

12-2010

Revisiting the Regulatory Status of Broadband Internet Access: A Policy Framework for Net Neutrality and an Open Competitive Internet


Lee L. Selwyn

Economics and Technology, Inc.

Helen E. Golding

Economics and Technology, Inc.

Follow this and additional works at: <http://www.repository.law.indiana.edu/fclj>

 Part of the [Administrative Law Commons](#), [Antitrust and Trade Regulation Commons](#), [Communications Law Commons](#), [Internet Law Commons](#), and the [Legislation Commons](#)

Recommended Citation

Selwyn, Lee L. and Golding, Helen E. (2010) "Revisiting the Regulatory Status of Broadband Internet Access: A Policy Framework for Net Neutrality and an Open Competitive Internet," *Federal Communications Law Journal*: Vol. 63: Iss. 1, Article 8.

Available at: <http://www.repository.law.indiana.edu/fclj/vol63/iss1/8>

This Article is brought to you for free and open access by the Law School Journals at Digital Repository @ Maurer Law. It has been accepted for inclusion in Federal Communications Law Journal by an authorized administrator of Digital Repository @ Maurer Law. For more information, please contact wattn@indiana.edu.



JEROME HALL LAW LIBRARY

INDIANA UNIVERSITY
Maurer School of Law
Bloomington

Revisiting the Regulatory Status of Broadband Internet Access: A Policy Framework for Net Neutrality and an Open Competitive Internet

Lee L. Selwyn*

Helen E. Golding**

I.	INTRODUCTION	92
II.	NEITHER FACT, POLICY, NOR PRECEDENT SUPPORT THE CLASSIFICATION OF BROADBAND INTERNET ACCESS AS ANYTHING BUT A BASIC TELECOMMUNICATIONS SERVICE	94
	<i>A. The Slippery Slope</i>	<i>94</i>
	<i>B. Longstanding Policies Requiring the Separation of Common Carrier Telecommunications from Information Services Should Apply Equally to Next Generation Technology.....</i>	<i>101</i>
	<i>C. Is Today's Broadband Internet Access an Information</i>	

* Lee L. Selwyn, founder and president of Economics and Technology, Inc., Boston, is an economist specializing in telecommunications policy and regulation, whose work in this field dates back to the late 1960s. Ph.D., Alfred P. Sloan School of Management, Massachusetts Institute of Technology, 1969; B.A., Economics, Queens College (CUNY), 1962.

** Helen E. Golding is vice president of Economics and Technology, Inc. She has been actively involved in telecommunications law and public policy since 1976. J.D., Boston University School of Law, 1977; A.B., Bryn Mawr College, *cum laude*, 1974.

	<i>Service or Simply Basic Transmission?</i>	106
III.	TECHNOLOGY-BASED CLAIMS THAT BROADBAND INTERNET ACCESS IS AN INFORMATION SERVICE.....	107
	A. <i>“Bundled” Information Services</i>	107
	B. <i>Domain Name Services</i>	111
	C. <i>Technology Transitions Are an Ongoing Part of Telecommunications Industry Progress</i>	114
	D. <i>Neither Its Eventual Destination (on the Public Internet) nor Its Bandwidth (Speed) Set Broadband Internet Access Apart from Other Last-Mile Telecommunications Services</i>	116
	E. <i>Regulating the Underlying Transmission in Internet Access Services is Not, and Would Not Amount to or Result in, the Regulation of Content or Application Providers</i>	119
IV.	ECONOMIC REALITIES REQUIRE REGULATORY SUPPORT FOR NONDISCRIMINATORY ACCESS BY COMPETITORS TO BROADBAND TRANSMISSION USED FOR INTERNET ACCESS .	120
	A. <i>Regardless of the Technology in the Upstream Network, Access Facilities Remain a Bottleneck</i>	121
	B. <i>Reevaluation of FCC Competition Analysis Needs to Extend to Broadband Access</i>	129
	C. <i>Reconciling Recent FCC Decisions with Existing Policies on Broadband Internet Access</i>	131
V.	CONCLUSION: NET NEUTRALITY CAN BEST BE ACHIEVED BY THE FULL RESTORATION OF NONDISCRIMINATORY ACCESS TO BROADBAND LAST-MILE FACILITIES	136

I. INTRODUCTION

When the United States Court of Appeals for the District of Columbia Circuit recently shut down the FCC’s attempt to impose “net neutrality” principles on the Internet access provider Comcast,¹ the FCC was forced to confront the fact that a decade’s worth of steps on the slippery slope of broadband access deregulation had led the FCC to an unforeseen and ultimately untenable destination, where it was unable to enforce the fundamental principles of common carrier regulation necessary to ensure that all Internet content and application providers—including those not

1. Formal Complaint of Free Press and Public Knowledge Against Comcast Corporation for Secretly Degrading Peer-to-Peer Applications, *Memorandum Opinion and Order*, 23 F.C.C.R. 13028 (2008), *vacated by* Comcast Corp. v. FCC, 600 F.3d 642 (D.C. Cir. 2010).

affiliated with the owners of Internet access facilities—were ensured reasonable and nondiscriminatory use of those facilities. The FCC had arrived at its current dilemma through an unfortunate combination of (1) unverified predictive judgments associating deregulation with investment; (2) fanciful notions about a gold rush of competitive entry into the consumer broadband market; (3) the abandonment of the decades-old “bright line” between common carrier transmission functions and competitive services that any provider could furnish using that basic transmission (i.e., telecommunications); and (4) the elimination of unbundling requirements for services over broadband facilities. The FCC needs now to revisit—and revise—the factual, legal, and policy judgments that have brought it to the current situation. The Chairman of the FCC has proposed that the regulatory oversight the FCC considers necessary for net neutrality can be restored by reclassifying Internet access as “telecommunications services,”² but under his proposed “Third Way,” the FCC would apply and enforce “only a handful of provisions of Title II”³

