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Three strains of rhetoric coexist in debates about the appropriate regulatory institutions for the Internet and Internet services. The first strain cried that the Internet should never be regulated and, in its strongest versions, asserted that the Internet *cannot* be regulated.[1] The second strain responds to one of the implicit assertions in the first—the assertion that the Internet has successfully grown without regulation—to note that much of its growth was possible precisely because regulation of telephone carriers prevented them from blocking this new network's expansion.[2] The third, more recent strain, includes arguments for significant new regulation of emerging Internet services to combat the market power of providers, guarantee access, or otherwise maintain the public interest. The specific debates range from the cable open access debate,[3] to multimedia instant messaging,[4] to interactive television[5]—to name only a few.

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1. *E.g.*, PETER W. HUBER, LAW AND DISORDER IN CYBERSPACE: ABOLISH THE FCC AND LET COMMON LAW RULE THE TELECOSM 4 (1997); Dan L. Burk, *Virtual Exit in the Global Information Economy*, 73 CHI.-KENT L. REV. 943, 995 (1998).

2. *E.g.*, Francois Bar et al., *Access and Innovation Policy for the Third-Generation Internet*, 24 TELECOMM. POL'Y 489, 492 (2000); Mark Cooper, *Open Access to the Broadband Internet: Technical and Economic Discrimination in Closed, Proprietary Networks*, 71 U. COLO. L. REV. 1011, 1020–22 (2000); Mark A. Lemley & Lawrence Lessig, *Open Access to Cable Modems*, 22 WHITTIER L. REV. 3, 13–15 (2000).

3. *See generally* Mark A. Lemley & Lawrence Lessig, *The End of End-to-End: Preserving the Architecture of the Internet in the Broadband Era*, 48 UCLA L. REV. 925, 930–33 (2001) (discussing the origin and the consequences of end-to-end design principles); James B. Speta, *The Vertical Dimension of Cable Open Access*, 71 U. COLO. L. REV. 975 (2000) [hereinafter Speta, *Vertical Dimension*].

4. *E.g.*, Philip J. Weiser, *Internet Governance, Standard Setting, and Self Regulation*, 28 N. KY. L. REV. 822, 844 (2001) (discussing the debate over instant messaging regulation).

5. *E.g.*, Hernan Galperin & Francois Bar, *The Regulation of Interactive Television in the United States and the European Union*, 55 FED. COMM. L.J. 61, 63 (2002).

These rhetorical strains do not map precisely onto the possibilities for regulatory governance of the Internet,[6] but here there are three dominant possibilities as well. First, many propose that the Internet should remain "unregulated," which generally means that no sector-specific regulation should be developed to address Internet carriers and services. Rather, Internet markets and market participants would be governed only by background legal regimes that apply more generally, most importantly, antitrust. Second, many propose that the Federal Communications Commission ("FCC") should, as it seems to be doing currently, address Internet competition issues on a case-by-case basis, regulating when there is a clear case to do so. In this Symposium Issue of the Loyola University Chicago Law Journal, Professor Philip Weiser proposes a common-law system of FCC regulation in which the FCC asserts its so-called Title I powers under the Communications Act of 1934[7] to regulate when the case is compelling.[8] The last possibility, rarely proffered, is the development of a substantial regulatory regime for the Internet, tracking in part the regulatory structures long-applicable to telephone companies.

I here offer a version of this last structure. In a previous article, I proposed a common carrier approach to Internet interconnection regulation.[9] I now more fully operationalize how such a legal regime would work and explain why I think this regime would be superior to one that relies solely on common-law processes, be they the court-centered processes of antitrust or agency-centered processes developed under Title I of the Communications Act. While I have no brief for imposing full-blown price, service, and process regulation on Internet carriers and services, many of the controversies surrounding Internet competition have in common a dispute over interconnection.[10] Indeed, maintaining the full-network nature of Internet services would be advanced by an interconnection default rule. I will argue that this interconnection rule ought to be established by statute, with the FCC delegated authority to implement it. This regime will be superior both

6. By which I mean the debate over which regulatory institutions should address competition matters on the Internet, and not more. Therefore, I am not referring to the debates over governance of the domain-name system or over content regulation on the Internet.

7. *See* 47 U.S.C. §§ 151–161 (2000 & West Supp. 2003).

8. Philip J. Weiser, *Toward a Next Generation Regulatory Strategy*, 35 LOY. U. CHI. L.J. 41, 65–84 (2003).

9. James B. Speta, *A Common Carrier Approach to Internet Interconnection*, 54 FED. COMM. L.J. 225 (2002) [hereinafter Speta, *Internet Interconnection*].

10. *See id.* at 229–43; Weiser, *supra* note 8, at 70.

to relying on antitrust alone and to relying on the FCC's current (vague and uncertain) Title I authority.

Certainty is one of the most significant benefits of this regime. The antitrust process and the Title I process could impose interconnection within the domain of particular cases. But a statutory interconnection rule is superior for institutional and operational reasons. Unlike courts operating under antitrust laws, agencies possess the expertise to supervise the pricing structures that may be necessary to implement interconnection rules. Moreover, the FCC, unlike a single antitrust court, may immediately control the national telecommunications marketplace. But Title I of the current Act provides neither sufficient agency regulatory authority, nor an adequate imperative for agency action to assure that Internet interconnection prevails. Title I, in fact, contains no particular direction to the agency at all. On balance, an interconnection rule mandated by statute seems a better alternative to a common-law rule.

Part I of this article suggests some inadequacies of a court-administered common-law regime—i.e., the inadequacies of relying on antitrust alone. Interconnection disputes are likely, and their resolution will require the application of a pricing regime. Even in circumstances in which courts have entertained antitrust actions, they have long been wary of attempting to supervise pricing regimes of this sort. In short, agency expertise is required. Part II details the inadequacies of an agency-centered, common-law regime—i.e., the inadequacies of a Title I regime. In particular, a Title I regime rests on shaky legal ground, both as to the FCC's fundamental authority vel non to regulate the Internet and as to the likelihood that any particular FCC regulatory decision would withstand judicial review. Even if the FCC's Title I authority were clear, that regime does not provide market participants sufficient notice of the scope of the agency's potentially significant interventions. Part III describes in more detail the interconnection regime and the FCC's supervision of such a regime. The conclusion offers a somewhat more theoretical justification for my proposal on the grounds that it appropriately balances likely errors and their costs.

I. THE DIFFICULTIES OF USING AN ANTITRUST REGIME TO REGULATE THE INTERNET

The antitrust regulatory alternative asserts that sector-specific rules for the Internet are unnecessary and probably harmful, and that the general regime of antitrust is both sufficient and preferable. Embedded within the usual argument for antitrust are three subsidiary claims, although advocates for the antitrust regime need not rely upon all of

these. The first claim is that the incidence of competition problems is likely to be low because of the Internet's market structure and the presence of multiple entities in most Internet markets. The second is that antitrust can adequately address whatever competition problems do develop on the Internet.[11] The third is that the antitrust regime's benefits, attributable to the *absence* of a sector-specific regulator, outweigh any residual competition problems not adequately addressed.[12]

There are reasons to be skeptical of all three claims, the last two in particular. First, the early history of the Internet, which is of course all that is available, has already been characterized by a significant number of interconnection disputes, ranging from the cable modem debate to instant messaging, backbone peering, and Internet telephony.[13] As the market matures, increasing numbers of market actors will provide sufficient interconnection alternatives that any party seeking access will be able to secure access. Many current interconnection disputes will disappear or become trivial.[14] Nevertheless, market evolution also presents the opportunity for new interconnection disputes to arise, such as the nascent controversies over open multimedia wireless platforms[15]

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11. HUBER, *supra* note 1, at 100 ("[A]ntitrust law remains by far the best instrument for policing economic behavior in the telecosm.").

12. *E.g.*, *id.* at 89 ("In the telecommunications arena, the single largest impediment to effective antitrust enforcement has been the FCC itself.").

13. *See generally* Speta, *Internet Interconnection*, *supra* note 9, at 229–43 (describing various Internet interconnection disputes).

