a per se basis.

The current federal tower siting regime is also inadequate because it applies only to towers used for "personal wireless services,"²⁹⁹ which include commercial cell phone service, private wireless service networks (such as dispatch services), and "common carrier wireless exchange access services."³⁰⁰ Thus, although the statute covers fixed services that substitute for plain old telephone service, the section (at least arguably) does not cover fixed wireless Internet access services.³⁰¹ A statute sensitive to intermodal competition and the deployment of new services through new technologies generally would not base rights or obligations on either the type of service offered or the technology used, a theme to which I will return shortly.³⁰² Surely the protocols used by the radios atop the towers bear slightly if at all upon the aesthetic and other local siting concerns.

It is tempting, given the foregoing, to conclude that all currently local decisions over rights of way and tower siting should be entirely federalized to ensure that competition values are given the appropriate weight. But that solution is impractical. The sheer number of such decisions is probably beyond the capacity of the FCC and the federal courts to manage. Moreover, the point of devolving such decisionmaking is to give appropriate consideration to localized differences. The optimal solution is to set federal rules for those matters in which there is little need for local variation.³⁰³ For example, federal

298. Voluntary tower sharing does limit the municipalities' power in this regard, and there is some evidence that the established carriers cooperate with one another due to their mutual need for access to each others' towers. Cf. Lynn Hanley, Note, *Wireless Communications and the Telecommunications Act of 1996: An Experiment in Federalism*, 12 LOY. CONSUMER L. REV. 48, 59-60 (1999) (discussing forced sharing attempts by certain municipalities).

299. 47 U.S.C. § 332(c)(7) (2000).

300. *Id.* § 332(c)(7)(C).

301. This answer is uncertain because, as discussed *infra* notes 368-73 and accompanying text, there is still no settled regulatory category for Internet services. The FCC's preferred classification—that of information services—would probably mean that they are not "common carrier" services.

302. See *infra* notes 375-85 and accompanying text (describing the inequities of not regulating VoIP like every other telecommunications service).

303. Some have argued that economic competition among cities will provide sufficient limits on municipal zoning decisions, in particular that municipal competition for businesses (tax base) and residents will yield the socially optimal amount of regulation. See Vicki Been, "Exit" as a Constraint on Land Use Exactions: Rethinking the Unconstitutional Conditions Doctrine, 91 COLUM. L. REV. 473, 506-28 (1991) (arguing that competition will prevent governments from overregulating). I have elsewhere argued that there is no reason to believe that this type of competition will yield efficient right of way and tower siting decisions. See

law already prohibits municipalities from barring wireless towers on the basis of health concerns.³⁰⁴ Whether RF radiation is linked with cancer or other health concerns is not a matter on which local decisionmakers have any advantage. For similar reasons, although there may be diversity among municipalities in their need to raise revenues through right of way charges, the tradeoff between those revenues and telecommunications competition should be resolved on a consistent basis.³⁰⁵ Moreover, even where the ultimate decision is made at the local level on the basis of genuinely local factors, the Congress or the FCC can provide substantial guidance by developing model local statutes, best practices, or other guidelines that courts can look to in reviewing local decisions.³⁰⁶ If municipalities were required to justify their decisions, then the normal processes and costs of administrative review by the courts would provide incentives to follow federal guidelines.³⁰⁷

Although it was focused only on the unbundling regime, and therefore on the introduction of intramodal competition, the FCC's recent third attempt to

Speta, *supra* note 120, at 800–02 (asserting a need for a federal rule). Additionally, many commentators consistently express the concern that state and local regulators do not sufficiently value competition in telecommunications markets. This was certainly one of Congress's concerns in debating the 1996 Act. *See supra* notes 116–19 and accompanying text (quoting legislators and their concerns).

304. *See* 47 U.S.C. § 332(c)(7)(B)(iv) (2000) (prohibiting local regulation of tower siting "on the basis of the environmental effects of radio frequency emissions to the extent that such facilities comply with the Commission's regulations concerning such emissions").

305. This proposition runs, of course, into the general objection that state and local control can facilitate experimentation. Apart from whether claims of experimentation are simply masks for economic protectionism through incumbent capture of local decisionmakers, federalizing the decisionmaking is not inconsistent with experimentation or variation. Such variation should be on the basis of objective economic (or other) differences, and not based on any unexpressed different tolerance for competition.

306. In other words, where local variation is unimportant, the rule should be federal. Where there is need for local variation or a need for local decisionmaking because of true diversity of underlying facts, there should be federal standards to be implemented by state adjudicators. To a large extent, this extends the model of federalism that, as interpreted by the Supreme Court, Congress used in the 1996 Act's local competition provisions. *See AT&T Corp. v. Iowa Utils. Bd.*, 525 U.S. 366, 370–75 (1999) (describing the effect of federal law on local standards); Weiser, *supra* note 140, at 1720–23 (explaining challenges to agency lawmaking).

307. This highlights one further continuing issue under the wireless tower siting rules: the extent to which municipalities must build a written record and provide a written justification for their decisions. Despite a federal statutory requirement of a written decision, a significant number of court decisions have essentially held that a municipality need not comply with basic administrative law procedures. *See Mitchell A. Carrel & Robert B. Foster, Railroad Tracks by Walden Pond: The Ongoing Struggle Between Towns and Providers Under the Telecommunications Act of 1996*, 33 URB. LAW. 781, 785 (2001) (summarizing various court decisions).

devise unbundling rules erred in failing to set adequate federal rules to direct the states in making important decisions under the Act. Without a doubt, the FCC moved in this direction because it was prodded by the D.C. Circuit to introduce more variation into its unbundling rules, to take account of differences in numbers of competitors and of economic conditions in different markets.³⁰⁸ But nothing in the D.C. Circuit's decision required the FCC to leave the field to the states as much as it did. The FCC's 576-page opinion sets some minimum unbundling requirements and gives the states some guidance in determining which additional network elements must be unbundled.³⁰⁹ But the FCC's decision does not set standards or even provide quantitative guidance for addressing most of the unbundling decisions. The D.C. Circuit was undoubtedly correct that unbundling rules might vary based on market (although I do not think the D.C. Circuit was correct to reverse the FCC's earlier, uniform rules),³¹⁰ but the Chicago, New York, and Houston markets probably have more in common than the Chicago, Springfield, and Cairo, Illinois, markets.³¹¹ In other words, the unbundling rules are not like the case of tower siting, where local decisionmakers are needed to take into account local characteristics that cannot be captured in objective market data. Everything about the relevant market variations can be reflected in market data, which can form the basis of a decision as to unbundling and pricing.

2. Decreasing Costs Embedded in Federal Regulation

Congress and the FCC should also reform current federal regulation to eliminate legal rules that unnecessarily raise the costs of companies entering

308. See generally Review of Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers, *Report and Order on Remand and Further Notice of Proposed Rulemaking*, 18 F.C.C.R. 19,020 (2003) [hereinafter Section 251 Unbundling Obligations], *vacated* U.S. Telecom Ass'n v. FCC, 359 F.3d 554 (D.C. Cir. 2004). The FCC's decision would also have taken some of the judicial review out of the hands of the D.C. Circuit which has questioned the FCC's implementation of the Act quite strongly.

309. *Id.*

310. In particular, the judgment about the appropriate level of "granularity" (as everyone now describes the level of local variation) involves a balance between administrative costs and errors on two dimensions—insufficient granularity can have economic costs, but excessive granularity and poor administrative procedures can create costs as well. The FCC's prior orders attempted a balance of these policies, to which the D.C. Circuit did not seem to give sufficient deference.

311. According to the 2000 Census, the respective populations of these three cities are: 2,900,000; 111,000; and 3,600. 2000 Census Population Compared to 1990: Illinois Municipalities, <http://illinoisgis.ito.state.il.us/census2000/censusData/2000/docs/munipop.pdf> (last visited Sept. 14, 2004) (on file with the Washington and Lee Law Review).

communications markets. Although wholesale spectrum reform is the largest area in which this could be accomplished, Congress and the FCC could also adopt rules that all current spectrum users may introduce noninterfering secondary uses without administrative permission. The FCC has gone some lengths in this direction,³¹² but confirming the general principle would allow the introduction of additional competing services. For example, the TV spectrum, if political barriers prevent it from being reclaimed wholesale, could support additional, lower-power services, perhaps even the types of services that commons advocates envision. A second-best solution to reallocating the entire spectrum, both politically and technically, might be to give the incumbents the (tradeable) rights to introduce noninterfering uses. Politically, vesting these rights in the incumbents provides them economic incentives both to reduce interference in their existing uses and to facilitate new entry.³¹³ Technically, vesting the rights in the incumbent may make the problem of resolving interference disputes more tractable.³¹⁴

3. *Beginning the End of "Regulatory Apartheid"*

Peter Huber called the Communications Act "regulatory apartheid,"³¹⁵ referring to the way the Act had and still has separate titles and regulatory rules for telephone (Title II), broadcast (Title III), and cable (Title VI). Remarkably,

312. See, e.g., Goodman, *supra* note 220, at 339 (explaining the interference determination process).

313. Advocates of a "big bang" auction of spectrum sometimes structure the auction so that payments go to the existing license holders, in order to help secure their political acquiescence in the new regime. See, e.g., Hazlett, *supra* note 255, at 542–43 (explaining why incumbent licenses support the spectrum allocation regime). Tom Merrill has generalized the point, noting that in any transition from an administratively controlled regime to one based on markets, some payout (payoff) to those incumbents with an interest in the administrative scheme has been necessary. See generally Thomas W. Merrill, *Explaining Market Mechanisms*, 2000 U. ILL. L. REV. 275, 290–94.