This Article explains why dedicated Internet access *is* a telecommunications service and, as such, why reclassification to Title II must be pursued to correct its earlier—and incorrect—treatment as an “information service.” More importantly, it explains why reclassification alone will not be sufficient to assure a competitive and open Internet, and why an approach that restores competitor access to common carrier broadband facilities for purposes of offering Internet access to their own retail customers remains the best strategy for achieving this goal. To be effective, these policies need to be applied regardless of the transmission medium or the regulatory status of the incumbent service provider; for example, incumbent local telephone exchange carriers (ILECs), incumbent cable companies, and wireless carriers that furnish Internet access must be embraced within this framework. To reach this result, the FCC needs to admit to factual errors underlying its broadband Internet access decisions of the past decade, but it also needs to admit to factual errors underlying its pervasive deregulation of broadband access facilities. The FCC stands a

2. Julius Genachowski, *The Third Way: A Narrowly Tailored Broadband Framework*, FCC, 4 (May 6, 2010), http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-297944A1.pdf.

3. *Id.* at 5. The legal analysis supporting the Chairman’s proposal was first laid out in an accompanying statement by the FCC’s General Counsel. See Austin Schlick, *A Third-Way Legal Framework for Addressing the Comcast Dilemma*, FCC (May 6, 2010), http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-297945A1.pdf [hereinafter Schlick Third-Way Memorandum]. And a yet more detailed analysis followed in the form of a *Notice of Inquiry* adopted by the FCC in June 2010. Framework for Broadband Internet Service, *Notice of Inquiry*, GN Docket 10-127, 2010 FCC LEXIS 3649 (June 17, 2010), available at http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-10-114A1.pdf.

better chance of attaining its goals of net neutrality and competitive Internet access if it combines reclassification with a requirement for unbundled access to all network elements necessary for nonfacilities-based providers to offer retail Internet access in competition with the retail services currently available solely from incumbent facilities-based providers.

II. NEITHER FACT, POLICY, NOR PRECEDENT SUPPORT THE CLASSIFICATION OF BROADBAND INTERNET ACCESS AS ANYTHING BUT A BASIC TELECOMMUNICATIONS SERVICE

A. *The Slippery Slope*

The first step along the slippery slope came, innocently enough, shortly after passage of the Telecommunications Act of 1996⁴ (1996 Act or TA96), in the context of the Federal-State Joint Board on Universal Service Report to Congress (the so-called *Stevens Report*).⁵ As it evaluated the various potential sources for federal universal service funding, the FCC was confronted with the primary question of whether to classify Internet Service Providers (ISPs) as providers of telecommunications services subject to assessment under the federal Universal Service Fund (USF), pursuant to the specific directives of the 1996 Act.⁶ Given its focus at the time, the FCC was basically trying to decide whether information services should be included in the USF funding base because they contained a “telecommunications” component. In the *Stevens Report*, the FCC expressed the view that ISPs were furnishing information, and not telecommunications, services, and that the intent of the 1996 Act was not to “break out” the telecommunications component of an information service so as to subject it to a separate universal service support obligation.⁷ After all, as the Commission noted, in most cases, the ISP purchased the underlying transmission as a telecommunications service, from a common carrier; whatever “telecommunications” was incorporated into the information service was thus already contributing to the USF base. The Commission went on to find that this treatment was consistent with the fact that the definitional structure for “telecommunications services” and “information services” in the 1996 Act, which—like the *Computer Inquiry II* framework on which it was based—contained two separate (and thus

4. Telecommunications Act of 1996, Pub. L. No. 104-104, 110 Stat. 56 (codified at scattered sections of 47 U.S.C.).

5. Federal-State Joint Board on Universal Service, *Report to Congress*, 13 F.C.C.R. 11501 (1998) [hereinafter *Stevens Report*].

6. Telecommunications Act of 1996. The questions that Congress directed the FCC to address in its Report to Congress are described at note 1 of the *Report. Stevens Report*, *supra* note 5, at para. 1 n.1.

7. *Stevens Report*, *supra* note 5, at paras. 33, 43.

mutually exclusive) definitions for an “information service” and a “telecommunications service.”⁸ In its *Report*, the FCC stated: “We find generally, however, that Congress intended to maintain a regime in which information service providers are not subject to regulation as common carriers merely because they provide their services ‘via telecommunications.’”⁹

Several key distinctions of fact and context make the analysis contained in the *Stevens Report* a poor basis for the FCC’s subsequent decision to permit facilities-based common carriers (including providers of cable telephony) to provide “integrated” Internet access services exclusively as deregulated information services. Most importantly, while the FCC undoubtedly intended to continue its policy of shielding competitive information service providers from common carrier regulation, it unequivocally also intended to preserve the long-standing *Computer Inquiry II* requirement that facilities-based common carriers make the transmission (telecommunications) component of any information service available to competitor ISPs on a non-discriminatory, common carrier basis.¹⁰ This carefully preserved the twin policies that ensured (1) that non-