14. I do not have a technological or business-case crystal ball, but many commentators (including me) have surveyed past and current developments and believe that additional competition is coming in most communications markets, which would obviate the need for much regulation. *See, e.g.*, 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, 48–61 (2000) [hereinafter Speta, *Handicapping the Race*] (surveying various broadband technologies and concluding, albeit prior to the Internet crash, that "a number of technologies will soon compete to provide video, telephone, and data, including Internet, services"); Daniel F. Spulber & Christopher S. Yoo, *Access to Networks: Economic and Constitutional Connections*, 88 CORNELL L. REV. 885, 970–76, 988–93, 1018–21, 1024 (2003) (reviewing markets and stating, "[S]ufficient competition in the provision of network services eventually would suggest regulatory forebearance in setting access rates and compelling access, with reliance instead on markets both for pricing of network services and for assuring the provision of access."); *see also* Inquiry Concerning the Deployment of Advanced Telecommunications Services 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, para. 1 (2002) ("We are also encouraged by technological and industry trends, which indicate that alternative and developing technologies will continue to be made available to consumers.").

15. James B. Speta, *Maintaining Competition in Information Platforms: Vertical Restrictions in Emerging Telecommunications Markets*, 1 J. ON TELECOMM. & HIGH TECH. L. 185, 188 (2002) [hereinafter Speta, *Maintaining Competition*].

or access to interactive television triggers.[16] To some extent, so long as technological advancement continues, interconnection disputes will likely remain.

Second, while the cases against the integrated Bell System[17] and the famous *Otter Tail*[18] case demonstrate that antitrust can address interconnection disputes, this regulatory alternative suffers several deficits. Antitrust depends upon case-by-case adjudication and the development of facts via an adversarial process,[19] creating the possibility for delay and nonuniformity, both of which interfere with the development of business models.[20] It is true that the D.C. Circuit has recently pushed the FCC to adopt substantially nonuniform rules under the 1996 Telecommunications Act's local competition provisions,[21] and the FCC has seemingly complied. But that decision is based more on an interpretation of the controlling statute—that Congress required a

16. *E.g.*, Galperin & Bar, *supra* note 5, at 79 (discussing the role of interfering with interactive signals as part of anti-competition strategies).

17. Government antitrust litigation against the Bell System eventually resulted in the Consent Decree that divested the local operating companies (the Bell Operating Companies) from AT&T. *See* United States v. Am. Tel. & Tel. Co., 552 F. Supp. 131 (D.D.C. 1982), *aff'd. sub nom.* Maryland v. United States, 460 U.S. 1001 (1983). But, there was substantial private damages litigation against the Bell System as well, which has sometimes been credited with moving AT&T to agree to the consent decree. *See* Mark C. Rosenblum, *The Antitrust Rationale for the MFJ's Line-of-Business Restrictions and a Policy Proposal for Removing Them*, 25 SW. U. L. REV. 605, 614 (1996).

18. Otter Tail Power Co. v. United States, 410 U.S. 366 (1973) (affirming antitrust injunction requiring a local electric company to provide distribution of power from a distant producer to local consumers).

19. Stephen Breyer, *Regulation and Deregulation in the United States: Airlines, Telecommunications and Antitrust*, *in* DEREGULATION OR RE-REGULATION 44–45 (Giandomenico Majone ed., 1990). Breyer stated:

> Antitrust policy is administered primarily by courts, operating through rule and precedent. Courts find it difficult to reverse direction or to have a change of heart once a case is decided. Courts also have difficulty investigating underlying circumstances—particularly changes in circumstances—because they depend upon a record, produced through an adversarial process, for their information.

Id.

20. *See, e.g.*, Warren G. Lavey, *Making and Keeping Regulatory Promises*, 55 FED. COMM. L.J. 1, 8 (2002) ("[A]lthough many U.S. regulators claim to support faster broadband deployment by carriers, uncertainty about the details of future regulations can cause carriers and their suppliers to delay investment and service commitments.").

21. United States Telecom Ass'n v. FCC, 290 F.3d 415 (D.C. Cir. 2002) (holding that the FCC's uniform rules on leasing networks violated the Telecommunications Act, which required the FCC to consider the competitive impact of its rules prior to promulgation); *see also* Telecommunications Act of 1996, 47 U.S.C. § 251 (2000) (requiring local exchange carriers to unbundle their network elements).

finding of impaired competitor chances before unbundling could be ordered[22]—than upon any balance of the benefits of uniformity.

Moreover, antitrust courts are less vigorous in their embrace of claims (such as "essential facilities" claims) that would force a company with natural market power to open its property or business to others. Although both *Otter Tail* and the *Terminal Railroad*[23] cases stood as precedents, the Supreme Court's most recent pronouncement refused to adopt a finding of antitrust liability on essential facilities grounds.[24] The principal reason that antitrust courts are wary of essential facilities cases is that any mandatory interconnection regime, whether adopted by antitrust or regulation, requires detailed supervision over the pricing that governs the interconnection. Without price regulation, the essential facilities owner, even if interconnecting, can use its superior market power to erect an exclusionary barrier.[25] This barrier, which can take the form of a price squeeze or other manipulation of new market entry, can be nearly as effective as a simple denial of access.[26] Yet, "[o]nly rarely do the antitrust enforcement agencies create the detailed web of affirmative legal obligations that characterizes classical regulation."[27] As Professor Philip Weiser has pointed out elsewhere,[28] successful antitrust injunctions requiring access to essential facilities have depended upon the availability of expert regulators to supervise the details of the pricing arrangements between the essential facilities owner and those purchasing access.[29] For example, the injunction in *Terminal Railroad* depended upon the Interstate Commerce

22. *United States Telecom Ass'n*, 290 F.3d at 425 ("[T]he entire argument about expanding competition and investment boils down to the Commission's expression of its belief that in this area more unbundling is better. But Congress did not authorize so open-ended a judgment. It made 'impairment' the touchstone.").

23. United States v. Terminal R.R., 224 U.S. 383 (1912) (affirming injunction requiring railroad association to permit the use of a bridge over the Mississippi River by competing railroad lines).

24. *See* Aspen Skiing Co. v. Aspen Highlands Skiing Corp., 472 U.S. 585, 610–11 & n.44 (1985) (affirming on the basis of a refusal to deal theory, stating, "Given our conclusion that the evidence amply supports the verdict under the instructions as given by the trial court, we find it unnecessary to consider the possible relevance of the 'essential facilities' doctrine . . . .").

25. *E.g.*, JEAN-JACQUES LAFFONT & JEAN TIROLE, COMPETITION IN TELECOMMUNICATIONS 97–100 (2000), *available at* http://emedia.netlibary.com (last visited Sept. 21, 2003).

26. *Id.*

27. STEPHEN BREYER, REGULATION AND ITS REFORM 157 (1982).

28. Philip J. Weiser, Goldwasser, *the Telecom Act, and Reflections on Antitrust Remedies*, 55 ADMIN. L. REV. 1, 11–14 (2003); *see also* Gregory J. Werden, *The Law and Economics of the Essential Facility Doctrine*, 32 ST. LOUIS U. L.J. 433 (1987) (discussing the essential facilities doctrine and its relation to unilateral refusals to deal).

29. *See also* James B. Speta, *Antitrust and Local Competition Under the Telecommunications Act*, 71 ANTITRUST L.J. 99, 134–38 (2003) [hereinafter Speta, *Antitrust and Local Competition*].

Commission's ("ICC") administration of railroad rates;[30] in *Otter Tail*, the Court looked to the Federal Power Commission to establish and monitor rates;[31] and the FCC supervised access pricing after the AT&T Consent Decree required that the Bell companies provide equal access to all long-distance carriers.[32]

Third, antitrust's advantage of regulatory absence depends on the value that a regulator might supply. Regulation has well-known advantages and disadvantages. On the one hand, regulatory agencies possess greater specialty expertise and flexibility than the courts.[33] On the other hand, regulation often results in increased operating costs for regulated businesses and the possibility that agency capture will preserve monopolies and not destroy them.[34] I myself am generally skeptical of regulatory solutions unless they are made necessary by a serious and likely persistent market failure.[35] I have made the case, which I will develop further below, that the Internet needs a default interconnection rule.[36] As a result, I believe that an expert agency, whose jurisdiction is firmly and narrowly established by Congress, has an important role to play in regulating the Internet.