314. Commons advocates and others advocate a rule which permits any person, whether or not the license holder, to introduce noninterfering uses. The proposal here is a smaller step that might be easier to manage, both politically and technically. As to the latter, Ellen Goodman has made the case that neither the property rights advocates nor the commons advocates, both of whom rely upon noninterference as the touch-stone of operating permission, have given much thought to how interference disputes will be resolved. Indeed, she makes the case that resolving such disputes will be quite difficult, especially as the number of users increases. See Goodman, *supra* note 220, at 375–79, 402–03 (discussing spectrum etiquette, interference control, and conflict resolution). If incumbents are given the interference rights, they have an internal incentive to resolve interference before transferring any underlying rights. They maximize their returns by doing so.

315. Hazlett, *supra* note 130, at 220.

the 1996 Act did little to eliminate these categories, despite the sometimes expressed hope that different types of carriers would compete with one another. Instead, the 1996 Act added another category by codifying a definition of "information services"³¹⁶ mirroring the FCC's old definition of "enhanced services,"³¹⁷ although the Act provided very little in the way of specifics as to how information services should or should not be regulated.³¹⁸ New services therefore confront regulatory uncertainty—uncertainty borne of determining which definition will apply and what rules will flow from that.

This is not a new problem in communications law, but the prospects for intermodal competition make it a more pressing one. In the case of the FCC's *Computer Inquiries*, in which the agency invented the "enhanced services" category to ensure that computing services were not themselves regulated,³¹⁹ these new services used telecommunications as an essential component of their services, but they were not in competition with traditional telephone service. Instead, they were dependent on the telephone network, and the competitive concern was that the telephone companies either would discriminate against them in favor of their own enhanced service offerings or would extract significant monopoly rents for providing service.³²⁰

Today, the definition of a service can have serious consequences for competition. Cable modem service is the prime mature example. Although the service has been in use since the mid-1990s, there is still no definitive statement about how it is, or is not, regulated under the Communications Act. Some academic commentators argued for it to be considered an information service because the FCC had previously classified Internet services as information services; as such, it would not be subject to common carrier regulation or to local franchising rules.³²¹ Others argued that it should be

316. See 47 U.S.C. § 153(20) (2000) (defining "information service").

317. See *supra* notes 81–84 and accompanying text (describing the FCC's definitional moves).

318. Other than the definition, the Act contains only six further references to information services. See 47 U.S.C. § 228 (2000) (regulating "pay per call" services); § 230 (granting certain copyright and defamation immunities to information services providers and others); § 254(b)(2), (3) (calling for certain universal service commitments to information services); § 257(a) (requiring an FCC proceeding to examine barriers to entry for entrepreneurs into telecommunications and information services markets); § 272(f)(2) (requiring BOCs to offer long-distance information services through separate subsidiaries for four years after receiving operating authority).

319. See *supra* notes 74–75 and accompanying text (discussing the first of the *Computer Inquiries*).

320. See *supra* notes 81–84 and accompanying text (summarizing the FCC's various acts of redefinition).

321. See Jim Chen, *The Authority to Regulate Broadband Internet Access Over Cable*, 16

considered a "cable service" because it was offered by cable companies and because the definition of "cable service" included "interactive services."³²² As a cable service, it would be subject to local taxation, but no regulator (state or federal) would be permitted to impose common carrier rules.³²³ In the first appellate case to consider local regulation of cable modem service, the parties litigated the case on the stipulation that the service was a cable service, but the Ninth Circuit rejected that assumption and held that cable modem services were "telecommunications services," which would make them subject to all of the Communications Act's Title II burdens.³²⁴ When the FCC finally decided it was time to issue an opinion, it defined cable modem services as "information services,"³²⁵ but the Ninth Circuit, adhering to its earlier precedents, reversed that decision.³²⁶ Further proceedings are ongoing, ten years in.³²⁷

The classification of cable modem service has direct regulatory consequences for that service, but the decision also affects other services, regulated under other categories, that compete with it. Today, cable modem service competes with DSL and, to a limited extent, satellite Internet services.³²⁸ The hope is that fixed wireless broadband services will soon be added to the mix.³²⁹ Incumbent telephone companies are subject to the 1996 Act's unbundling regime, which means that they must lease local telephone wires to other companies for the competing provision of DSL service—a requirement that would not apply to cable companies unless cable modem

BERKELEY TECH. L.J. 677, 696–713 (2001) (analyzing cases which govern the regulation of broadband Internet access).

322. See Speta, *supra* note 114, at 989–90 (explaining how some provisions of the Act appear to inhibit open access regulation).

323. *Id.*

324. See *AT&T Corp. v. City of Portland*, 216 F.3d 871, 878 (9th Cir. 2000) (finding an intention that cable modem service be regulated as a telecommunication service).

325. See *High-Speed Access Declaratory Ruling*, *supra* note 290, ¶¶ 34–69 (ruling that cable modem services are interstate information services).

326. See *Brand X Internet Servs. v. FCC*, 345 F.3d 1120, 1132 (9th Cir. 2003), *petition for cert. filed* (U.S. Aug. 27, 2004) (No. 04-281) (concluding "that cable broadband service was not a 'cable service' but instead was part 'telecommunications service' and part 'information service.'").

327. See, e.g., *IP-Enabled Services, Notice of Proposed Rulemaking*, 19 F.C.C.R. 4863, ¶ 43 (2004) (calling for, among other things, comment on: "What effect, if any, do judicial decisions—including but not necessarily limited to those issued in *Brand X Internet Services v. FCC* and *Vonage Holdings Corp. v. Minnesota Pub. Utils. Comm'n*—have on the Commission's discretion to classify IP-enabled services?").

328. See *supra* notes 161–64 and accompanying text (discussing competition in local high-speed Internet access markets).

329. See *supra* notes 165–66 and accompanying text (examining the struggle to successfully provide fixed wireless platforms).

service was also a "telecommunications service." Satellite Internet services and fixed wireless services would, under the FCC's classifications, be "information services" and outside of Title II and unbundling rules as well.³³⁰ There may be good reasons for different regulatory treatment (which are discussed more in the next section), but these services are precisely the same from a consumer's perspective and basing them in different regulations only as an exercise in applying outmoded regulatory categories simply makes no sense.

A new Communications Act would attempt to eliminate regulatory apartheid and time-wasting battles over whether identical services offered by different technologies will be regulated in the same or different manners. A new Act would focus on economic realities of service, such as whether certain providers had market power and the appropriate responses to such market power. In a new Act, the FCC's role would be diminished. In my view, and that of others, the principal role for the agency would be to assure interconnection among carriers and to serve as an expert body resolving spectrum interference disputes.³³¹

For a system with eighty years of history with technology dependent rules, a new Act along these lines is difficult to fully imagine. A number of helpful precedents exist. The first is antitrust law as it has been re-envisioned by the law and economics movement.³³² The most notable example of this is Frank Easterbrook's proposal for a series of "screens" to govern antitrust cases, the first of which is a required showing of the defendants' market power.³³³ Professor Philip Weiser has proposed that the FCC regulate all Internet services by developing a new body of communications law for these services and that it employ principles consistent with antitrust law.³³⁴

330. See Speta, *supra* note 127, at 70–71 (summarizing regulatory treatment of these services).

331. See Kearney, *supra* note 125, at 1198 ("Telecommunications will . . . benefit from having a regulator that can adjudicate interconnection disputes . . . [and] some . . . superintend[ence of] at least some spectrum related matters.").

332. See Fred S. McChesney, *Talking 'Bout My Antitrust Generation: Competition for and in the Field of Competition Law*, 52 EMORY L.J. 1401, 1404–05 (2003) (noting the evolution of analysis in antitrust law). McChesney states:

Traditionally in antitrust, each sort of "contract, combination, or conspiracy" or allegedly "monopolizing" practice has been treated as requiring a separate mode of analysis Increasingly, however, the disparate strands of antitrust law have coalesced [following economics] and have moved away from this needless taxonomy, with its different cases and analyses for different contracts or practices.

Id.