8. *Id.* at para. 13 (citing *Computer Inquiry II*, Amendment of Section 64.702 of the Commission’s Rules and Regulations (Second Computer Inquiry), *Final Decision*, 77 F.C.C.2d 384 (1980) [hereinafter *Computer Inquiry II* or *Computer II*], *modified*, 84 F.C.C.2d 50 (1980), *reconsidered in* 88 F.C.C.2d 512 (1981), *aff’d sub nom.* Computer and Comm. Indus. Ass’n v. FCC, 693 F.2d 198 (D.C. Cir. 1982), *cert. denied*, Louisiana Pub. Serv. Comm’n v. FCC, 461 U.S. 938 (1983)). The terms “basic” and “enhanced” services in *Computer Inquiry II* correspond to the terms “telecommunications” and “information” services in the 1996 Act. *Stevens Report*, *supra* note 5, at para. 33 (citing Implementation of the Non-Accounting Safeguards of Sections 271 and 272 of the Communications Act of 1934, as Amended, *First Report and Order and Further Notice of Proposed Rulemaking*, 11 F.C.C.R. 21905, para. 102 (1996) (subsequent case history omitted)). Earlier, the *Computer Inquiry II* framework was incorporated into the terms of the court-supervised Consent Decree that ended the decades-old antitrust proceeding against AT&T. *United States v. American Tel. & Tel. Co.*, 552 F. Supp. 131 (D.D.C. 1982), *aff’d sub nom.* *Maryland v. United States*, 460 U.S. 1001 (1983). See *Stevens Report*, *supra* note 5, at para. 42 n.85.

9. *Stevens Report*, *supra* note 5, at para. 13. As Kevin Werbach, who headed the FCC’s Internet policy development in the period following the 1996 Act, explained:

The issue before the Commission in these early decisions was whether an information-service provider could be found to engage in telecommunications; the issue was not whether telecommunications-service providers could be classified as offering information services. Although the possibility existed that incumbent operators could switch to Internet-protocol-based transmission, the FCC did not consider this possibility a serious threat to the regulatory structure.

Kevin Werbach, *Off the Hook*, 95 CORNELL L. REV. 535, 543 (2010).

10. Commenting on these objectives, the FCC stated:

As long as the underlying market for provision of transmission facilities is competitive or is subject to sufficient pro-competitive safeguards, we see no need to regulate the enhanced functionalities that can be built on top of those facilities. . . . Limiting carrier regulation to those companies that provide the underlying transport ensures that regulation is minimized and is targeted to markets where full competition has not emerged.

ILEC providers of ISP services would be shielded from common carrier status merely because they incorporated “telecommunications” as an input to their end (information service) product, and (2) that the ILEC could not escape its common carrier obligations with regard to the “telecommunications” component of its information services merely by contaminating the transmission with content or processing enhancements.

This approach was also completely consistent with the nature of ISPs and ISP services at the time of the *Stevens Report*.¹¹ At that time, subscribers to the major ISPs were required to provide their own “last mile” connection, usually accomplished on a dial-up basis utilizing the subscriber’s home (or business) local telephone service. As such, and unlike today’s principal providers of broadband Internet access, dial-up ISPs did not provide last-mile telecommunications services to their customers. According to the FCC,

In essential aspect, Internet access providers look like other enhanced – or information – service providers. Internet access providers, typically, own no telecommunications facilities. Rather, in order to provide those components of Internet access services that involve information transport, they lease lines, and otherwise acquire telecommunications, from telecommunications providers – interexchange carriers, incumbent local exchange carriers, competitive local exchange carriers, and others.¹²

Moreover, although these ISPs redirected a small portion of their end users’ traffic to the public Internet, ISPs at the time of the *Stevens Report* typically continued their traditional “information services provider” role of offering end users enhanced functionalities on the ISP’s own host computers.¹³ In other words their principal business continued to be to “add value” to the underlying transmission, rather than simply to provide a connection for users’ access to independent, third-party content. Thus, both the nature of ISPs’ businesses and the regulatory framework that applied

Stevens Report, *supra* note 5, at para. 95. Similarly, with respect to the collection of USF, the FCC stated both “that the provision of transmission capacity to Internet access providers and Internet backbone providers is appropriately viewed as ‘telecommunications service’ or ‘telecommunications’ rather than ‘information service,’ and that the provision of such transmission should also generate contribution to universal service support mechanisms.” *Id.* at para. 15.

11. *Stevens Report*, *supra* note 5, at para. 63 (“Major Internet access providers include America Online, AT&T WorldNet, Netcom, Earthlink, and the Microsoft Network.”).

12. *Id.* at para. 81.

13. The role of an Internet access provider has much more in common with the functions associated with earlier enhanced/information services providers than with Internet access services offered by ILECs, cable companies, and wireless carriers over their last-mile transmission facilities. *Id.* at para. 76 (“Internet access providers typically provide their subscribers with the ability to run a variety of applications, including World Wide Web browsers, FTP clients, Usenet newsreaders, electronic mail clients, Telnet applications, and others.”).

continued to reflect the decades old *Computer II* framework.¹⁴

The first significant deviation from the *Computer II* framework came in the FCC's 2002 *Cable Modem Declaratory Ruling*.¹⁵ In that proceeding, the FCC dealt specifically with Internet access over broadband facilities that were owned by the provider of the Internet access service. This case had another novel characteristic, however, in that the owner of the broadband transmission facility at issue was a cable television company, traditionally subject to regulation under Title VI of the Communications Act of 1934 for its "cable service."¹⁶ In the *Cable Modem Ruling*, the FCC declared that "cable modem service, as it is currently offered, is properly classified as an interstate information service, not as a cable service, and that there is no separate offering of telecommunications service."¹⁷ In finding cable modem service to be a highly integrated offering of information services with telecommunications, the FCC referred back to the analysis in the *Stevens Report*, particularly highlighting applications resident on the ISP's own host computers (e.g., e-mail) as well as a function known as "Domain Name Service" (DNS).