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30. United States v. Terminal R.R., 224 U.S. 383, 412 (1912).

31. *See* Otter Tail Power Co. v. United States, 410 U.S. 366, 373–74 (1973).

32. *See generally* United States v. Am. Tel. & Tel. Co., 552 F. Supp. 131 (D.D.C. 1982), *aff'd. sub nom.* Maryland v. United States, 460 U.S. 1001 (1983). In AT&T's case, the pricing was less problematic because the decree's business restrictions prevented the Bell Operating Companies ("BOCs") from providing long distance services. In the *Terminal Railroad* and *Otter Tail* cases, the defendants were required to provide input to their essential facility on a wholesale basis but were permitted to continue to compete in the relevant retail market. In such a circumstance, the competitive necessity to monitor the facility owner's pricing is much more imperative to prevent a price squeeze or other exclusionary pricing behavior. The AT&T consent decree contained line of business restrictions that were designed to give the BOCs only the incentive to sell access and to eliminate the BOCs' incentives to discriminate in their own favor.

33. *See, e.g.*, Breyer, *supra* note 19, at 45 ("Courts also have difficulty investigating underlying circumstances—particularly changed circumstances—because they depend upon a record, produced through an adversarial process, for their information.").

34. *See, e.g.*, 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.").

35. *See generally* Speta, *Handicapping the Race*, *supra* note 14, at 61; Speta, *Vertical Dimension*, *supra* note 3, at 977–78.

36. Speta, *Internet Interconnection*, *supra* note 9, at 275–79 (proposing a default interconnection rule for the Internet).

II. THE PROBLEMS OF AN FCC TITLE I REGULATORY REGIME

An alternative to antitrust would be a common-law regime of case-by-case legal development by the FCC under its Title I authority, also known as its ancillary jurisdiction. The FCC's involvement would address possible objections that an antitrust regime would be too variable and that antitrust courts lack the expertise to supervise pricing regimes necessary to resolve interconnection disputes. The Title I solution, however, suffers three potentially severe problems as well.

First, the FCC's authority under Title I is, at best, uncertain. I believe it unlikely that the courts would permit the FCC to regulate the Internet in any significant fashion. Second, even if courts clearly established the FCC's Title I authority to regulate the Internet, a common-law regime does not provide the default interconnection rule that I think is necessary. Similarly, the FCC's proceeding by way of common-law process subjects it to much more searching judicial review by the courts of appeals. For example, the D.C. Circuit especially, but not exclusively, has proved quite willing to second-guess the agency on most policy decisions. Third, the lack of precise substantive guidelines in Title I not only creates more uncertainty about the possibilities of regulation, but it also raises some of the spectre of agency capture.

A. The FCC's Uncertain Title I Authority

In its *Cable Modem Services Ruling*,[37] the FCC took its first big step to regulate a pure Internet service, and the Commission asserted that it had authority to do so pursuant to Title I of the Communications Act.[38] The FCC's statutory authority to regulate Internet carriers and services under this provision is less than well settled, however. The principal difficulty lies in the FCC's classification of Internet services as "information services" and not as "telecommunications service[s]."[39] If

37. 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 (2002) [hereinafter Cable Modem Services Ruling].

38. *See id.* paras. 59, 75–76.

39. *See id.*; *see also* Federal-State Joint Board on Universal Service, Report to Congress, 13 F.C.C.R. 11,501, paras. 73–74 (1998) (classifying Internet services as information services rather than telecommunications services); JASON OXMAN, THE FCC AND THE UNREGULATION OF THE INTERNET 22 (FCC Office of Plans & Pol'y, Working Paper No. 31, July 1999) (looking to future pressure for government intervention), *available at* http://www.fcc.gov/osp/workingp.html (last visited Oct. 13, 2003); Robert Cannon, *The Legacy of the Federal Communications Commission's Computer Inquiries*, 55 FED. COMM. L.J. 167, 191–92 (2003) (discussing classification as rooted in the physical network); 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, 225–38 (1999) (discussing

the Internet is not a telecommunications service, i.e., not a common carrier service, then the FCC cannot rely on its Title II powers to make legislative rules[40] or to adjudicate disputes.[41] The FCC has shown little desire to describe Internet services as telecommunications services, insisting that the information services classification is accurate.[42]

The argument that the FCC can regulate Internet services even if those services are not Title II common carrier services relies upon the FCC's general authority arising under Title I of the Communications Act. Title I created the FCC, described its membership and general operations, and stated its mission. Thus, section 1 of the Communications Act established the FCC "[f]or the purpose of regulating interstate and foreign commerce in communication by wire and radio,"[43] and section 2(a) states that "[t]he provisions of this chapter shall apply to all interstate and foreign communication by wire or radio."[44] Title I does include a general grant of rulemaking authority to the FCC, stating in section 4(i) that "[t]he Commission may perform any and all acts, make such rules and regulations, and issue such orders, not inconsistent with this chapter, as may be necessary in the execution of its functions."[45] Professors Thomas Merrill and Kathryn Watts have recently contended (persuasively in my view) that section 4(i) is *not* a grant of legislative authority to the FCC, but rather a grant of housekeeping authority empowering the agency only to set rules of internal procedure.[46] The Communication Act's substantive provisions

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classification difficulties and suggesting an alternative facilities bandwith approach for universal service).

40. The principal provision is § 201(b), which the Supreme Court found gave the FCC authority to make legislative rules as to any matter in Title II. *AT&T Corp. v. Iowa Utils. Bd.*, 525 U.S. 366, 377–78 (1999). There is good reason to doubt that this was the best interpretation of the rulemaking grant contained in this section, *see* Thomas W. Merrill & Kathryn Tongue Watts, *Agency Rules with the Force of Law: The Original Convention*, 116 HARV. L. REV. 467, 519 n.264 (2002), but it is now settled law.

41. *See* 47 U.S.C. §§ 207–208 (2000).

42. To be sure, the FCC in the Cable Modem Services Ruling offered the alternative position that cable modem services were telecommunications services that the FCC would "forbear" from regulating under its § 160 authority. *See* Cable Modem Services Ruling, *supra* note 37, para. 95, at 4847–48. But this was clearly a fall-back position in case the Commission's classification of the services as "information services" was reversed. *See id.* The FCC might in fact have difficulty supporting its forbearance ruling, because it would have to show that cable modem services are subject to effective competition, and that would require it to prove that DSL and cable were effective competitors.

43. Communications Act of 1934, ch. 652, § 1, 48 Stat. 1064, 1064 (1934) (codified as amended at 47 U.S.C. § 151 (2000)).

44. § 2(a), 48 Stat. at 1064 (codified as amended at 47 U.S.C. § 152(a) (2000)).

45. § 4(i), 48 Stat. at 1068 (codified as amended at 47 U.S.C. § 154(i) (2000)).