333. Frank H. Easterbrook, *The Limits of Antitrust*, 63 TEXAS L. REV. 1, 17 (1984).

334. See Philip J. Weiser, *Toward a Next Generation Regulatory Strategy*, 35 LOY. U. CHI. L.J. 41, 66 (2003) ("outlin[ing] how the FCC can rely on its Title I authority to employ a

A second example is the European Union's recent attempt to harmonize telecommunications laws through a series of Directives that extend across telecommunications markets. A comprehensive treatment of those Directives is beyond the scope of this Article,³³⁵ and we are still relatively early in their implementation by the European Union's Member States. Nevertheless, they do provide an example of a regulatory approach that attempts to address markets on a technology-neutral basis. For example, the so-called "Framework Directive,"³³⁶ which anchors all of the more specific telecommunications directives, premises most economic regulation upon a finding that an entity has "significant market power."³³⁷ The prescribed approach to determine significant market power has the steps of market definition (by considering demand and supply substitutability) and of ability to raise prices through restricting output without incurring significant loss of sales or revenues that echo the United States merger guidelines and antitrust economics generally.³³⁸ A series of subsidiary directives—on access, interconnection, and universal service—likewise adopt a technology neutral approach to regulation.³³⁹ The

reactive, antitrust-like model of regulation for the emerging broadband market"). Weiser's is the best proposal for a comprehensive strategy for the FCC to address Internet services under the current Communications Act, and it, therefore, may be politically more feasible than a wholesale revision of the statute (an issue addressed *infra* notes 384–85 and accompanying text). See James B. Speta, *FCC Authority To Regulate the Internet: Creating It and Limiting It*, 35 LOY. U. CHI. L.J. 15 (2003), for my own view that the FCC does not have authority under Title I of the Act to accomplish all that Weiser proposes, and that there are reasons to limit the FCC's regulatory authority.

335. For descriptions of the regulatory regimes established, see, for example, L. J. H. F. GARZANITI, *TELECOMMUNICATIONS, BROADCASTING AND THE INTERNET: EU COMPETITION LAW AND REGULATION*, ch. 1 (2d ed. 2003); EC COMPETITION AND TELECOMMUNICATIONS LAW (Christian Koenig et al. eds., 2002).

336. Directive 2002/21/EC of the European Parliament and of the Council of March 7, 2002 on a Common Regulatory Framework for Electronic Communications Networks and Services, 2002 O.J. (L108) 33 [hereinafter *Framework Directive*].

337. *Id.* at art. 14(2).

338. See generally *id.* (determining when an undertaking has "significant market power"); Commission Guidelines on Market Analysis and the Assessment of Significant Market Power Under the Community Regulatory Framework for Electronic Communications Networks and Services, 2002 O.J. (C165) 6 [hereinafter *Commission Guidelines*]; Jens-Daniel Braun & Ralf Capito, *The Framework Directive*, in EC COMPETITION AND TELECOMMUNICATIONS LAW 309, 312–13 (Christian Koenig et al. eds., 2002) (discussing the significant market power concept).

339. See generally Directive 2002/19/EC of the European Parliament and of the Council of 7 March 2002 on Access to, and Interconnection of, Electronic Communications Networks and Associated Facilities, 2002 O.J. (L108) 7; Directive 98/10/EC of the European Parliament and of the Council of 26 February 1998 on the Application of Open Network Provision (ONP) to Voice Telephony and on Universal Service for Telecommunications in a Competitive Environment, 1998 O.J. (L101) 24.

European Union Directives seem more concerned with the possibilities of monopoly leveraging than do American regulation and antitrust law, and other substantial differences would need to be worked out.³⁴⁰ As a starting point, however, they are undeniably ahead of the current American regulatory regime.

What I would like to see borrowed from the Directives is their overall approach. Regulation in the telecommunications field should be directed to all electronic communications, instead of to particular services defined only on the basis of the underlying platform technology. Substantive regulatory authority should be limited to circumstances in which the relevant parties have market power that threatens consumers, and the regulatory tools should be limited to the minimum necessary to control that power. The Directives provide a substantial toolkit to the regulators in individual countries. But, as long as competition continues to develop along the lines hoped for, regulation limited to interconnection rules and to preventing the strategic use of monopoly power should provide all of the protection that the market requires.³⁴¹

4. Addressing Regulatory Parity

Congress and the FCC should ensure that regulation does not create costs for new entrants that are not borne by incumbents. For example, municipalities have the authority to charge franchise fees to cable operators, capped at 5% of revenues by federal law.³⁴² Many municipalities have imposed this tax on cable

340. The Framework Directive states:

Where an undertaking has significant market power on a specific market, it may also be deemed to have significant market power on a closely related market, where the links between the two markets are such as to allow the market power held in one market to be leveraged into the other market, thereby strengthening the market power of the undertaking.

Framework Directive, *supra* note 336, at art. 14(3). The Commission states that "[t]his is often the case in the telecommunications sector, where an operator often has a dominant position on the infrastructure market and a significant presence on the downstream, services market." *Commission Guidelines*, *supra* note 338, ¶ 84. In the United States, monopoly leveraging as the basis for communications access rules is receiving very little traction. See Farrell & Weiser, *supra* note 288, at 133–34 (proposing a more "anti-trust like" perspective on rethinking the reasons for the FCC's rules); see also James B. Speta, *Vertical Regulation in Digital Television: Explaining Why the United States Has No Access Directive*, in REGULATING ACCESS TO DIGITAL TELEVISION TECHNICAL BOTTLENECKS, VERTICALLY-INTEGRATED MARKETS AND NEW FORMS OF MEDIA CONCENTRATION 69, 76 (European Audiovisual Observatory 2004) (noting the debate between the "Chicago school" and the "post-Chicago" school regarding monopoly leveraging).

341. See *supra* notes 287–89 and accompanying text (evaluating interconnection rules in light of monopoly concerns).

342. See 47 U.S.C. § 542(b) (2000) (limiting franchise fees).

operators' high-speed Internet access service, and the FCC has not yet stopped this practice.³⁴³ Telephone companies are not subject to such franchise fees for DSL service, and so cable would be at a 5% cost disadvantage.³⁴⁴ Similarly, whatever the appropriate pricing rules are for right of way, it should not be the case that states and municipalities are permitted to charge new telecommunications carriers right of way fees that are essentially taxes on revenues while permitting incumbents free use of streets. Yet, this is precisely the result the Sixth Circuit approved³⁴⁵ and the FCC acquiesced in until recently. Another example is the permission to incumbent television broadcasters to use part of their digital licenses for nonbroadcast services such as data,³⁴⁶ while other new entrants to those services will have to acquire spectrum rights at auction (if any such rights are made available).³⁴⁷

Of course, the story can work in reverse: Regulation can give the upper hand to new entrants as above-cost long-distance access charges did to voice over IP services. The FCC eventually limited VoIP's advantage by informally expressing the view that phone-to-phone VoIP providers should pay the same access charges as traditional telephony services and then by substantially reducing access charges.³⁴⁸ But computer-to-computer voice communications continue to be exempt from access charges and from direct contributions to universal service, and as is more fully described in the next section, this informal regime is breaking down. Similarly, the FCC long justified its decision not to require enhanced service providers' and ISPs to pay access charges as a means of helping a nascent industry develop.³⁴⁹ More recently,

343. The FCC has called for comment on the issue and issued its tentative view that this is the correct result, but it has not yet issued rules. See High-Speed Access Declaratory Ruling, *supra* note 289, ¶¶ 106–08 (discussing "franchise fees previously paid pursuant to Section 622").

344. Of course, cable Internet service has approximately two-thirds of the high-speed Internet access market, see FCC, *supra* note 161, at tbl. 1 (showing change in percentage of high-speed line ownership), and my portraying the powerful cable companies as disadvantaged new entrants therefore does not quite fit the bill.

345. TCG Detroit v. City of Dearborn, 206 F.3d 618, 625–26 (6th Cir. 2000) (determining that statutory revisions did not affect pre-existing franchise rights).

346. See *supra* notes 247–48 and accompanying text (discussing changes in spectrum licensing).

347. See 47 U.S.C. § 309(j) (2000) (requiring the auction of all spectrum rights except broadcast and satellite services).

348. See JASON OXMAN, FCC, THE FCC AND THE UNREGULATION OF THE INTERNET: OPP WORKING PAPER NO. 31, at 22, <http://www.fcc.gov/osp/workingp.html> (July 1999) (arguing that everyone who uses the telephone network should pay the same charges) (on file with the Washington and Lee Law Review).

349. See *id.* at 10 ("The Commission determined that the participation of common carriers in the data processing market would benefit consumers by offering them innovative new

although I think it unfair to blame regulators, dial-up ISPs took advantage of regulatory arbitrage to receive above-cost termination payments from incumbents—to the tune of millions of dollars.³⁵⁰

These examples lead to the more general question, which currently goes under the catch-name "regulatory parity," of whether all providers of a particular service must be subject to the same regulatory rules. For example, incumbent local exchange carriers make much of the fact that they are required to provide unbundled network elements to competing DSL providers who may then market unaffiliated Internet services, while the cable companies are not subject to any regulatory requirement that permits other ISPs direct access to cable customers.³⁵¹ Similarly, the FCC continues the ISP exemption from access charges and universal service taxes.³⁵² If competition is the end goal and converging services provided by multiple platforms the expected market structure as some commentators argue, then communications regulation ought to strictly apply principles of regulatory parity to ensure that competition is on equal footing.³⁵³

Regulatory parity is certainly an important touchstone in ensuring that the market is served by the most efficient providers and efficient technologies,³⁵⁴ but applying it in any given instance can be elusive, particularly when regulatory policy must serve multiple goals. For example, William Rogerson has defended the disparity between the unbundling rules and the absence of cable open access by pointing to the different underlying technologies. Because DSL service requires a much more minimal change to the carrier's

services at lower prices.").