14. *Computer Inquiry III*—a revision to the *Computer II* rules initiated in 1985 and developed over most of the next decade—relaxed the mechanism for separating the Bell operating companies' basic and enhanced services from a fully structural approach to a nonstructural, accounting-based approach and addressed the treatment of certain specific services. However, the definitional framework and principal objectives of *Computer II* were retained. See Amendment of Sections 64.702 of the Commission's Rules and Regulations (Third Computer Inquiry), *Report and Order*, 104 F.C.C.2d 958 (1986) [hereinafter *Computer Inquiry III* or *Computer III*], *reconsidered in* 2 F.C.C.R. 3035 (1987), *reconsidered in* 3 F.C.C.R. 1135 (1988), *reconsidered in* 4 F.C.C.R. 5927 (1989), *vacated and remanded sub nom.* California v. FCC, 905 F.2d 1217 (9th Cir. 1990); Amendment to Sections 64.702 of the Commission's Rules and Regulations (Third Computer Inquiry), *Report and Order*, 2 F.C.C.R. 3072 (1987), *reconsidered in* 3 F.C.C.R. 1150 (1988), *reconsidered in* 4 F.C.C.R. 5927 (1989), *vacated*, California I, 905 F.2d 1217 (9th Cir. 1990); Computer III Remand Proceedings, 5 F.C.C.R. 7719 (1990), *reconsidered in* 7 F.C.C.R. 909 (1992), *petitions for review denied*, California v. FCC, 4 F.3d 1505 (9th Cir. 1993); Computer III Remand Proceedings: Bell Operating Company Safeguards and Tier 1 Local Exchange Company Safeguards, 6 F.C.C.R. 7571 (1991); BOC Safeguards Order, *vacated in part and remanded*, California v. FCC, 39 F.3d 919 (9th Cir. 1994), *cert. denied*, 514 U.S. 1050 (1995).

15. 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 Declaratory Ruling*], *aff'd sub nom.* Nat'l Cable & Telecomm. Ass'n v. Brand X Internet Servs., 545 U.S. 967 (2005).

16. The term "cable service" under the Communications Act refers to "(A) the one-way transmission to subscribers of (i) video programming, or (ii) other programming service, and (B) subscriber interaction, if any, which is required for the selection or use of such video programming or other programming service . . ." Communications Act of 1934, ch. 652, § 602(6), 48 Stat. 1064 (codified as amended at 47 U.S.C. § 522(6)). Cable modem service, with or without the bundling of Internet applications and content, plainly does not fall within this definition.

17. *Cable Modem Declaratory Ruling*, *supra* note 15, at para. 7.

Although it pinned its factual analysis on these few specific functions, it became clear around this time that the FCC was actually pursuing broadband deregulation as part of a broader policy shift. The *Cable Modem Declaratory Ruling* quotes from the recently released *Wireline Broadband Internet Services NPRM* in which the FCC expressed that, as a policy matter, “broadband services should exist in a minimal regulatory environment that promotes investment and innovation in a competitive market.”¹⁸ Although the FCC purported to anchor this policy shift on the rather ill-defined section 706 mandate to “promote advanced services,”¹⁹ the Commission did a poor job of analyzing or explaining why the newness or speed of broadband services made any consequential difference with respect to the long-standing economic objectives for common carrier regulation of the transmission services of providers that owned access facilities

When challenged to require the cable companies to offer the transmission component of the cable modem service separate from any “enhanced” functionalities, the FCC weakly explained that (1) *Computer II* (which would have required this result in the case of ILECs) had never been applied to cable companies,²⁰ and (2) in any event, if the requirement existed, the FCC was prepared to waive it.²¹ In *Brand X*, the Supreme Court affirmed the FCC’s decision on a six-to-three vote, largely in deference to the agency’s expertise.²² The dissent in *Brand X* was unconvinced by the FCC’s conclusion that the cable company was not “offering” a telecommunications service, and it observed that

The merger of the physical connection and Internet functions in cable’s offerings has nothing to do with the “inextricably intertwined” . . . nature of the two . . . , but is an artificial product of the cable company’s marketing decision not to offer the two separately, so that the Commission could . . . exempt it from common-carrier status.²³

18. *Id.* at para. 5 (citing *Appropriate Framework for Broadband Access to the Internet over Wireline Facilities, Notice of Proposed Rulemaking*, 17 F.C.C.R. 3019, para. 5 (2002) [hereinafter *Wireline Broadband NPRM*]). There is also no analysis in either the *Cable Modem Declaratory Ruling* or the *Wireline Broadband NPRM* that shows that broadband investment and innovation (the section 706 objectives purportedly relied upon by the FCC) either require or directly benefit from minimal regulation, and the FCC has never conducted a formal evaluation to confirm this prediction. Nonetheless, over time, the “investment” part of this objective has come to greatly overshadow the “innovation” and “competitive market” elements of the policy framework.

19. *Cable Modem Declaratory Ruling*, *supra* note 15, at para. 4 (citing section 706 of the 1996 Act).

20. *Id.* at para. 43.

21. *Id.* at para. 45.

22. *Nat’l Cable & Telecomm. Ass’n v. Brand X Internet Servs.*, 545 U.S. 967, 989 (2005).