46. Merrill & Watts, *supra* note 40, at 517–19 (commenting on the legislative intent of section 4(i)).

and the FCC's regulatory authority cover only three specific types of communications services: (1) interstate common carriers under Title II, (2) spectrum licensees under Title III, and (3) cable operators under Title VI. Indeed, each of these Titles provides the FCC a grant of legislative rulemaking authority.[47] If the section 4(i) grant of authority included legislative rulemaking, then the specific inclusion of these other substantive grants would be redundant. As the Supreme Court made clear in *United States v. Mead*, judicial deference to agency interpretations does not derive from the agency's expertise over a particular question, but rather from Congress's grant of power to the agency to make rules that have the force and effect of law.[48]

It is true of course that several court decisions have relied upon Title I to establish in the FCC an ancillary jurisdiction that seems to permit the FCC to regulate even those entities that are not the subjects of the substantive titles of the Communications Act. For example, in *United States v. Southwestern Cable Co.*,[49] the Supreme Court relied upon these provisions to affirm FCC regulation of cable television, notwithstanding that it was neither a common carrier nor a broadcast service.[50] Indeed, the Court specifically rejected the argument that the FCC had authority over only common carriers and broadcasters, stating: "We cannot construe the Act so restrictively. Nothing in the language of § 152(a), in the surrounding language, or in the Act's history or purposes limits the Commission's authority to those activities and forms of communication that are specifically described by the Act's other provisions."[51]

Nevertheless, more recent Supreme Court authority construes the FCC's Title I authority much more narrowly, certainly overruling the broadest language of *Southwestern Cable*. For example, in *FCC v. Midwest Video*, the Court struck down a variety of access regulations the FCC sought to impose on cable companies on the grounds that those companies were not within the Communication Act's substantive jurisdiction.[52] While the regulations were perhaps warranted as good cable policy, they were unrelated to the Communications Act's substantive provisions.[53] The Court established that the exercises of Title I authority must be for purposes that are "ancillary to," by which it

47. *See* 47 U.S.C. § 201 (2000); 47 U.S.C. § 309(j) (2000 & West Supp. 2003).
48. United States v. Mead Corp., 533 U.S. 218, 221–31 (2001).
49. United States v. Southwestern Cable Co., 392 U.S. 157 (1968).
50. *Id.* at 168–74.
51. *Id.* at 172.
52. FCC v. Midwest Video Corp., 440 U.S. 689, 708–09 (1979).
53. *Id.* at 696–707.

meant "necessary to," the furtherance of its other regulatory authority.[54] All subsequent affirmances of FCC Title I regulatory authority have depended upon showing a close relationship between the regulation and the FCC's authority over common carriers or broadcasters.[55] Even if they are good law,[56] those decisions require the FCC's regulation to be strictly in furtherance of the goals of those substantive titles.[57]

Thus, as the FCC acknowledged in the *Cable Modem Services Ruling*,[58] its regulation of Internet carriers or services under Title I depends upon a finding that the regulation is necessary to protect common carrier, broadcast, or cable regulation. Such a finding is difficult to imagine in the Internet, however. There are two possibilities: first, that the Internet service presents a unique competition problem, unknown to traditional telecommunications markets because the infrastructure or service is new to the Internet, and second, that the Internet service creates a competition problem due to its interaction (as a competitor, complement, or otherwise) with traditional communications services. As examples of the first, in both the cable

54. *Id.* at 706–09.

55. *See, e.g.*, Motion Picture Ass'n of Am. v. FCC, 309 F.3d 796, 804 (D.C. Cir. 2002) (denying FCC authority under Title I to regulate broadcasting content because such authority is otherwise not granted in the Communications Act); Rural Tel. Coalition v. FCC, 838 F.2d 1307, 1315 (D.C. Cir. 1988) (affirming Title I authority to create Universal Service Fund to further the goal of developing common carrier services at an affordable rate); N. Am. Telecomm. Ass'n v. FCC, 772 F.2d 1282, 1292 (7th Cir. 1985) (affirming conditions of common carriers providing telephone equipment); GTE Serv. Corp. v. FCC, 474 F.2d 724, 730–31 (2d Cir. 1973) (finding that the FCC has the authority to regulate the manner in which common carriers provide data processing).

56. There is reason to think they may not be. More recent Supreme Court decisions have focused much more closely on the question of whether an agency has been delegated legislative authority to act in particular areas with the force of law. *See, e.g.*, United States v. Mead Corp., 533 U.S. 218, 226–28 (2001) (emphasizing that the first question in determining an agency's regulatory authority is a delegation from Congress to act with force of law); FDA v. Brown & Williamson Tobacco Corp., 529 U.S. 120, 159–60 (2000) (finding that the FDA did not have jurisdiction to regulate tobacco products because of a lack of explicit delegation of authority from Congress). *See generally* Thomas W. Merrill & Kristin E. Hickman, Chevron*'s Domain*, 89 GEO. L.J. 833 (2001) (analyzing the *Chevron U.S.A. Inc. v. Natural Resources Defense Counsel* doctrine of court deference to agency statutory interpretations); Eric A. Posner & Adrian Vermeule, *Interring the Nondelegation Doctrine*, 69 U. CHI. L. REV. 1721 (2002) (arguing against a constitutional basis for legislative grants of authority to the executive branch or its agents).

57. United States v. Southwestern Cable Co., 392 U.S. 157, 173–81 (1968) (holding that the FCC had authority under the Communications Act to forbid cable company importation of distant broadcast signals because importation would interfere with the structure of broadcast regulation); Computer & Communications Indus. Ass'n v. FCC, 693 F.2d 198, 206–20 (D.C. Cir. 1982) (concluding that the FCC had jurisdiction to forbid state regulation of customer premises equipment in furtherance of its common carrier regulation of telephone companies).

58. *See* Cable Modem Services Ruling, *supra* note 37, paras. 78–79.

modem dispute and the dispute over Internet backbone peering and transit arrangements, the only carriers and entities with a stake in the regulation are Internet carriers. But, in these types of cases, the FCC would not have "ancillary" jurisdiction, because regulating these new services or infrastructures would not be ancillary to traditional telecommunications, broadcast, or cable services.[59]

The FCC's attempt to claim ancillary authority in the second class of cases—where the new Internet service competes with a traditional service—runs square into the central theme of the Telecommunications Act of 1996 ("1996 Act"), which was the introduction of competition into all telecommunications markets. This presents the most significant barrier to the use of the agency's Title I authority. *Southwestern Cable* permitted the FCC to regulate cable companies in order to protect broadcasters, and hence broadcast regulation.[60] But the 1996 Act conclusively states that the FCC should encourage competitive entry in all telecommunications markets.[61] Indeed, the 1996 Act instructs the FCC to dismantle the Communications Act's regulatory structure when additional competition proves it unnecessary.[62] Under the 1996 Act, a Title I regulatory theory that depends on an argument that broadband carriers are providing competition to traditional Title II carriers should be met with an elimination of regulation, not the creation of an entirely new, untethered regulatory power for the FCC.

B. Common Law Process Under Title I

Even if the FCC has jurisdiction and substantive authority under Title I to regulate the Internet, proceeding under those provisions, especially in a common-law fashion of devising rules on a case-by-case basis, seems likely to create significant uncertainties. The first uncertainty is the FCC's ability, in the absence of any statutory confirmation of the goals it should pursue, to persuade the courts to let its decisions stand. Although the appellate standard of review is technically limited,[63] a

59. As to cable modem regulation, one can make an argument about "regulatory symmetry" between cable companies and the incumbent local exchange carriers ("ILECs") required to provide loops on a nondiscriminatory basis to unaffiliated entities. But it is hard to see how imposing open access requirements on cable companies would be *necessary* to maintaining the ILEC regulatory scheme.

60. *Southwestern Cable Co.*, 392 U.S. at 172–73.

61. *See* 47 U.S.C. § 253(a) (2000).

62. 47 U.S.C. §§ 160–161 (2000).

63. The courts of appeals should affirm the FCC's decisions if supported by substantial evidence, based on a permissible interpretation of the Act, and otherwise not arbitrary and capricious. *See* 5 U.S.C. § 706(2) (2000); *see also* 47 U.S.C. § 402(a) (2000) (applying judicial review procedures of 28 U.S.C. §§ 2431–51 to FCC orders and decisions); Chevron U.S.A. Inc.

review of the cases reveals, at a minimum, that the courts have not always approved of the FCC's implementation of the 1996 Act. The Supreme Court did uphold the FCC's core decisions to take jurisdiction over the rules implementing the 1996 Act's local competition provisions and to adopt forward-looking pricing methodology for unbundled network elements.[64] However, the Supreme Court and the D.C. Circuit struck down many of the FCC's other attempts to implement the 1996 Act as either irrational interpretations or as arbitrary and capricious.[65] In the first agency reversal under the lenient second prong of the *Chevron* standard, the Supreme Court refused to uphold the FCC's interpretation of the central "necessary" and "impair" standards for unbundling network elements.[66]

The D.C. Circuit's decisions in several cases also demonstrate a willingness to demand substantial theoretical and evidentiary bases for the FCC's policy decisions and conformity with the economic theories

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v. Natural Res. Def. Council, Inc., 467 U.S. 837, 842–45 (1984) (discussing court reviews of agency decisions).