350. It is unfair to blame regulators because it appears that the incumbents created the situation for themselves by insisting that local traffic exchange be made on a paid (and above-cost) basis instead of a bill and keep basis, which is what created the opportunity for ISPs (who only receive telephone calls) to receive substantial payments.

351. See, e.g., Nirali Patel, Comment, *FCC Broadband Policy: More Power for the Bell Monopolies*, 55 ADMIN. L. REV. 393, 417–19 (2003) (discussing the regulatory parity debate).

352. See, e.g., OXMAN, *supra* note 348, at 24 (advocating the continued nonregulation of IP-bound services).

353. This is the focus of Dan Spulber and Christopher Yoo's extended defense of "market-based" prices for access rights. See Spulber & Yoo, *supra* note 131, at 895–900, 1023–24 (discussing the economic effects of regulation). I disagree with their proposal. See *infra* Part V.F and note 426 (criticizing their proposal). See generally Rob Frieden, *Regulatory Opportunism in Telecommunications: The Uneven Competitive Playing Field*, 10 COMM.LAW CONSP. 81 (2001); Mark Schankerman, *Symmetric Regulation for Competitive Telecommunications*, 8 INFO. ECON. & POL'Y 3 (1996).

354. See, e.g., Speta, *supra* note 120, at 795–96 (examining the benefits of efficiency); see also William J. Baumol et al., *Parity Pricing and Its Critics: A Necessary Condition for Efficiency in the Provision of Bottleneck Services to Competitors*, 14 YALE J. ON REG. 145, 169 (1997) (addressing the need for regulatory parity in the solid waste management industry).

network than does introducing cable modem service, the risk of regulation interfering with cable company investment incentives is much greater than the risk of its interfering with incumbent telephone companies' incentives.³⁵⁵ Where regulatory policy is attempting simultaneously to test the prospect of intermodal competition (cable companies) and to balance the risk of its not developing with an experiment in wholesaling and intramodal competition (telephone company unbundling), such an argument can justify differential regulatory treatment. Similarly, as Ashutosh Bhagwat has discussed, after the Bell breakup, the FCC successfully applied a variety of regulatory policies that helped the new entrants get a foothold in the long-distance market—most notably the rule that local companies could not give AT&T lower access prices even where AT&T's more efficient access structure yielded relevantly lower costs to the local companies.³⁵⁶ Bhagwat makes the case that without these regulatory assists, AT&T's scale would have enabled it to prevent the development of facilities-based competition among long-distance companies.³⁵⁷

The danger, of course, with any explicit "transition" assist is that it creates a regulatory process in which the new entrants have a continuing political/economic interest.³⁵⁸ Gains that regulation creates through earlier competition than would develop without regulatory assistance may be lost if regulation continues to tip the playing field longer than necessary.³⁵⁹ The FCC certainly continued its heavy-handed regulation of AT&T's long-distance service long after AT&T lost market power in that market.³⁶⁰ And even regulators committed to eliminating regulation when it has served its purpose may not be able to develop information adequate to know when the stopping point has been reached.³⁶¹

355. 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, 145 (discussing the underlying technology).

356. See Bhagwat, *supra* note 98, at 1483–84 (examining AT&T's heavier regulatory and financial burden).

357. See *id.* at 1483–89 (critiquing the regulation of AT&T and subsequent analysis).

358. See Paul L. Joskow & Roger G. Noll, *The Bell Doctrine: Applications in Telecommunications, Electricity, and Other Network Industries*, 51 STAN. L. REV. 1249, 1252 (1999) ("[R]egulation must accord rights of participation and policy review to anyone substantially affected by its policies, which invites strategies and tactics that, at best, retard the competitive process and, with depressing frequency, invite cartelization.").

359. An optimal regulation permits efficient entry but does not induce inefficient entry. See Baumol, *supra* note 354, at 147–49 (providing a "parity-pricing solution" for the problem of inefficiency in access pricing for facilities needed for competitors).

360. See Jim Chen, *Standing in the Shadows of Giants: The Role of Intergenerational Equity in Telecommunications Reform*, 71 U. COLO. L. REV. 921, 953 (2000).

361. Some data is easy to come by, and a significant number of active competitors in the

The following general principles seem to emerge. Regulation that burdens new entrants should be more suspect than regulation that burdens incumbents, and regulation that absolutely forbids entry into a communications market is presumptively impermissible. Pure interconnection regulation is justified, even though its intent is explicitly to assist new entrants. Where a network is necessary for a communications service, an interconnection rule will almost always be necessary³⁶² to test whether monopoly is due to demand or supply side effects and to preserve the social utility of the communications networks. (Of course, on its face an interconnection rule does not violate regulatory neutrality, for it applies to new carriers as well as old). Other regulation that burdens incumbents should be more suspect where it only assists new entrants, and especially where it does so without a sunset or other reasonably definite mechanism for reevaluating its continuation. Regulation that burdens incumbents to serve another goal, such as limiting market power, testing alternative market structures, providing universal service, or advancing other noneconomic goals (such as free expression) would be more tolerable. It will always do to weigh the costs and benefits of those other goals versus the likely efficiency compromises, but asking for more either oversimplifies the difficulty of policymaking in these areas or exaggerates the precision with which limited policy tools can be wielded.

market presents an easy case to imagine. But, where markets are monopolized or oligopolistic, the question of whether the players have relevant market power is of course much more difficult.

362. See *supra* note 287 and accompanying text (discussing generally why structural regulation of monopolies will be unnecessary). The exception is where the new entrant's new network is so superior that all of the incumbent's customers (or at least a critical mass) expect that a sufficient number of others will switch to the new entrant. See Michael L. Katz & Carl Shapiro, *Technology Adoption in the Presence of Network Externalities*, 94 J. POL. ECON. 822, 825 (1986) (evaluating the effects of sponsorship on the standardization of technology); Shelanski & Sidak, *supra* note 101, at 6–15 (discussing interaction between network effects and competition for the market more generally). What is difficult, perhaps intractable on an ex ante basis, is determining whether a given market with network effects will exhibit inertia or "quick" tipping. The working assumption has been that, at least in wireline communications markets, the combination of network effects and economies of scale, scope, and density make an interconnection rule necessary. See *supra* notes 150–66 (evaluating the limited competition in wireline communications); Speta, *supra* note 127, at 81–82 (examining "common carrier duties to confront direct network externality"). But with pure wireless networks (that is, where interconnection with a wireline incumbent is not necessary to maintain the network nature of the service), the market might be less likely to become entrenched. See *id.* at 83–84 (discussing lower economies of scale for deployment of wireless networks).

C. VoIP as a Case Study

As noted above, VoIP may provide a new source of genuine competition to incumbent local telephone companies. But VoIP is also a perfect case study in the regulatory uncertainties that face a new service. As Senator McCain said in introducing a recent hearing on VoIP:

In many ways, VoIP is a microcosm of the broad array of telecommunications regulatory issues that have been debated since passage of the Telecommunications Act of 1996, including the role of state regulators, the legal classification of services, universal service, access charges, emergency services and access by people with disabilities.³⁶³

In this section, I describe these issues in the VoIP context and discuss the optimal regulatory structure for VoIP services.

To do so, however, requires a bit more technical background about VoIP.³⁶⁴ As the name suggests, it is a voice service run over the Internet protocol, which means that it transmits voices over Internet networks in the same fashion in which e-mail, webpages, music, or instant messaging transits the Internet. In fact, a close technical analogy is simply to think of it as instant messaging that uses voices instead of text. VoIP can be provided over any moderately high-speed Internet connection as long as the user has the appropriate software and hardware. As a result, VoIP can actually be provided in a number of configurations. It can be provided through a computer running a simple application to which the user has attached a microphone and a speaker; it can also be provided through a special VoIP phone that looks and feels like a traditional phone, that itself connects to the Internet, and that does not require an additional computer to operate. Some VoIP providers will install a box in a person's home that connects a high-speed Internet connection to the consumer's in-home telephone wires, so that regular telephones may be used in existing telephone jacks.³⁶⁵

Some VoIP services, such as ICQ's voice-chat feature or the currently popular Skype, which was created by the same programmers who created the Kazaa software, are only computer-to-computer services and only link to members of the same network—that is, both parties must be running the same

363. *Hearing Before the S. Commerce, Sci. & Transp. Comm.*, 108th Cong. (Feb. 24, 2004), LEXIS, News Service file [hereinafter *S. Hr'g*] (Senator John McCain).

364. See generally FCC, *Voice Over Internet Protocol*, at <http://www.fcc.gov/voip> (last visited Sept. 13, 2004) (on file with the Washington and Lee Law Review).

365. See *S. Hr'g*, *supra* note 363 (Glenn A. Britt, Time Warner Cable) ("Our customers can use their existing phones and existing phone jacks and they can even keep their same telephone numbers.").

software and both must be connected to the Internet when the session begins.³⁶⁶ Other VoIP services, such as Net-2-Phone, have long provided links to the public telephone network, permitting Internet users to connect through their computers to any telephone number.³⁶⁷ The current generation of voice services—the ones that are expected to provide competition to the local telephone incumbents—provide traditional telephone numbers to users and permit them both to call and to receive calls from any other person with a telephone number.