23. *Id.* at 1009–10 n.4 (Scalia, J., dissenting) (citation omitted). It is noteworthy that the Canadian Radio-television and Telecommunications Commission (CRTC) has adopted a

Soon after *Brand X*, seeking to establish “parity” (*vis-à-vis* cable) in the treatment of ILEC-provided broadband Internet access services, the FCC compounded the errors in its *Cable Modem Declaratory Ruling* by extending the same faulty reasoning to ILEC-provided consumer broadband services.²⁴ The FCC once again reached back to the analysis in the 1998 *Stevens Report*²⁵ without probing the extensive industry evolution that had occurred in the intervening seven years. Thus, echoing its earlier discussion of the “integration” of transmission and information services²⁶ and of the nature of DNS²⁷ (both discussed in more detail below), the FCC reached the conclusion that ILEC broadband Internet access services were “information services.” However, with an ILEC-provided information service, the FCC also had to confront its twenty-five-year-old rule that required “facilities-based common carriers to provide the basic transmission services underlying their enhanced services on a nondiscriminatory basis pursuant to tariffs governed by Title II of the Act,” such that they “offered the underlying basic service at the same prices, terms, and conditions, to all enhanced service providers, including their own enhanced services operations.”²⁸ In order to reach the desired result—deregulated ILEC broadband Internet access with no requirement for the unbundling of the underlying transmission—the FCC also needed to remove this longstanding *Computer II* rule. To reach this result, the FCC relied upon the purported technological differences between the broadband environment and “traditional” wireline telecommunications,²⁹ together with unverified claims that unbundling would interfere with investment incentives.³⁰ The FCC also relied upon predictive judgments about the state of competition for broadband access to the Internet³¹ and assurances from the ILECs that they had incentives to, and therefore would, retain

very different approach to the classification and regulation of Internet access facilities. The CRTC has had long-standing requirements for competitor access to ILEC and cable company high-speed access facilities for the purposes of supporting retail competition for Internet access services, a policy that it has recently reaffirmed and broadened. See generally Wholesale High-Speed Access Services Proceeding, *Telecom Regulatory Policy*, CRTC 2010-632 (Aug. 30, 2010) [hereinafter *Telecom Regulatory Policy CRTC*].

24. See Appropriate Framework for Broadband Access to the Internet over Wireline Facilities, *Report and Order and Notice of Proposed Rulemaking*, 20 F.C.C.R. 14853 (2005) [hereinafter *BWIA Order*].

25. *Id.* at n.16.

26. *Id.* at para. 9.

27. *Id.* at para. 15.

28. *Id.* at para. 24.

29. See *id.* at paras. 32–40. Ironically, the FCC emphasized these artificial technological distinctions while at the same time proclaiming its intention to adopt a technology-neutral policy (as between various broadband platforms). *Id.* at n.342.

30. See *id.* at paras. 19, 44.

31. *Id.* at para. 62.

wholesale access offerings in the absence of regulatory compulsion.³² In choosing to abandon common carrier regulation of the telecommunications component of Internet access, the FCC specifically relied upon being able to enforce non-discrimination requirements with respect to Internet access provided by facilities-based carriers (such as ILECs and cable companies) via its ancillary jurisdiction under Title I of the Act.³³ In fact, the FCC adopted its first formal net neutrality policy statement³⁴ on the same day as its *BWIA Order*.³⁵

In *Comcast v. Federal Communications Commission*, the Court of Appeals for the D.C. Circuit told the FCC that the FCC's reliance upon ancillary jurisdiction as a broad-brush justification for requiring ISPs to comply with net neutrality principles was misplaced.³⁶ Following the

32. *Id.* at para. 63. Large ILECs and cable providers (including Cox, SBC (now AT&T), and Verizon), had assured the FCC that their ability to protect consumers would not be eroded by classifying broadband Internet access under Title I, rather than Title II. See Schlick Third-Way Memorandum, *supra* note 3, at 4. Moreover, the "voluntary" Merger Conditions in the SBC-AT&T, Verizon-MCI, and AT&T-BellSouth mergers required only temporary compliance with the net neutrality principles contained in its *Internet Policy Statement*. See, e.g., SBC Communications Inc. and AT&T Corp. Applications for Approval of Transfer of Control, *Memorandum Opinion and Order*, 20 F.C.C.R. 18290, app. F (2005) (stating under "Conditions," "Net Neutrality[:] 1. Effective on the Merger Closing Date, and continuing for two years thereafter, SBC/AT&T will conduct business in a manner that comports with the principles set forth in the FCC's Policy Statement, issued September 23, 2005 (FCC 05-151)."); Verizon Communications Inc. and MCI, Inc. Applications for Approval of Transfer of Control, *Memorandum Opinion and Order*, 20 F.C.C.R. 18433, app. F (2005) (stating under "Conditions," "Net Neutrality[:] 1. Effective on the Merger Closing Date, and continuing for two years thereafter, Verizon/MCI will conduct business in a manner that comports with the principles set forth in the FCC's Policy Statement, issued September 23, 2005 (FCC 05-151).").

33. See *BWIA Order*, *supra* note 24, at para. 24 (citing *Nat'l Cable & Telecomm. Ass'n v. Brand X Internet Servs.*, 545 U.S. 967, 996 (2005) (stating that the FCC "remains free to impose special regulatory duties on facilities-based ISPs under its Title I ancillary jurisdiction")); see also Formal Complaint of Free Press and Public Knowledge Against Comcast Corporation for Secretly Degrading Peer-to-Peer Applications, *Memorandum Opinion and Order*, 23 F.C.C.R. 13028, paras. 14–17 (2008).

34. Appropriate Framework for Broadband Access to the Internet over Wireline Facilities, *Policy Statement*, 20 F.C.C.R. 14986 (2005) [hereinafter *Internet Policy Statement*].