64. *See generally* Verizon Communications, Inc. v. FCC, 535 U.S. 467, 476–77 (2002) (discussing rules for pricing these elements); 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).

65. *Iowa Utils. Bd.*, 525 U.S. at 388–91; Worldcom, Inc. v. FCC, 308 F.3d 1, 10 (D.C. Cir. 2002) (reversing in part the FCC's methodology to determine entry by BOC into long-distance (Massachusetts)); AT&T Corp. v. FCC, 292 F.3d 808, 811–13 (D.C. Cir. 2002) (reversing an FCC order that inter-exchange carriers must buy switched access from competitive local exchange carriers); United States Telecom Ass'n v. FCC, 290 F.3d 415, 419–30 (D.C. Cir. 2002) (invalidating the FCC's second attempt at global unbundled network elements ("UNE") rules); Sinclair Broad. Group v. FCC, 284 F.3d 148, 152 (D.C. Cir. 2002) (reversing in part the FCC's common broadcast ownership rules); Fox Television Stations, Inc. v. FCC, 280 F.3d 1027, 1040–45, 1049–50 (D.C. Cir. 2002) (finding the FCC's retention of national television station ownership and cable broadcast cross ownership rules arbitrary and capricious); Worldcom, Inc. v. FCC, 246 F.3d 690, 692–96 (D.C. Cir. 2001) (finding that the FCC's rules characterizing DSL service as an exchange access service were based on inadequate reasoning); AT&T Corp. v. FCC, 236 F.3d 729, 736–37 (D.C. Cir. 2001) (finding the FCC's methodology to determine market dominance arbitrary and capricious); Ass'n of Communications Enters. v. FCC, 235 F.3d 662, 668 (D.C. Cir. 2001) (finding unreasonable the FCC's decision to allow merging entity to satisfy resale obligations through a separate subsidiary); Iowa v. FCC, 218 F.3d 756, 758–60 (D.C. Cir. 2000) (concluding that the FCC was arbitrary and capricious in its definition of a common carrier entitled to receive universal service subsidies under the 1996 Act); Bell Atl. Tel. Co. v. FCC, 206 F.3d 1, 4–9 (D.C. Cir. 2000) (remanding for clarification the FCC's reasoning underlying its reciprocal compensation rules for ISP-bound calls); GTE Serv. Corp. v. FCC, 205 F.3d 416, 418–19 (D.C. Cir. 2000) (vacating in a large part the FCC's physical collocation rules); MCI Telecomm. Corp. v. FCC, 143 F.3d 606, 608–09 (D.C. Cir. 1998) (per curium) (remanding for further explanation the FCC's rules covering the implementation of payphone provisions of the 1996 Act).

66. *Iowa Utils. Bd.*, 525 U.S. at 387–92; *see also* GARY LAWSON, FEDERAL ADMINISTRATIVE LAW 642–43 (2d ed. 2001) (characterizing the Court's holding as notable for being the first reversal of agency action under the second prong of *Chevron*).

advanced by the judges.[67] While this tendency may or may not be proper under administrative law theory, it is certainly well-established. Although one of the aims of the 1996 Act was to eliminate one single judge's control over the telecommunications industry,[68] it is no exaggeration to say that the FCC is now sharply aware that its policies will receive searching review by the courts.[69]

Moreover, it seems likely that Title I regulation would be subject to heightened scrutiny under the First Amendment. The Supreme Court has clearly rejected the notion that the Internet suffers any scarcity or other feature that would give government regulation wide berth under a broadcast model of regulation.[70] Many Internet carriers and service providers will be able to establish that they engage in at least an editorial function, if not directly engaging in speech themselves.[71] In this regard, the FCC's long-standing position that Internet services are information services probably ensures that its regulations would be subject to First Amendment review. The classification as an information service emphasizes that the providers are not merely transmitting information but are engaged in the transformation, selection, or manipulation of information.[72] Needless to say, heightened

67. In this regard, I am thinking principally of the D.C. Circuit's *United States Telecom Ass'n* decision striking down the UNE rules and its *Fox Television Stations* decision demanding greater theoretical and evidentiary basis for the national television station ownership rules. In both cases, the court acknowledged that the agency had provided a theory, but it demanded even more justification of that theory—signaling its disapproval of it on the merits, albeit in the language of administrative law. *See United States Telecom Ass'n*, 290 F.3d at 419–30; *Fox Television Stations*, 280 F.3d at 1040–45.

68. That judge was Judge Greene, who supervised the AT&T Consent Decree. For a description of this as one of the rallying cries behind the 1996 Act, as well as a reassessment of Judge Greene's performance, see generally Joseph D. Kearney, *From the Fall of the Bell System to the Telecommunications Act of 1996: Regulation of Telecommunications Under Judge Greene*, 50 HASTINGS L.J. 1395 (1999).

69. *See, e.g.*, Chairman Michael Powell, Statement at Public Hearing on Broadcast Ownership (Feb. 27, 2003) ("Five times in the past two years we have defended our ownership rules in court. Five times we have lost. To put it in terms that hard core baseball fans can appreciate, 0 for 5 puts the Commission below even the 'Mendoza line.'"), *available at* http://www.fcc.gov/headlines.html (last visited Sept. 21, 2003); Chairman Michael Powell, Statement at Public Hearing on Media Ownership (Jan. 16, 2003) (stating that the FCC needs evidence "[it] can actually use to defend ownership rules" to the D.C. Circuit), *available at* http://www.fcc.gov/headlines.html (last visited Sept. 21, 2003).

70. Reno v. ACLU, 521 U.S. 844, 868–70 (1997).

71. *Cf.* Turner Broad. Sys., Inc. v. FCC, 512 U.S. 622, 636–41 (1994) (finding that the FCC's "must-carry" regulation is subject to heightened scrutiny due to the speech and editorial functions of cable operators). In fact, in *Comcast Cablevision of Broward County, Inc. v. Broward County*, 124 F. Supp. 2d 685 (S.D. Fla. 2000), the district court struck down the county's cable open access ordinance on First Amendment grounds.

72. *See* 47 U.S.C. § 153(20) (2000) (defining information service).

First Amendment review would make any FCC regulation pursued under Title I even less likely to withstand judicial scrutiny.[73]

Unlike Title II, Title I does not expressly include an interconnection default rule.[74] Given the rigorous judicial review to which the FCC's decisions are subject, I believe it unlikely that the FCC could use its Title I authority to develop an interconnection default rule.

C. Case-by-case and Capture

The lack of a statutory interconnection prescription, or any other substantive standards, in Title I and the prospect for judicial review are not dispositive against a Title I regime. The FCC could respond to particular competitive problems by developing a complete record and providing a specific remedy that would withstand judicial review. In other words, the FCC could act very similarly to an antitrust court but could use its comparative expertise over communications markets and technologies.[75]

Nevertheless, the lack of substantive guidelines in Title I creates institutional problems apart from the possibility that any FCC decision will fail judicial review. The FCC's assertion of a common-law power to regulate the Internet will provide market participants little guidance as to the scope of that regulatory authority. Indeed, Title I's vague standards create the possibility that the FCC will apply tests other than the competition analysis it currently imports from antitrust law. Not that long ago, notions of "public interest, convenience, and necessity" treated competition as only one factor in a complex analysis.[76] An extended rehearsal of such telecommunications law favorites as the

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73. *Cf.* Joseph D. Kearney & Thomas W. Merrill, *The Great Transformation of Regulated Industries Law*, 98 COLUM. L. REV. 1323, 1370–72 (1998) (noting the increase in judicial invalidation of regulation affecting more traditional forms of communication under the First Amendment).

74. *See* 47 U.S.C. §§ 201(a), 251(a) (2000); *see also infra* Part III.B (discussing a proposal for an interconnection default rule for Internet carriers).