This short description should make obvious that VoIP raises a difficult classification issue under the Communications Act.³⁶⁸ On the one hand, the service is identical to traditional telephone service—it connects two parties, in real time, and transmits their voices to one another. As such, it would appear at first blush to be a telecommunications service. On the other hand, VoIP is carried over Internet access connections and largely over Internet backbones, and the FCC has long described Internet and Internet-based services as "information services."³⁶⁹

Over the past several years, the FCC has taken the position that "phone-to-phone" VoIP is a telecommunications service, while "computer-to-phone" or "computer-to-computer" VoIP is an information service.³⁷⁰ More recently, the FCC has held that a VoIP service that does not interconnect with the public telephone network is not "telecommunications," even though the service is designed to use a telephone-like device and connects voices in real time.³⁷¹ Rather, the FCC declared it to be "an unregulated information service subject to federal jurisdiction."³⁷² Crucial to the FCC's decision, however, was the fact that the provider did not itself provide any transmission service. Rather, users had to have their own broadband Internet access; the provider simply provided

366. See Jon Van, *Computer-Based Calls Source of Net Concern*, CHI. TRIB., Nov. 11, 2003, at C1 (expressing some people's concern that VoIP will hurt phone companies like Napster hurt record companies).

367. *Id.*

368. See *S. Hr'g*, *supra* note 363 (Sen. McCain) ("The FCC is forced to shoehorn a newly emerging technology into Congress' 1996 vision of communications regulation and to classify as either fish or fowl that which may be neither.").

369. See OXMAN, *supra* note 348, at 22–24 (discussing information services definition).

370. See Federal-State Joint Board on Universal Service, *Report to Congress*, 13 F.C.C.R. 11501, ¶¶ 21–54 (1998) (providing background for statutory definitions).

371. See Petition for Declaratory Ruling that pulver.com's Free World Dialup is Neither Telecommunications nor a Telecommunications Service, *Memorandum Opinion and Order*, 19 F.C.C.R. 3307, ¶ 7 (2004) [hereinafter *pulver.com Declaratory Ruling*] (examining pulver.com's perspective on its service definition).

372. *Id.* ¶ 8.

the core of a peer-to-peer service, matching up users through a central directory.³⁷³

The FCC's decisions have been largely driven by a desire to avoid regulation of Internet-based services. In the very first sentence of his separate statement in the pulver.com decision, Chairman Powell simply states: "Today we affirm our commitment—and fulfill our statutory obligation—to keep the Internet free from unnecessary government regulation."³⁷⁴ But it is clear that decisions like this stretch the Act's definitions and may, ultimately, result in different kinds of VoIP services being regulated differently.

Indeed, the Act's definition of "telecommunications"—"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 as sent and received"³⁷⁵—would seem to cover many Internet services. That a service uses protocols other than the protocols traditionally associated with telephone service does not affect the service's definition as telecommunications, as the FCC itself has long held.³⁷⁶ Other Internet services, such as e-mail, that transmit information from one user to another without changing that information at all have escaped classification as "telecommunications" only because they are stored in a server that is intermediate between the sender and the receiver until such time as the receiver logs on to retrieve his or her e-mail.³⁷⁷ But VoIP transmissions are not delayed in this manner.

The FCC's current decision simply does not address the two more important manifestations of VoIP service, namely those services that are provided together with the underlying transmission (as when the Internet access provider is also the VoIP provider) and those services that interconnect with the

373. See *id.* ¶¶ 10–13 (explaining why pulver.com is an information service rather than a telecommunications service).

374. *Id.* at 3326 (separate statement of Chairman Michael K. Powell).

375. 47 U.S.C. § 153(43) (2000).

376. See *Final Decision*, *supra* note 75, ¶ 96 (stating that "basic"—now "telecommunications"—services are those that provide "pure transmission capability over a communications path that is virtually transparent in terms of its interaction with customer supplied information"); *id.* ¶ 95 (asserting that the use of packet switching and error control techniques "that facilitate economical, reliable movement of [such] information do[] not alter the nature of the basic service"); Application of AT&T for Authority Under Section 214 of the Communications Act of 1934, as Amended, to Install and Operate Packet Switches at Specified Telephone Company Locations in the United States, *Memorandum Opinion, Order, and Authorization*, 94 F.C.C.2d 48, ¶¶ 15–20 (1983) (holding that X.25 packet switching networks provided basic services because they transmitted user-supplied information without changing the content of that information).

377. See generally Weinberg, *supra* note 84, at 227–30 (discussing FCC's precedents in this regard).

public telephone network. Many cable modem companies are proposing to provide VoIP services,³⁷⁸ and modern VoIP service is envisioned to provide connectivity to and from all telephone numbers. To accomplish the latter, VoIP providers need to install equipment that converts VoIP calls into protocols that are acknowledged by the voice telephone network—and they need to do this whether or not they provide the Internet access and Internet transit portions of the service. Each of these types of services, because it provides an element of transmission, would then be within common carrier and other regulation. At the Senate Commerce Committee's recent hearing on VoIP, several witnesses advocated bringing VoIP within the traditional regulatory regime to ensure that states and local governments would be able to continue to tax and otherwise regulate these services.³⁷⁹

If VoIP is not regulated as telecommunications, but is left unregulated as an Internet (information) service, then many of the issues discussed above arise. The first and perhaps most important is that of competitive neutrality. Traditional telecommunications services are not only regulated, but they are subject to a variety of taxes at the state, local, and federal levels. Exempting VoIP puts it at a cost advantage, but one that is a feature of the regulatory structure and not of the superiority of the underlying technology. This is not economically efficient.³⁸⁰ The second issue is jurisdictional. If VoIP is not telecommunications, it may be subject to regulation at the state and local level, where the prospect of multiple and varying regulation may (by contrast to telephony) put it at a competitive *disadvantage*.³⁸¹ The FCC currently intends to exercise its so-called ancillary jurisdiction over information services to preempt state regulation,³⁸² but the FCC's authority in this regard is unsettled.³⁸³

378. See *supra* notes 188–94 and accompanying text (presenting plans to unveil VoIP services).

379. See *S. Hr 'g*, *supra* note 363 (statements of Senator Lamar Alexander and Stan Wise, Chairman, Nat'l Ass'n of Regulatory Util. Comm'ns).

380. See Speta, *supra* note 120, at 795–96 (discussing the costs of economic inefficiency).

381. See Esbin & Lutzker, *supra* note 293, at 63 (reviewing the *Broward County* legislation); see also *supra* notes 291–93 and accompanying text (describing problems with local regulation regarding tower siting and rights of way).

382. See *pulver.com* Declaratory Ruling, *supra* note 371, ¶ 15 ("We determine, consistent with our precedent regarding information services, that FWD is an unregulated information service and any state regulations that seek to treat FWD as a telecommunications service or otherwise subject it to public-utility type regulation would almost certainly pose a conflict with our policy of nonregulation.").

383. See Speta, *supra* note 334, at 16–19 (arguing that the FCC lacks jurisdiction to develop comprehensive regulation of Internet services).

Third, if VoIP is not regulated as a telecommunications service, other important social objectives may be implicated. For example, and as is discussed more in subpart E, if VoIP begins to take significant market share from traditional telecommunications services, then revenues raised for universal service and for other purposes through telecommunications taxes will decrease. Additionally, VoIP providers will not be required to provide 911 service (although most VoIP services that are designed to substitute for traditional telephone service provide some kind of 911 access), wiretapping capabilities, or access for those with disabilities.³⁸⁴

A rational statute would not make the regulatory decision depend upon the metaphysics of classifying VoIP as telecommunications or not. And a rational statute would not tip the competitive playing field among services that are identical from the consumer's perspective. VoIP, of course, is a new entrant, and so under the general outlines discussed above,³⁸⁵ the lack of regulatory parity may not be of immediate concern. But, if the predictions for its success begin to materialize, then a new regulatory framework should be adopted.

The difficult issue for current telecommunications policy, however, is that the appropriate response to the success of VoIP is *not* necessarily to subject it to regulation to bring it into parity with telephone regulation, but rather to lift the regulation and regulatory costs to which telephone service is subject. To take the easier issues first, it seems to me that VoIP providers that interconnect with the voice telephone network ought to be required to provide 911 service and access for people with disabilities. By interconnecting with the traditional network, these services declare their "publicness" in an important regard, and current policy requires consistent access to emergency services and for disabled persons. Similarly, if public policy otherwise demands that law enforcement has the ability to tap voice telephone calls, then VoIP providers should be required to build this into their service.

The foregoing regulatory trigger—that the VoIP service interconnects with the public telephone network—is itself, however, at least potentially an anachronism. Not tomorrow and not in the next few years, but a time may arrive when "voice-only" is not the service that unites all Americans. When that day comes, these

384. See FCC, *VoIP/Internet Voice Fact Sheet*, <http://www.fcc.gov/cgb/consumerfacts/voip.pdf> (last visited June 14, 2004) (addressing some of the drawbacks of VoIP) (on file with the Washington and Lee Law Review). The FCC has recently proposed rules that would require all VoIP providers to ensure that law enforcement agencies can tap VoIP calls. Communications Assistance for Law Enforcement Act and Broadband Access and Services, *Notice of Proposed Rulemaking and Declaratory Ruling*, FCC 04-187 (Aug. 9, 2004), available at http://www.hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-04-187A1.pdf.