35. See *BWIA Order*, *supra* note 24.

36. *Comcast Corp. v. FCC*, 600 F.3d 642, 644 (D.C. Cir. 2010). Werbach argues, however, that the FCC's error arises from its attempt to anchor ancillary jurisdiction to section 230 of the Communications Act of 1934, as amended, rather than other provisions—in particular, sections 251 (Interconnection) and 256 (Standards). Werbach, *supra* note 9, at 571. While finding against the FCC on the Comcast BitTorrent matter, the D.C. appeals court specifically acknowledged that the Supreme Court in *Brand X* had stated that "the Commission remains free to impose special regulatory duties on [facilities-based ISPs including cable Internet providers] under its Title I ancillary jurisdiction" and that, "[i]n particular, the Court suggested that the Commission could likely 'require cable companies to allow independent ISPs access to their facilities' pursuant to its ancillary authority, rather than using Title II as *Brand X* urged." *Comcast Corp.*, 600 F.3d at 649 (citing *Brand X*, 545

Comcast decision, the current FCC began looking for a way to restore its authority to enforce the principle of nondiscrimination by reinstating its jurisdiction over the transmission component of broadband Internet access, but without also having to resurrect all aspects of Title II regulation. Not long after the FCC General Counsel and Chairman had articulated the legal and policy rationale for this “third way” of approaching the regulation of Internet access,³⁷ the FCC issued a *Notice of Inquiry* “to consider the adequacy of the current legal framework within which the Commission promotes investment and innovation in, and protects consumers of, broadband Internet service.”³⁸ Opponents have opined that the FCC has no legal authority to revise its classification of Internet access services, because nothing has changed³⁹ since the original Title I classification was adopted.

As we demonstrate below, the “facts” relied upon by the FCC when it had decided to treat broadband wireline and cable Internet access as information services did not accurately reflect the nature of Internet access, even then, and with evolution of Internet access services since that time, the factual basis for that classification is even less appropriate today. The FCC coupled its classification mistake with erroneous findings and “predictive judgments” about the extent of competition for broadband access services generally, and for broadband Internet access in particular. The policies that the FCC adopted based upon these mistaken assumptions should not be perpetuated simply because they are the most recent “precedents” on these subjects. After all, these relatively new policies take the place of sounder, time-tested regulatory frameworks that the FCC should not have abandoned in the first place.

B. Longstanding Policies Requiring the Separation of Common Carrier Telecommunications from Information Services Should Apply Equally to Next Generation Technology

In its seminal 1980 *Computer Inquiry II* decision,⁴⁰ the FCC crafted a regulatory paradigm in which all telecommunications services under its jurisdiction were to be classified into one of only two categories—either “basic” or “enhanced”: “In defining the difference between basic and

U.S. at 996, 1002).

37. See Genachowski, *supra* note 2.

38. Framework for Broadband Internet Service, *Notice of Inquiry*, 25 F.C.C.R. 7866, para. 1 (2010), available at http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-10-114A1.pdf.

39. See, e.g., Comments of Seth Waxman, *A National Broadband Plan for Our Future*, GN Docket No. 09-51; *Preserving the Open Internet*, GN Docket No. 09-191; *Broadband Industry Practices*, WC Docket No. 07-52 (rel. Apr. 28, 2010).

40. *Computer Inquiry II*, *supra* note 8.

enhanced services, we have concluded that basic transmission services are traditional common carrier communications services and that enhanced services are not.”⁴¹ Historically, common carriers—whether involved in transportation or telecommunications—were expected to carry the sender’s goods or messages without modification, so that they arrived at the destination in an unaltered condition. “Basic service” embodied that same connotation: even though the signal (e.g., voice, data, image) might be manipulated to facilitate its transport, it would be restored to its original form prior to its delivery.⁴²

Defined most simply under the FCC’s dichotomy, “enhanced services” are not basic services. With an “enhanced” telecommunications service, the intelligence handed over to the service provider would be acted upon or manipulated in some manner before its ultimate delivery. In *Computer II*, the FCC undertook to codify this distinction between “basic” and “enhanced” services:

We find that basic service is limited to the common carrier offering of transmission capacity for the movement of information, whereas enhanced service combines basic service with computer processing applications that act on the format, content, code, protocol or similar aspects of the subscriber’s transmitted information, or provide the subscriber additional, different, or restructured information, or involve subscriber interaction with stored information.⁴³

The framework adopted by the FCC in *Computer II* recognized the importance of common carriage as a neutral platform for innovation, and created a simple but effective means of protecting nonfacilities-based providers in competition with owners of transmission facilities. Under this framework, the FCC successfully unbundled and deregulated customer

41. *Id.* at para. 119.

42. Indeed, the definition of “basic” when used in telecommunications was actually construed more strictly than in certain transportation carriage situations. For example, when transporting oil or natural gas through a pipeline, the pipeline carrier’s obligation is not to deliver the actual oil or actual gas molecules delivered to it by the shipper, but only to deliver the equivalent quantity of the commodity, adjusted to account for variations in grade or other attributes, to its recipient. Similarly, electric distribution utilities that offer their customers the ability to separately purchase their electricity from any of several sources, furnish the consumer with the same volume of electricity (kWh) being purchased, but not the very same electrons as delivered to it by the energy provider. Telecommunications transport—particularly over longer distances—typically involves some form of multiplexing in which individual signals are commingled for long-haul transport, much as individual packages are combined in the same truck, railroad car, or airplane so as to achieve comparable transport efficiencies. Prior to delivery, the signals are “demultiplexed” and delivered to their recipient in essentially the same form as had been handed off by the sender to the carrier. See ANNABEL Z. DODD, *THE ESSENTIAL GUIDE TO TELECOMMUNICATIONS* 23–25 (2d ed. 2000).