75. Interestingly, even in this scenario, the FCC may be subject to more stringent appellate review than would a district court in an antitrust case, but this depends largely upon whether Justice Scalia succeeds in conflating administrative law's substantial evidence standard with the clearly erroneous standard applicable in civil litigation, a topic that is not even within the ancillary jurisdiction of this paper. *Compare* Universal Camera Corp. v. NLRB, 340 U.S. 474, 492–97 (1951) (finding that a substantial evidence review requires a searching review of the agency's record and decision), *with* Allentown Mack Sales & Serv. Corp. v. NLRB, 522 U.S. 359, 367 (1998) (equating substantial evidence standard with jury standard).

76. *See, e.g.*, Haw. Tel. Co. v. FCC, 498 F.2d 771, 775–76 (D.C. Cir. 1974) (finding that the FCC must particularly consider public interest in terms of convenience and necessity).

Hush-A-Phone decision[77] or *Execunet*[78] is unnecessary to establish that the Commission has had and continues to have substantial leeway in suppressing competition as the controlling test.

In fact, the FCC's *Carterfone* decision[79] came only after the D.C. Circuit, in *Hush-A-Phone* and other similar cases, made it clear to the FCC that it should not tolerate AT&T's anti-interconnection policies with respect to customer premises equipment ("CPE").[80] Even more importantly, vague statutory standards permit an agency the leeway that facilitates agency capture or politically expedient decision making. Neither makes for sound communications policy and the former can actually entrench monopoly.[81] The 1996 Act aimed to eliminate regulation that created barriers to entry and competition[82] and to decrease the likelihood that obsolete regulations would stand in the way of competition.[83] Developing a new regime of regulation without specific statutory direction seems fundamentally inconsistent with the 1996 Act's desire to decrease the role of regulation in the markets.

III. A STATUTORY INTERCONNECTION RULE

This Article's proposal for a statute giving the FCC regulatory authority over the Internet is not a proposal for the entire regime instituted by the 1934 Act, which included a duty to serve the public, retail price regulation, and nondiscrimination rules all backed up by a

77. Hush-A-Phone Corp. v. United States, 238 F.2d 266 (D.C. Cir. 1956). It was actually not until the later *Carterfone* proceedings that the FCC implemented this decision in a meaningful way. *See* Use of the Carterfone Device in Message Toll Telephone Service, Memorandum and Order, 14 F.C.C.2d 571 (June 26, 1968).

78. MCI Telecomms. Corp., v. FCC, 561 F.2d 365 (D.C. Cir. 1977) (forcing the FCC to justify maintaining AT&T's long-distance monopoly).

79. Use of the Carterfone Device in Message Toll Telephone Service, Decision, 13 F.C.C.2d 420 (Sept. 11, 1968).

80. *Hush-A-Phone Corp.*, 238 F.2d at 268. *See generally* Günter Knieps & Pablo T. Spiller, *Regulating by Partial Deregulation: The Case of Telecommunications*, 35 ADMIN. L. REV. 391, 404 (1983) (discussing AT&T's pre-1968 policy that forbade the use of CPE not manufactured by AT&T).

81. *See, e.g.*, FRED S. MCCHESNEY, MONEY FOR NOTHING: POLITICIANS, RENT EXTRACTION AND POLITICAL EXTORTION 30–32 (1997) (explaining that where statutes give decision makers leeway, the possibility of capture or political rent seeking are higher).

82. 47 U.S.C. § 253(a) (2000) (preempting any state law or rule that "prohibit[s] or ha[s] the effect of prohibiting" the entry of any entity into telecommunications markets); *see also* H.R. REP. NO. 104–204, at 50 (1996), *reprinted in* 1996 U.S.C.C.A.N. 10, 13–14 (concluding that state regulation was protecting incumbents from competition).

83. *See* 47 U.S.C. § 161 (2000) (requiring a biennial review of FCC regulations to determine whether competition has made them obsolete).

tariff-filing requirement.[84] Rather, this Article advances a statutory default rule that would require Internet carriers to interconnect amongst themselves and with retail customers. The FCC would have authority to supervise interconnection arrangements and to entertain complaints concerning those arrangements, but such authority would be strictly cabined. Unlike a pure common law regime under Title I, the FCC would have explicit authority and an explicit but limited set of regulations it could impose.

A. Justification for a Statutory Regime

The justification for a statutory default rule of Internet interconnection depends upon three assertions that focus on the costs and benefits of such a rule. First, an interconnection rule has substantial benefits. The Internet is a network of networks, and its utility largely depends on the principle of universal interconnectivity. This is true both as a technical and as an economic matter.[85] The Internet's technical innovation is its ability to transmit data that emerges from any application and to permit applications to correspond without any changes to the transport networks.[86] Because the Internet is essentially a connectivity good, it exhibits network effects as an economic matter, whereby its utility to consumers grows as connections increase.[87]

Second, a legal rule will be necessary to maintain such interconnection, at least sometimes. If markets provide interconnection, the benefits of an interconnection rule are realized without regulation, and, given that regulation has costs, the legal rule probably could not be justified.[88] As noted above, however, the Internet has seen a substantial

84. *See* 47 U.S.C. § 201(a) (2000) (duty to provide service on request); *id.* § 201(b) ("just and reasonable" pricing); *id.* § 202(a) (nondiscrimination obligations); *id.* § 203(a) (tariff-filing requirements).

85. *See generally* Speta, *Internet Interconnection*, *supra* note 9, at 243–51 (discussing the technical, legal, and economic aspects of the Internet and interconnection).

86. *See generally* Lemley & Lessig, *supra* note 3, at 930–33 (discussing the "principle of nondiscrimination among applications" and how it has facilitated innovation on the Internet).

87. *See generally* Michael L. Katz & Carl Shapiro, *Network Externalities, Competition, and Compatibility*, 75 AM. ECON. REV. 424, 426–29 (1985) (examining a formal model of network competition); Mark A. Lemley & David McGowan, *Legal Implications of Network Economic Effects*, 86 CAL. L. REV. 479, 551–61 (1998) (exploring the application and role of network economic theory on the Internet).

88. *See generally* Speta, *Internet Interconnection*, *supra* note 9, at 268–79 (discussing the legal, economic, and technical reasons supporting an interconnection rule).

number of interconnection disputes already,[89] and it is likely that at least some interconnection disputes will continue to develop.[90]

Third, a statutory default rule would provide beneficial notice and certainty. Industry actors would develop business models on the presumption that interconnection—but not more—was required. In those situations in which the FCC acted to maintain interconnection, it would not bear the burden of proving to the courts of appeals that interconnection was good economic policy, nor would the private costs of the default rule seem severe. It is possible to imagine the development of a business plan in which an Internet carrier would provide only selective access to content providers and services. The interconnection rule advocated here, however, requires interconnection only if the network describes itself as an "Internet carrier."[91] Thus, a company that believed it had developed a truly innovative network would not be required to interconnect.[92]

B. The Specified Interconnection Rule

Under the statutory interconnection default rule, Internet carriers would be required to interconnect, directly or indirectly, with other Internet carriers when the FCC found, by rule or adjudication, that a carrier's market power threatened competition. An Internet carrier would include any entity that sold Internet access service at retail or that sold a transport service to Internet carriers. It would also encompass Internet services that provide network addressing, either on a de jure basis, such as allocation of IP numbers, or on a de facto basis, such as names and presence databases implementing instant messaging or equivalent services.

Interconnection would require an Internet carrier to transport or transit IP-compliant traffic on an equal footing with the IP access service sold to its retail customers. The FCC would be empowered to

89. *See* Speta, *Internet Connection*, *supra* note 9, at 229–42 (describing various Internet interconnection disputes); *see also supra* notes 15–16 and accompanying text (listing exemplary Internet interconnection disputes).

90. *See supra* notes 15–16 and accompanying text (describing nascent Internet interconnection disputes).

91. *See infra* Part III.B.1 (defining Internet carriers).