385. See *supra* notes 351–61 and accompanying text (examining various aspects of regulatory parity).

policies will need to be tied to access or to whatever that generation of network turns out to be.³⁸⁶

If VoIP becomes a real competitor to voice telephone service, then the regulation currently designed to control the rates of voice service will need reform. Currently, traditional long-distance carriers pay higher rates to the local telephone companies for the origination and termination of telephone calls than VoIP providers would pay because VoIP terminations into the local network would be considered local telephone calls, not long-distance. This lack of competitive neutrality is largely indefensible. More radically, competition in local markets would eliminate the justification for retail rate regulation. The extent of this reform, however, will depend upon the nature of the broadband market as this competition takes hold. VoIP, of course, depends upon an underlying access service; it does not itself provide a connection into a home. VoIP changes the competitive playing field between facilities-based carriers, because VoIP is an application that may make cable broadband (or wireless or whatever platform utilizes it) more attractive to consumers vis-à-vis a traditional voice telephone line.

D. Government Subsidies

Some commentators and industry officials have gone further in suggesting that the government assist the development of new communications services by advocating government financing or building new communications networks. Many municipalities are developing their own broadband networks, either because no broadband service is available or the municipality perceives there to be insufficient competition.³⁸⁷ And some groups have called for substantial federal deployment of new "fiber to the home" networks.³⁸⁸ Entry or explicit financing by governments would introduce new providers into the markets even more surely than would the simple steps of lifting barriers to entry and a bit of regulatory hospitality.

386. See Speta, *supra* note 127, at 81–82 (suggesting interconnection policy based upon the need for a single network to provide service).

387. See Kathryn A. Tongue, *Municipal Entry into the Broadband Cable Market: Recognizing the Inequities Inherent in Allowing Publicly Owned Cable Systems to Compete Directly Against Private Providers*, 95 NW. U. L. REV. 1099, 1103–05 (2001) (discussing trend).

388. See, e.g., TECHNET, A NATIONAL IMPERATIVE: UNIVERSAL AVAILABILITY OF BROADBAND BY 2010, at 7, <http://www.tchnet.org/news/newsreleases/2002-01-15.64.pdf> (last visited May 29, 2004) (calling on network providers to invest billions in infrastructure upgrades and increased bandwidth capacities) (on file with the Washington and Lee Law Review).

In the main, these proposals do not situate the government as the only communications provider in a market; indeed, no one seems to think the old European model of a Post, Telephone, and Telegraph monopoly is a good idea. Rather, these proposals are made with the rhetoric of competition. However, creating a government stake in a particular provider of service threatens two kinds of inefficiencies. First, the government provider might be cross-subsidized from general revenues or by lighter regulatory treatment and might gain an inefficient advantage over others.³⁸⁹ Second, if not subsidized, the municipal telecommunications company might lose money, creating the politically unpalatable prospect that city officials are losing taxpayer money and prompting them to take regulatory measures against their competitors.³⁹⁰ For these reasons, and because of the possibility of profligate municipal spending, some states have adopted legislation forbidding municipalities to enter telecommunications markets. The Supreme Court upheld these laws.³⁹¹ Despite my general call for the lifting of legal barriers to entry, I do not think these state laws violate the imperative to develop new competition in telecommunications markets. The commonly heard expression from antitrust law, that it is designed for "the protection of *competition*, not *competitors*,"³⁹² seems applicable here. A law that forbids entry by one narrowly defined entity may or may not be justified (although the arguments about avoiding anticompetitive subsidy and protecting the public fisc seem quite important). But excluding one potential entrant should not, itself, damage competition in an otherwise structurally competitive market.

Nevertheless, while government itself probably should not get into the telecommunications carrier business, government could accelerate the process of intermodal competition in the more customary manner of providing funds for basic research and development. Government-funded research, especially military, provided some of the essential Internet and wireless technologies now in commercial service.³⁹³ But, the level of funding such basic research has not kept pace with the growth of the communications sector,³⁹⁴ nor has it focused

389. See Tongue, *supra* note 387, at 1120 (discussing these sorts of subsidies in the context of municipal and municipal utility-owned communications companies).

390. *Id.* at 1125.

391. See *Nixon v. Mo. Mun. League*, 124 S.Ct. 1555, 1559 (2004) (construing § 253's "any entity" to not include municipalities). Section 253 forbids any state law that "prohibits . . . any entity" from providing telecommunications services. 47 U.S.C. § 253(a) (2000).

392. *Brown Shoe Co. v. United States*, 370 U.S. 294, 320 (1962).

393. See COMM. ON INNOVATIONS IN COMPUTING AND COMMUNICATIONS: LESSONS FROM HISTORY, NAT'L RESEARCH COUNCIL, *FUNDING A REVOLUTION: GOVERNMENT SUPPORT FOR COMPUTING RESEARCH*, at ch. 7 (1999) (discussing the government's role in and funding of early Internet projects).

394. See, e.g., PRESIDENT'S INFO. TECH. ADVISORY COMM. REPORT TO THE PRESIDENT,

explicitly on funding research into technologies on the basis of their potential to provide intermodal competition. Indeed, a presidential commission has concluded that military funding of communications research, while still significant, now focuses exclusively on near-term war fighting projects and not on the types of basic research that previously inspired the Internet.³⁹⁵

Competitive markets, in fact, likely increase the need for government funding. The Bell System's ability to subsidize basic research with its monopoly profits is well known,³⁹⁶ and some economic work argues that competitive industries invest less in basic (as opposed to applied) research and development.³⁹⁷

E. A Note on Universal Service

Competitive telecommunications markets need a new universal service policy. Although airline and railroad deregulation attempted to ease the transition to competition and to provide some funds to continue service on lightly traveled routes, both transitions have resulted in the loss of service to a substantial number of communities.³⁹⁸ By contrast, universal service has long been a goal in telecommunications regulation; indeed, universal service to some extent provided the argument that resulted in the comprehensive regulation of what was, at its outset, a competitive local telecommunications market.³⁹⁹ The 1996 Act did not decrease the commitment to universal telecommunications service;⁴⁰⁰ in many regards, it increased its scope by including Internet access for many entities as part of universal service.⁴⁰¹

INFORMATION TECHNOLOGY RESEARCH: INVESTING IN OUR FUTURE 21–24 (1999) (concluding that government funded basic communications research is inadequate and has not grown with the increasing importance of communications to the economy), available at http://www.hpcc.gov/pitac/report/pitac_report.pdf.

395. *Id.*

396. See generally A. Michael Noll, *Bell System R&D Activities: The Impact of Divestiture*, 11 TELECOMMS. POL'Y 161 (1987) (evaluating Bell's research and development activities).

397. See VISCUSI ET AL., *supra* note 136, at 232–35 (discussing this literature).

398. See *supra* notes 24–26, 59 and accompanying text (acknowledging loss of service).

399. See MILTON L. MUELLER, JR., *UNIVERSAL SERVICE: COMPETITION, INTERCONNECTION, AND MONOPOLY IN THE MAKING OF THE AMERICAN TELEPHONE SYSTEM* 97–98 (1997) (providing justifications for universal service).

400. See generally Eli M. Noam, *Will Universal Service and Common Carriage Survive the Telecommunications Act of 1996?*, 97 COLUM. L. REV. 955 (1997) (discussing goals and challenges of universal service under the Act).

401. For example, the Act provided universal service funds to schools, libraries, and health

The 1996 Act's stated goals with respect to universal service are compatible with the agenda to facilitate intermodal telecommunications competition. The Act itself states that "[a]ll providers of telecommunications services should make an equitable and nondiscriminatory contribution to the preservation and advancement of universal service."⁴⁰² In practice, however, distortions have been introduced, because "providers of telecommunications services" has been limited to traditional wireline and wireless telephony services.⁴⁰³ Thus, if VoIP is successfully kept out of the telecommunications category, it will not pay universal service fees, just as the providers of instant messaging (which already is a limited substitute for voice calls) do not. The most vocal advocates of VoIP regulation tout concern for universal service funds as the principal ground for such regulation.⁴⁰⁴

The long-run goal for universal service should be a funding mechanism—from both the collection and distribution sides—that is entirely competition-neutral. As many have argued, the least distorting mechanism would be a system funded through the general federal revenues.⁴⁰⁵ This has long been considered politically impossible, and so some specific tax on communications service will probably continue. But taxing VoIP will prove difficult because the essential components of VoIP service can be provided overseas.⁴⁰⁶ One alternative would be to embed the universal service tax in the allocation of telephone numbers, although, if the charge were passed through on a "per-number" basis, it would raise the costs of service for the lightest users. Perhaps more promising would be to require any entity that receives telephone numbers to pay a universal service fee based upon the percentage of their revenues likely derived from voice service. Because the entire point of VoIP is that the traffic appears to be the same as other Internet traffic, the FCC would have to engage in some sort of sampling or other estimation to determine a baseline voice percentage as to which the universal service charge would apply. These

care providers for the deployment of broadband services. See 47 U.S.C. § 254(h) (2000) (increasing requirements for telecommunications providers).

402. *Id.* § 254(b)(4).