43. *Computer Inquiry II*, *supra* note 8, at para. 5.

premises equipment,⁴⁴ which as a result, emerged as a multi-billion dollar competitive and highly innovative industry. Prior to the several FCC decisions that permitted providers of last-mile broadband facilities to foreclose competitors' use of those facilities for Internet access,⁴⁵ the independent information services industry had grown to a \$23 billion segment of the national economy.⁴⁶

Not long after the *Computer II* rules went into effect, the U.S. Department of Justice entered into a settlement with AT&T and its affiliates (collectively, the Bell System) with the intention of ending a protracted antitrust action in which the DOJ had "alleged monopolization by the defendants with respect to a broad variety of telecommunications

44. *Id.* at para. 141. Previously, telephone handsets and other customer premises equipment (CPE) were "bundled" with basic local telephone service and could not be purchased separately, or, if obtained from a source other than the local telephone company, attached to the telephone company's facilities. In its seminal *Carterfone* ruling, the FCC allowed attachments of customer-owned CPE if achieved using a protective connecting arrangement (PCA) that the customer was required to rent from the telephone company. Use of the Carterfone Device in Message Toll Telephone Service, *Decision*, 13 F.C.C.2d 420 (1968). In 1977 and 1978, this PCA requirement was replaced by an equipment certification program, permitting customers to directly connect "certified" CPE to the public telephone network. Proposal for New or Revised Classes [sic] of Interstate and Foreign Message Toll Telephone Service (MTS) & Wide Area Telephone Service (WATS), *First Report and Order*, 56 F.C.C.2d 593 (1975), *on reconsideration*, 57 F.C.C.2d 1216 (1976), 58 F.C.C.2d 716 (1976), 59 F.C.C.2d 83 (1976); Proposal for New or Revised Classes of Interstate and Foreign Message Toll Telephone Service (MTS) & Wide Area Telephone Service (WATS), *Second Report and Order*, 58 F.C.C.2d 736 (1976), *on reconsideration*, 61 F.C.C.2d 396 (1976), 64 F.C.C.2d 1058 (1977), *aff'd sub nom.* North Carolina Utils. Comm'n v. FCC, 552 F.2d 1036 (4th Cir., 1977), *cert. denied*, 434 U.S. 874 (1977). Shortly before its *Computer II* decision, the FCC ruled as unlawful the ILEC practice of requiring the customer to use at least one telco-provided handset (the so-called "primary instrument" concept). Implications of the Telephone Industry's Primary Instrument Concept, *Report and Order*, 68 F.C.C.2d 1157 (1978). These policies culminated in *Computer II*, in which the FCC required ILECs to unbundle CPE from any basic telecommunications offering, to remove it from their regulated operations and, in the case of the largest ILECs (the Bell and GTE operating companies), to offer CPE only through a fully separate subsidiary. *Computer Inquiry II*, *supra* note 8, at paras. 150-158, 174. The Bell company CPE affiliates were retained by AT&T following the 1984 breakup of the former Bell System, effectively taking the divested Bell operating companies out of the CPE business. See *United States v. American Tel. & Tel. Co.*, 552 F. Supp. 131, 192 (D.D.C. 1982).

45. See, e.g., Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers, *Report and Order and Order on Remand and Further Notice of Proposed Rulemaking*, 18 F.C.C.R. 16978, para. 7 (2003) [hereinafter *Triennial Review Order* or *TRO*], *vacated and remanded in part, affirmed in part*, United States Telecomm. Ass'n v. FCC, 359 F.3d 554 (D.C. Cir. 2004), *cert. denied*, 543 U.S. 925 (2004) (high frequency portion of the loop, hybrid fiber-coaxial loops, and "greenfield" loops); *Cable Modem Declaratory Ruling*, *supra* note 15, para. 11 (cable broadband facilities for Internet access); *BWIA Order*, *supra* note 24, para. 5 (ILEC broadband facilities for Internet access).

46. Corey Grice, *Short Take: ISP Revenue Will Near \$23 Billion, Study Says*, CNET (Feb. 15, 2000), http://news.cnet.com/Short-Take-ISP-revenue-will-near-23-billion,-study-says/2110-1033_3-236944.html.

services and equipment in violation of section 2 of the Sherman Act.”⁴⁷ After a Tunney Act proceeding, the U.S. District Court approved the Consent Decree, with modifications the court deemed necessary to make the settlement consistent with the public interest. The Consent Decree, as modified (commonly referred to as the *Modification of Final Judgment* or *MFJ*), incorporated a structural approach to delinking ILEC market power in the last-mile (local access) from potentially competitive long distance services.⁴⁸ It also incorporated and reinforced the *Computer II* framework by barring the Bell ILECs from the customer premises equipment (manufacturing) and information services lines of business.⁴⁹ Many of the key structural protections in the *MFJ* were incorporated into the 1996 Act, which made provision for their phase-out once the FCC had determined that competition had been firmly established with respect to local exchange and exchange access services.⁵⁰

With these structural protections in place, by the end of the 1990s numerous local and national ISPs had entered what by then had become an extremely competitive and unconcentrated market. When demand for dial-up Internet access had reached its peak, around the beginning of 2002, even the largest ISP at that time—America Online—served only one in five Internet-connected households.⁵¹ By contrast, between 1980 and the passage of the 1996 Act, local telephone companies (telcos) showed little interest in being enhanced service providers beyond pursuing efforts to obtain their legal right to do so.⁵² When, in the late 1990s, some ILECs finally began offering enhanced services (renamed “information services” under the 1996 Act),⁵³ they were compelled under *Computer Inquiry II/III* (and, in the case of the Bell ILECs, the *MFJ* provisions incorporated into the 1996 Act) to afford their ISP affiliate no preference or advantage relative to other nonaffiliated ISPs.⁵⁴

47. *United States v. American Tel. & Tel. Co.*, 552 F. Supp. 131, 139 (D.D.C. 1982).

48. *See id.* at 224.

49. *Id.* at 189–91, 224.

50. *See* 47 U.S.C. §§ 271–72 (1996).