92. Additionally, of course, the intellectual property laws might protect an innovative service, even if offered over the traditional Internet. *Cf.* F.M. SCHERER, INDUSTRIAL MARKET STRUCTURE AND ECONOMIC PERFORMANCE 444 (2d ed. 1980) (discussing a theory that intellectual property rights provide rents, and therefore incentives, to creators); Speta, *Maintaining Competition*, *supra* note 15, at 212 (stating that "[i]ntellectual property protections will also provide some assurance that innovation incentives will be maintained" when a new service is deployed to an interconnected network).

order interconnection upon a showing or finding of both a denial of direct access to an Internet carrier and the unavailability of indirect interconnection opportunities. In such circumstances, the FCC would be permitted to set prices governing the interconnection relationship, but it would not be empowered to require unbundling. This section explores these proposals in detail.

1. "Internet Carriers" Defined

The definition of Internet carriers is relatively straightforward, and it tracks the definition of a common carrier under Title II of the Act.[93] Indeed, a substantial argument can be made that many Internet carriers largely or exclusively engage in the shipment of bits, and on that basis, engage in telecommunications as common carriers and not information services.[94] Even apart from that argument, it is certainly possible to identify those entities that sell Internet access at retail to the public and those that sell transit to the Internet Service Providers ("ISP") as "Internet carriers" with a well-defined role. The definition is somewhat broader, however, to ensure that the interconnection duty also reaches the addressing services necessary to maintain the Internet as a network. The FCC and international authorities maintain the telephone numbering system to prevent duplication and ensure a distribution of numbers that permits a logical switching protocol.[95] Allocation of IP addresses is exactly parallel.[96] Moreover, services such as AOL's instant messenger depend upon a de facto address allocation and routing

93. *See* 47 U.S.C. § 153(46) (2000) (defining telecommunications services as offerings of telecommunications for a fee to the public); *cf.* Southwestern Bell Tel. Co. v. FCC, 19 F.3d 1475, 1480 (D.C. Cir. 1994) (defining common carrier in the same manner as Title II of the Telecommunications Act as one who "holds himself out to serve indifferently all potential users"); Nat'l Ass'n of Regulatory Util. Comm'rs v. FCC, 525 F.2d 630, 641 (D.C. Cir. 1976) (defining common carrier in the same manner as Title II of the Telecommunications Act, that "to be a common carrier one must hold oneself out indiscriminiately to the clientele one is suited to serve").

94. *See* Speta, *Internet Interconnection*, *supra* note 9, at 269–71 (discussing aspects of Internet carriers that might justify common carrier status); *see also* Cable Modem Services Ruling, *supra* note 37, para. 95 (inviting commentary on whether cable modem services should be subject to common carrier regulation).

95. *See generally* MARTIN P. CLARK, NETWORKS AND TELECOMMUNICATIONS: DESIGN AND OPERATION 125–30 (2d ed. 1997). The universal deployment and interconnection of telecommunication carriers' SS7 signaling systems and databases largely removes the necessity that telephone numbers be allocated on geographic bases, but a numbering authority still must ensure non-duplication. *See id.*

96. Professors Michael Froomkin and Mark Lemley have recently made the parallel argument that the similar role of ICANN in the domain name system should subject it to antitrust scrutiny. *See generally* A. Michael Froomkin & Mark A. Lemley, *ICANN and Antitrust*, 2003 U. ILL. L. REV. 1.

system known as a names and presence database. Because the network effects of such an address system are so large and because the instant messaging addressing scheme can begin to replace the underlying network's addressing scheme, an interconnection duty is warranted there as well.[97]

Similar to the definition of a telecommunications carrier, the definition of an Internet carrier applies only to those entities that sell Internet access service at retail to the public. As in telecommunications, one would be an Internet carrier by selling to any segment of the public; thus, DSL companies, for example, would be Internet carriers even if they sold service only to businesses or even only to a small business segment.[98] Of course, one could sell a service other than Internet access, such as raw transport of other sorts (e.g., frame relay) or an access service that provided only selective content (e.g., CompuServe or Prodigy before those services provided Internet access),[99] and such services would not be subject to the Internet interconnection duty.

2. The Interconnection Duty

The interconnection duty itself would require the transport or transit of IP-compliant traffic from other Internet carriers. Thus, to the extent that a company provided Internet access or transit to its customers, it would have to provide access to all of the content available on the

97. *See* Speta, *Internet Interconnection*, *supra* note 9, at 235–38, 273 (discussing instant messaging and its place in the interconnection debate); *see also* Weiser, *supra* note 4, at 844 (discussing the analytic incoherence of the FCC's treatment of instant messaging in the American Online/Time Warner merger proceedings and suggesting that more regulation may be necessary); Applications for Consent to the Transfer of Control of Licenses and Section 214 Authorizations by Time Warner Inc. and America OnLine, Inc., Transferors, to AOL Time Warner Inc., Transferee, Memorandum Opinion and Order, 16 F.C.C.R. 6547, paras. 176–90 (2001) (imposing on AOL Time Warner Inc. a duty to provide an open names and presence database when it upgraded instant messaging to a multimedia, broadband product).

98. *Cf. Nat'l Ass'n of Regulatory Util. Comm'rs*, 525 F.2d at 641 (stating that one need not serve the entire public to be a common carrier). Moreover, I have not proposed any "duty to serve," and so defining the relevant public for purposes of defining a common carrier's service obligation is less relevant here. *Cf.* 47 U.S.C. § 201(b) (2000) (requiring common carriers to provide service upon request). I do not think a duty to serve is necessary because I do not propose to control the ability of access providers with monopoly power to price based upon that monopoly power. *See infra* notes 106–09 and accompanying text (discussing incentives and strategies of dominant players, as well as pricing schemes).

99. A possible example of such service would be an Internet access provider that promised to permit the subscriber to access only certain types of approved content, such as an ISP that combined the portal services of Kosher.net or an ISP that served only sites that had content approved for kids. The proposed interconnection duty would not overthrow such services, which are in fact not selling Internet access.

Internet. Such a definition might seem circular,[100] or no more than a "truth in advertising" requirement, but its force comes because customer demand will be for Internet access service and not for something less.[101] The interconnection requirement could be satisfied indirectly, such as when an entity selling Internet access service is connected to a backbone that itself provides access to all other Internet carriers.[102]

The interconnection rule requires neither unbundling nor wholesaling of service. Thus, an Internet carrier need not provide access to its physical infrastructure in the manner that incumbent local exchange carriers must provide unbundled network elements under the 1996 Act.[103] An Internet carrier need not provide its service at wholesale to other, unaffiliated carriers to market at retail;[104] an Internet carrier would maintain its exclusive retail relationship with a customer, subject to the customer's ability to find another retailer in the market. I have maintained that such unbundling and wholesaling requirements would dampen incentives for network innovations too much.[105]

A difficult question is the extent to which this rule would constrain an Internet carrier's ability to engage in various types of differential pricing. Without pricing freedom, an Internet carrier with retail market

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100. However, this definition is no more circular that the historic definition of telecommunications common carriage, which defines a common carrier as one that offers service to the public as a whole. *See Nat'l Ass'n of Regulatory Util. Comm'rs*, 525 F.2d at 640 (noting the circularity of the common carrier definition).

101. *See* Speta, *Handicapping the Race*, *supra* note 14, at 79–81 (noting that where a good's value increases as others purchase it, demand for the good increases as others purchase it).

102. *See* MICHAEL KENDE, THE DIGITAL HANDSHAKE: CONNECTING INTERNET BACKBONES 15–32 (FCC Office of Plans & Pol'y, Working Paper No. 32, Sept. 2000) (discussing interconnection issues between backbone providers), *available at* http://www.fcc.gov/osp/workingp.html (last visited Sept. 21, 2003); Jay P. Kesan & Rajiv C. Shah, *Fool Us Once Shame on You—Fool Us Twice Shame on Us: What We Can Learn from the Privatizations of the Internet Backbone Network and the Domain Name System*, 79 WASH. U. L.Q. 89, 143–67 (2001) (discussing the role of the Internet backbone).