403. See Robert M. Frieden, *Universal Service: When Technologies Converge and Regulatory Models Diverge*, 13 HARV. J.L. & TECH. 395, 399–401 (2000) (examining telecommunications regulations prior to technology convergence).

404. See *supra* note 384 and accompanying text (describing possible problems with not regulating VoIP).

405. See, e.g., Gregory L. Rosston & Bradley S. Wimmer, *The ABC's of Universal Service: Arbitrage, Big Bucks, and Competition*, 50 HASTINGS L.J. 1585, 1606 (1999) (recounting the FCC's justifications for federal universal service mechanisms).

406. See S. Hr'g, *supra* note 363 (FCC Chairman Michael K. Powell) (addressing tax jurisdiction concerns).

difficulties might be enough to push the political process toward the more competitively neutral "tax and spend" structure. In all events, the imperative is to continually revisit the universal service mechanism as the unpredictable path of telecommunications innovation continues and to adjust the collection and payment mechanisms to eliminate competitive imbalances.

A better result would seem to be a tax on all services that provide access to electronic communications, including all of those services currently known as telecommunications transmission and those known as information services transmission. This means taxing Internet access, which has been forbidden from time to time by the so-called Internet tax freedom acts.⁴⁰⁷ Taxing the Internet does run counter to the prevailing impulse to leave the Internet free from regulation. But taxing Internet access on an even basis with the taxes placed on telecommunications services becomes necessary for competitive neutrality when those services compete with one another—as VoIP and other developments promise. Exempting Internet access services from taxation seemed valuable in their infancy, but it is hard to argue today that the likes of AOL, Microsoft, Earthlink, and others continue to need an implicit subsidy.⁴⁰⁸

The more important point from the perspective of introducing new competition into telecommunications markets is that regulatory policies which are actually universal service policies should be identified as such and evaluated for their effectiveness as such. To return to the example of television broadcast spectrum, the must-carry rules that put broadcast content on cable systems were defended on the basis of "preserving free broadcasting" for those who received television in that manner—in other words, to provide universal service to video.⁴⁰⁹ Judged from that perspective, the policy just does not make sense. Although there remain some 15% of television households that do not subscribe to cable or DBS, many of those nonsubscribers are in higher income brackets and might subscribe if there were no broadcast.⁴¹⁰ What is needed is an analysis that compares the number of subscribers to free television that

407. See generally Joseph R. Feehan, Comment, *Surfing Around the Sales Tax Byte: The Internet Tax Freedom Act, Sales Tax Jurisdiction and the Role of Congress*, 12 ALB. L.J. SCI. & TECH. 619 (2002) (providing background on legislation).

408. It is beyond the scope of this Article, but much of what I have just said also applies to state and local taxes on telecommunications, even those not designed to fund universal service. See, e.g., Jonathan Bick, *Implementing E-Commerce Tax Policy*, 13 HARV. J.L. & TECH. 597, 604 (2000) (noting that, in 1998, the average state tax on telecommunications was 14%). All taxes suppress demand, but competitively neutral taxes are less problematic.

409. See, e.g., *Turner Broad. Sys., Inc. v. FCC*, 512 U.S. 622, 644–46 (1994) (examining the burden of must-carry provisions).

410. See *Ninth Annual MVPD Report*, *supra* note 162, ¶ 13 (summarizing developments in the broadcast market).

depend upon it to the value of the spectrum for other uses. I suspect that it would be more efficient to fund a universal service program for cable or DBS. This would be wrenching to the broadcast industry, to be sure, but the competitive gains could be quite significant.

Similarly, one of the arguments advanced in favor of cable open access rules is that competition among ISPs would ensure users greater free speech possibilities than if the cable companies had exclusive control of the ISPs.⁴¹¹ This is not precisely a universal service argument, although it is similar in that the regulation is designed to advance a noneconomic good.⁴¹² If cable company restrictions on user speech are considered problematic, however, then the relevant comparison is between open access policy and an explicit rule, à la common carrier regulation, that forbids the cable companies to interfere with user speech. This rule might be more susceptible to a First Amendment challenge,⁴¹³ but it would focus the discussion on the respective technical and economic advantages of the proposal. From a purely economic perspective, the conversion of cable systems to common carriers would meet the speech goal in the same manner, without the technical costs of changing the cable systems to accommodate additional ISPs.⁴¹⁴ This might not satisfy the advocates of open access rules, but the debate could then proceed on other grounds.

F. A Return to the Unbundling and Pricing Puzzle

I have already identified the 1996 Act's unbundling regime as highly contentious, and indeed, its difficulties are part of the premise for a new focus on intermodal competition. This new paradigm, if implemented successfully, will have implications for the network sharing regime, and despite my desire largely to steer clear of the current controversies over unbundling, this topic

411. See, e.g., Harold Feld, *Whose Line Is It Anyway? The First Amendment and Cable Open Access*, 8 COMM. LAW CONCEPTS 23, 35–37 (2000) (evaluating the arguments for competition in light of the First Amendment).

412. Universal service is occasionally justified on economic grounds—that the network is more valuable to all subscribers as subscribership rises, but the network owner cannot capture all of those gains and will therefore supply a less than optimal level of service. But this is more of a welfare argument than an efficiency argument. More importantly, universal service is usually justified on noneconomic grounds of subsistence and equality.

413. See generally Lee, *supra* note 282 (discussing court decisions finding that open access rules violated the First Amendment and assessing arguments).

414. There might be economic costs to a common carrier rule depending on its design, such as an inability to price discriminate. See Noam, *supra* note 400, at 967–68 (discussing the need for price discrimination in the provision of telecommunications services). The point is to debate those costs and benefits directly.

now requires a few comments. The FCC has adopted, and the courts have approved, a forward-looking cost methodology known as TELRIC for those parts of the incumbents' network that it is forced to share.⁴¹⁵ TELRIC, as I have noted, is successful at squeezing the incumbent's monopoly profits out of the prices charged for local loops and other essential network elements. The regulations therefore permit a certain level of retail competition, and TELRIC limits monopoly profits at the wholesale level much as rate regulation historically controlled them at the retail level. For this reason, unbundling and TELRIC pricing make the most sense if one views the natural monopoly characteristics of the local loop and other elements of the local network as relatively stable.

Adopting facilities-based, intermodal competition to the local incumbents as the legislative and regulatory priority does not necessarily require abandoning the unbundling regime or TELRIC, but it does require some modification. The extreme, current criticisms of TELRIC as inadequate compensation (to the point of being a constitutional taking) are wide of the mark.⁴¹⁶ The FCC's TELRIC rules do require that interconnection and unbundling prices be set so as to make a fair contribution to the maintenance of the incumbent's local network.⁴¹⁷ TELRIC is therefore not marginal pricing in the sense that the incumbent cannot recover its fixed costs or the contribution that the foregone provision of a certain retail service would make to the joint and common costs of the incumbent's network. Moreover, the FCC, prodded by the courts,⁴¹⁸ has eliminated those applications of TELRIC most likely to upset a level playing field by limiting the number of elements that must be unbundled under that scheme. In fact, under the current rules, the FCC has limited the elements presumptively required to be unbundled to local loops,⁴¹⁹

415. See *supra* notes 126–31 and accompanying text (discussing the 1996 Act's justification for unbundling).

416. See, for example, Spulber & Yoo, *supra* note 131, for the argument that TELRIC constitutes a taking. For a rebuttal, see Baumol & Merrill, *supra* note 132. The Supreme Court rejected the argument that TELRIC methodology offends the Takings Clause in *Verizon Communications, Inc. v. FCC*, 533 U.S. 467 (2002).

417. *Verizon Communications, Inc. v. FCC*, 535 U.S. 467, 519 (2002).

418. In its initial rules implementing the local competition provision of the 1996 Act, the FCC required all elements to be unbundled and made available to CLECs. The Supreme Court reversed this aspect of the rules in *AT&T Corp. v. Iowa Utilities Board*, 525 U.S. 366 (1999). In its second set of rules, the FCC limited the list of elements to be unbundled to seven, but the D.C. Circuit found that this nationwide list did not adequately account for likely local variations in conditions of competition in *United States Telecom Ass'n v. FCC*, 290 F.3d 415, 422–24 (D.C. Cir. 2002).

419. See Section 251 Unbundling Obligations, *supra* note 308, ¶¶ 197–342 (analyzing loop deployment, types, and unbundling proposals).

which, because of their sunk cost characteristics, are the least likely to be duplicated by new entrants.⁴²⁰

Nevertheless, an affirmative attempt to develop new platforms will require intensifying the vigilance that the FCC adverts to in its third-generation unbundling rules—that mandatory unbundling should be lifted when the market demonstrates that one or more entities actually have bypassed the incumbent's facilities with substitute facilities.⁴²¹ More importantly, it requires sensitivity to the possibility that bypass, even if not currently feasible, will arrive in the (nearer) future. To the extent that unbundling is necessary at any particular time because the local loop (or some other facility) is then a natural monopoly facility, the TELRIC unbundling price must be based upon a projection of the useful life of that facility. As the FCC has long acknowledged but only just begun to implement, the depreciation rate should include not only the expected life of the facility based on wear and tear but also the expected useful life of the facility based on the prospect that it will be rendered obsolete by a new bypass technology.⁴²²

This possibility of developing bypass has led a number of commentators to argue that TELRIC should be replaced entirely by the efficient component pricing rule, global price caps, or another rule that permits the incumbent greater leeway in recovering from new entrants contributions to the incumbents' fixed and joint and common costs.⁴²³ But, as William Rogerson

420. See Hausman & Sidak, *supra* note 126, at 462–63 (noting that items with sunk costs, as opposed to fixed costs, are less likely to be duplicated).

421. See Section 251 Unbundling Obligations, *supra* note 308, ¶ 178 (evaluating arguments supporting and detracting from mandatory unbundling); see also 47 U.S.C. § 160(a) (2000) (requiring the forbearance from regulation when competition develops). This analysis requires, of course, an assessment familiar from antitrust law of the demand and supply substitutability of the goods on all dimensions. For example, while cable-based VoIP and cell phones are technical substitutes for local loops, it is not clear that they are yet in precisely the same economic market as traditional voice. The quality of those services is lower; they are often not compatible with the same range of vertical services such as call-waiting, caller ID, and voicemail; and they may not have independent power in emergency situations.

422. See Local Competition Provisions, *supra* note 127, ¶ 686 (claiming that "properly designed accounting depreciation schedules should account for expected declines in the value of capital goods"); Section 251 Unbundling Obligations, *supra* note 308, ¶¶ 685–91 (analyzing depreciation rate components).

423. The ECPR was developed by William Baumol and Robert Willig, and it sets the unbundling price at the incumbent's retail price less the incremental avoided costs (that is, the incremental costs of that part of the service that the new entrant will supply) of providing the service. See generally Robert D. Willig, *The Theory of Network Access Pricing*, in ISSUES IN PUBLIC UTILITY REGULATION 109 (Harry M. Trebing ed., 1979) (discussing technical network access prices); Baumol et al., *supra* note 354. Jean-Jacques Laffont and Jean Tirole advocate a global price cap, by which the incumbent maintains the freedom to price access and final goods subject only to a price cap weighted by the relative provision of both wholesale and retail goods.

has pointed out, keeping unbundling prices lower and thereby "artificially handicapping incumbents in the most profitable areas of their territories is actually a reasonably good way of encouraging . . . entry."⁴²⁴

Thus, for the same reasons that I am willing to tolerate a degree of regulatory asymmetry when that asymmetry benefits new challengers to incumbent carriers,⁴²⁵ I do not think that a regulatory policy designed to further the possibility of bypass must necessarily abandon TELRIC at the outset. When and if the hoped-for facilities-based competition begins to develop, TELRIC can then be revised.⁴²⁶ And when it develops completely, then the pricing problem will, mercifully, go away.

VI. Conclusion: Not a Political Pipedream

It does not seem necessary or appropriate, after setting out this proposal at such length, to conclude with a rote summary of the foregoing. What does seem necessary, by contrast, is at least a few words on why this radical proposal to rewrite telecommunications law—a task the Congress thought it successfully accomplished less than a decade ago—is anything other than an academic's pipedream.⁴²⁷

The answer is again supplied by some of the earlier deregulatory successes in transportation and long-distance. Martha Derthick and Paul J. Quirk have made a study of some of these deregulatory episodes,⁴²⁸ and their conclusions suggest that a window for further telecommunications reform may now be opening. In particular, they studied airline and trucking deregulation as well as

See LAFFONT & TIROLE, *supra* note 131, at 170 (examining the benefits of a global price cap).

424. William P. Rogerson, *New Economic Perspectives on Telecommunications Regulation*, 67 U. CHI. L. REV. 1489, 1497 (2000) (reviewing LAFFONT & TIROLE, *supra* note 131).

425. See *supra* notes 354–61 and accompanying text (justifying regulatory disparity in certain circumstances).

426. In this regard, one's regulatory prescription flows from how one reads the evidence concerning current competition and (an even less objective matter) what one thinks will happen with competition in the near term (not to mention how near one thinks the near term is). Christopher Yoo and Daniel Spulber advocate eliminating TELRIC pricing right now. See Spulber & Yoo, *supra* note 131, at 1019–21 (arguing against compelled access to broadband networks and then basing prices only on direct cost). I think they read the evidence of competition far too optimistically and see competition that has, in fact, yet to develop. As explained above in Part IV.A, there is reason for optimism, but the current evidence reveals only limited competition.

427. Excuse the pun.

428. See generally DERTHICK & QUIRK, *supra* note 45.

the early stages of telecommunications deregulation, and they identified a number of economic and political forces as important. First, they note that, prior to deregulation, "[e]lite opinion converged in support of reform."⁴²⁹ Second, they note that "[o]fficeholders in positions of leadership took initiatives."⁴³⁰ Third, they note the importance of economic analysis that justified legislative action.⁴³¹ To Derthick and Quick's factors should be added the important force that industrial users of utility services have sometimes added to pushing for legislative reforms.⁴³²

Each of these factors is emerging. In a very recent hearing prompted by VoIP, Senate Commerce Committee Chairman John McCain stated his preference for overhauling the Telecommunications Act and stated unequivocally that he was not alone in the Senate:

In many ways, VoIP is a microcosm of the broad array of telecommunications regulatory issues that have been debated since passage of the Telecommunications Act of 1996 We began the 108th Congress with a hearing on the state of competition in the industry and I reminded the public, the FCC Commissioners and my colleagues then of my long held beliefs that the 1996 act is a fundamentally flawed piece of legislation. Since then, some of my colleagues have joined me in expressing the need for Congress to take a serious look at reforming the act.⁴³³

At the same hearing, FCC Chairman Powell agreed:

[W]hether it's now or in the near future, it is my responsibility as your expert agency to tell you, I think the days are numbered on the way we're doing this under the current statute. I do believe there is going to have to

429. *Id.* at 238.

430. *Id.* at 239.

431. *See id.* at 246 ("As vividly and impressively as possible, our cases demonstrate the role that disinterested economic analysis can play in the formation of public policy. If economists had not made the case for procompetitive deregulation, it would not have occurred.")

432. *See* Kearney & Merrill, *supra* note 10, at 1395–96 (addressing another important force in deregulation). Kearney and Merrill state:

In addition to struggles among rival producer groups, there is also evidence that powerful consumer groups have played a greater role in more recent reform initiatives. It is always instructive to consider who are the winners and who are the losers from major policy changes. With respect to changes in telecommunications (both long distance and presumably local exchange service), electricity, and gas, the big winners appear to be large commercial and industrial users of these services.

Id.

433. *S. Hr'g*, *supra* note 363.

be a statute in the future that recognizes these dramatic technical changes and gets us out of the buckets of the '96 Act.⁴³⁴

Senator Lautenberg agreed with one of the principal proposals in this paper: "I'd urge some day that a whole bunch of wordsmiths get together and simplify the language and the structure and have a better understanding of it, because it seems to me at times we're fighting for definitions."⁴³⁵ It may be that a reprise of the Kennedy hearings—which built political momentum for airline deregulation⁴³⁶—can occur for local telecommunications.

Economists and legal commentators strongly support reform of the communications laws, as detailed above, and companies that have experienced lower long-distance prices can be expected to advocate for further legislation that promotes competition. With these groups in agreement and the seeming energy both of important Senators and of the FCC Chairman, it is possible that a window of legislative opportunity is available. Economists and other commentators need to marshal evidence of the success of markets in telecommunications—such as the evidence of how the intrastate airline markets or the unregulated agricultural commodities markets, each behaving competitively, helped spur reform in those areas.⁴³⁷ Such evidence should be at hand, for competition in long-distance and other telecommunications and cable markets has succeeded.⁴³⁸ Prompting this legislative action is important because the FCC is bound to the current definitions of the Act and because its actions are going to be challenged and subjected to judicial review. In passing the Airline Deregulation Act of 1978, Congress faced the question of what more there was to do after CAB Chairman Alfred Kahn had already instituted much of the deregulatory agenda. The answer was clear:

[A] revised act is needed to insure that a future CAB's do not undo the work of the present CAB and reimpose strict regulation. And even with respect to the present Board, its programs have not been subjected to complete judicial review, and it is not clear that the courts will conclude that existing law allows these programs. Moreover, the different elements of the Board's reform programs are interrelated . . . and a court decision

434. *Id.*

435. *Id.*

436. See *supra* notes 30–31 and accompanying text (discussing the 1975 "Kennedy hearings").

437. See *supra* notes 20–26 and accompanying text (describing airline deregulation).

438. See *supra* notes 150–77 and accompanying text (addressing competition between wireline and video service providers).

overruling any single CAB policy could set back the entire CAB program.⁴³⁹

The FCC has been doing heroic work trying to keep up with a market changing in Internet time, but legislative confirmation and assistance is now necessary.

I have not provided all of the pieces to implementing this agenda, but the framework for the future seems clear. New competition will need more than the lifting of legal prohibitions on entry; it will need a comprehensive review of the economics of regulations that may deter entry as an economic matter. Only then can there be a test of whether communications markets can become more fully competitive as a structural matter, and only then will a "deregulation" in the model of trains, trucks, and planes yield competition's benefits.

439. Air Service Improvement Act of 1978, H.R. REP. NO. 95-1211, at 4 (1978).