103. *See* 47 U.S.C. § 251(c)(3) (2000) (requiring that incumbent local exchange carriers provide "unbundled network elements in a manner that allows requesting carriers to combine such elements in order to provide such telecommunications service").

104. *Cf.* Lemley & Lessig, *supra* note 3, at 966 (noting that the Internet carriers, such as cable companies, are not "being forced to share their private property").

105. *See* Speta, *Handicapping the Race*, *supra* note 14, at 82–88. I am not (necessarily) criticizing here the FCC's recent decision to eliminate the so-called line-sharing requirement for DSL services, and I am certainly not criticizing the UNE approach to incumbent telephone network unbundling. It seems logical to further intramodal competition by unbundling the telephone network while encouraging intermodal competition by refusing unbundling rules in newly deployed technologies. A substantial argument can be made that the former unbundling does not interfere with innovation incentives and has been made by Professor William P. Rogerson. *See* 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.

power may have the incentive to block certain services in order to increase its own profitability.[106] On the other hand, pricing freedom may permit a carrier to engage in price squeezing or other anticompetitive behavior.[107]

To make these issues more concrete, consider a cable modem provider that is concerned that its Internet service may become a replacement for its traditional video services. If that provider can charge a premium for access to those Internet services more likely to be substitutes for traditional video, such as Internet streaming video, it will be more likely to provide such services. If it cannot charge such a premium, it may find that it loses money if it makes such services available to its Internet customers, and it may have an incentive not to offer them. The cable modem provider might price its Internet access on the basis of bandwidth used, and nothing in my proposed rule prevents an Internet carrier from charging by the bit or setting tiers of service by which heavier users pay more.[108] This freedom may suffice, because newer multimedia services are likely to be more bandwidth intensive than older services.

Thus, the cable modem provider may wish to charge for Internet access on the basis of the application (and not just the bandwidth) that the subscriber uses. Indeed, any provider would like to be able to engage in value of service pricing, where providers charge users on the basis of their value for the service,[109] and bandwidth charges will not necessarily mirror that. Eli Noam suggests that an indirect interconnection requirement, or as he phrases it, a rule that a carrier cannot discriminate against its customers' customers, would prevent carriers from engaging in at least some forms of price discrimination based on service quality.[110] The possibility that a network provider would develop differential charges or access policies for different types of services challenges the so-called end-to-end principle of the Internet most directly. Such practices place an access provider in the position of

106. *See* Speta, *Vertical Dimension*, *supra* note 3, at 1000 (noting the importance of pricing freedom to argue that even monopoly providers of high-speed Internet access will have incentives to provide open systems).

107. *See generally* Jacques Crémer et al., *Connectivity in the Commercial Internet*, 48 J. INDUS. ECON. 433 (2000).

108. *Cf.* Competitive Telecomms. Ass'n v. FCC, 998 F.2d 1058, 1061–63 (D.C. Cir. 1993) (holding that the non-discrimination rule under Title II requires only the selling of the *same* service on the same terms).

109. *See* Eli M. Noam, *Beyond Liberalization II: The Impending Doom of Common Carriage*, 18 TELECOMM. POL'Y 435, 451 (1994) (noting that "the ability to price discriminate makes it easier to be profitable").

110. *See id.* at 452.

treating traffic differently based upon the application that the traffic enabled.[111] As a result, Professor Timothy Wu has proposed a "network neutrality" rule that permits bandwidth charging but forbids charging on the basis of application.[112]

And Professor Lawrence Lessig has advanced the proposition that any carrier offering an IP service must simply transit all IP traffic equally.[113] It is on this dimension that the analogy to common carrier regulation begins to falter in the converged services environment. In the case of railroads or telephone service, a company could operate both as a common carrier for those services it offered generally to the public and as a private carrier for other services.[114] It was easy to identify the services because they involved different goods or traffic arrangements. The digital environment, however, allows the introduction of new services without alteration of the network's service arrangement.

At this stage in the Internet's development, I am unwilling to endorse a rule that requires carriers to be neutral among the applications carried over their networks, although I think that such a rule may well prevail in practice.[115] The interconnection rule proposed here would allow Internet access providers to offer services other than Internet access. It would also allow the carriers to offer services, such as direct connections or local caching, that successful new services may depend upon and to set different prices for those services than it sets for Internet access. The carrier would be required to interconnect to any provider of these services, thus eliminating provider discrimination if not eliminating price and service discrimination. In this way, the access provider retains substantial freedom. Such a rule might, in fact, lead to more openness than the rules proposed by Professors Wu and Lessig, because, under their rules, carriers may have incentives to provide only very limited bandwidth to their subscribers. On the other hand, to the extent the interconnection requirement has residual constraint on an

111. *See* Lemley & Lessig, *supra* note 3, at 931 (discussing the Internet's principle of nondiscrimination among applications).

112. *See* Timothy Wu, *Network Neutrality and Broadband Discrimination*, 2 J. ON TELECOMM. & HIGH TECH. L. (forthcoming 2003) (manuscript on file with author).

113. LAWRENCE LESSIG, THE FUTURE OF IDEAS: THE FATE OF THE COMMONS IN A CONNECTED WORLD 247–48 (2001).

114. Interestingly, this is somewhat similar to Professor Timothy Wu's proposal that a carrier may "police what it owns" and provide essentially private services on its own network. *See* Wu, *supra* note 112.

115. It may prevail in practice for technical reasons—that the treatment of different traffic on the basis of application is too difficult or costly to monitor. It may also prevail in practice for economic reasons—a recognition by carriers that consumer demand will depend on the continuing innovation in applications.

Internet carrier's pricing freedom, the result seems justified by the imperative of maintaining the Internet's network character.

C. The FCC's Authority

The statutory interconnection rule would have the great benefit of setting a default understanding that Internet service must remain interconnected. The FCC would have authority to enforce the requirement and to entertain complaints. Its authority, however, would be cabined to interconnection among carriers. It would not have jurisdiction to set retail prices or to order unbundling or wholesaling of services. The FCC would have the authority to order interconnection, but its authority to do so, by rule or on complaint, would be cabined to those situations in which it could establish that the denial of direct interconnection was not ameliorated by the availability of indirect interconnection. Its authority would be circumscribed by the limited scope of the interconnection requirement itself. Perhaps similar to the forbearance provision in the 1996 Act,[116] the statute should specify that competition in a market is dispositive against an interconnection order.

Despite this limited scope, the interconnection rule would still be beneficial. In circumstances in which interconnection is denied, the complaining party would not need to establish that the defendant carrier had market power or that its interconnection denial failed an antitrust rule of reason analysis—something likely required even in a Title I proceeding. The statutory imperative would provide a strong basis for any FCC order in the courts, and it would also provide a baseline for industry planning.

IV. CONCLUSION: ERROR RATES AND COSTS

As with so much else in telecommunications regulation, the desirability of a statutory default rule of interconnection depends on a balance of the factors as to which good data is difficult to come by, even after markets have developed. The balance here depends upon the frequency and costs of interconnection denials, the inability or delay of alternative legal regimes in addressing such denials, and the costs of providing for an interconnection rule (which include both regulatory costs and the costs of imposing legal interconnection requirements where such are actually detrimental to competition or innovation).[117]

116. 47 U.S.C. § 160(c) (2000).

117. *Cf.* ROGER G. NOLL, RESOLVING POLICY CHAOS IN HIGH SPEED INTERNET ACCESS 46 (Stanford Law and Econ., Olin Working Paper No. 239, May 2002) (advocating a balancing test

Interconnection is important to maintaining the network nature of the Internet. Interconnection has been a central feature of regulation of network industries, ranging from railroads to telegraphs to telecommunications carriers.[118] Additionally, other legal regimes for imposing interconnection, where legal interconnection rules are warranted, seem substantially less efficacious. The biggest wildcard is cabining the agency in a way that does not promote too many regulatory errors, but I believe that a narrowly drafted regime will do that.

in deciding cable open access policy), *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=311900 (last visited Sept. 21, 2003).

118. *See* Speta, *Internet Interconnection*, *supra* note 9, at 251–68 (discussing history of interconnection requirements in common carrier statutes).