51. *See* Patricia Fusco, *Top U.S. ISPs by Subscriber: Q1 2002*, ISP-PLANET (May 13, 2002), http://www.isp-planet.com/research/rankings/usa_q12002.html (including AOL (17.1% market share) and AOL-owned brands CompuServe and Road Runner (2.0% and 1.6% respectively) totaling 20.7% of the market share).

52. One of the “line of business restrictions” in the 1984 Consent Decree had precluded Regional Bell Operating Company (RBOC) entry into the “information services” business. However, that restriction was lifted in 1991. *United States v. Western Elec. Co.*, 767 F. Supp. 308 (D.D.C. 1991).

53. *See infra* note 55.

54. By 1999, telephone companies were selling approximately 28.9 million additional residential lines (meaning that nearly thirty percent of households with a telephone were purchasing an additional line). INDUSTRY ANALYSIS DIVISION, COMMON CARRIER BUREAU, FCC, TRENDS IN TELEPHONE SERVICE 8–6 tbl. 8.4 (Dec. 2000),

At that time, the ILECs' principal Internet focus was directed more toward selling highly profitable second residential telephone lines⁵⁵ (so that the customer's primary line remained available for voice communications when a dial-up online service was being accessed) than upon offering information services. Although by 1990, U.S. ILECs possessed technology necessary to provide customers with a dedicated data channel on the same copper loop as the customer's voice service,⁵⁶ the ILECs had little incentive to actively market these services, since it would undercut the lucrative market for second residential lines.⁵⁷ This all changed when the large ILECs began to experience competition in the form of dedicated broadband access services offered by cable companies. Confronted for the first time

http://fcc.gov/Bureaus/Common_Carrier/Reports/FCC-State_Link/IAD/trend200.pdf. By contrast, at the end of 1999, ILECs provided fewer than 300,000 high-speed (over 200 Kbps in at least one direction) ADSL lines to residential and small business customers nationwide. INDUSTRY ANALYSIS DIVISION, COMMON CARRIER BUREAU, FCC, HIGH-SPEED SERVICES FOR INTERNET ACCESS: SUBSCRIBERSHIP AS OF JUNE 30, 2000, at 5 tbl. 3 (Oct. 2000), http://www.fcc.gov/Bureaus/Common_Carrier/Reports/FCC-State_Link/IAD/hspd1000.pdf.

55. In most areas, distribution cable capacity, including drop wires into individual homes, was sufficient to provide a significant percentage of households with a second dial tone access line with little or no capital investment and minimal additional operating costs. As a result, incremental revenues derived from second residential access lines were in most cases substantially in excess of incremental costs for these services. At its peak, the market for additional residential lines being used for dial-up Internet access was generating as much as \$9 billion in annual revenue for the ILECs. (This calculation is performed using usage and subscriber data found in AOL TIME WARNER INC., FORM 10-K: ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(D) OF THE SECURITIES EXCHANGE ACT OF 1934 (Mar. 2002), available at <http://edgar.sec.gov/Archives/edgar/data/1105705/000095013002001845/d10k405.htm>; industry subscriber data from Jupiter Research; and the conservative assumption that average non-AOL dial-up use was fifty percent of average AOL dial-up use.)

56. Joseph Lechleider, a scientist at Bellcore, is credited with the development of ADSL (Asymmetrical Digital Subscriber Line) in the late 1980s. ADSL is a technology that allows users to download data at a faster rate than they uploaded it, thus mirroring the way most users used the Internet—sending a small amount of information up to the provider requesting a download of a significantly large quantity of data. This technology made its first appearance on the marketplace in the form of ISDN (Integrated Services Digital Network).

57. Raymond W. Smith, Bell Atlantic's then-CEO, told a group of securities analysts at a March 1996 Merrill Lynch Telecommunications CEO Conference that the rate of additional line growth in Bell Atlantic's operating territory had been increasing, and noted that additional lines produce significant incremental revenue:

In 1995, sales of secondary lines at Bell Atlantic increased more than 50 percent, fueled by surging demand for Internet and telecommuting applications. Unlike traditional horizontal line growth, which would have significantly added to our capital expenditures, the vertical growth we experienced in '95 brought most of the revenues down to the bottom line. *That's because we were able to provision new lines and services from idle capacity in an existing plant.*

Raymond W. Smith, Creating Shareowner Value in a Converged, Post-Legislation Environment, Speech at the Merrill Lynch Telecommunications CEO Conference (Mar. 19, 1996) (emphasis added), available at <http://fjallfoss.fcc.gov/ecfs/document/view?id=2074680011>.

with a competitive threat to their lucrative second line business, ILECs finally began to market their dedicated channel Internet access services.⁵⁸ Then, when the FCC went so far as to exempt cable companies from the obligation to provide the broadband transmission on a common carrier basis, the ILECs saw an opportunity—by claiming “parity”—to prevent competitors from gaining access to their own broadband facilities for purposes of providing a competitive retail Internet access service. Under a regulatory framework in which the last-mile broadband telecommunications channel and Internet access were deemed inextricably linked, the entry opportunities that had been previously available to non-ILEC dial-up ISPs no longer existed with respect to broadband access. As the demand for dial-up Internet access waned, most nonfacilities-based ISPs—unable to migrate their mass market customers to their own broadband Internet access services—were left to atrophy and eventually go out of business.

C. Is Today's Broadband Internet Access an Information Service or Simply Basic Transmission?

In seeking to justify the decision to treat broadband Internet access as somehow different from previous transmission platforms for accessing information services, those supporting complete deregulation of Internet access (including the elimination of the *Computer II/III* framework as to these services) have relied upon various artificial—and superficial—distinctions that generally fall into one of two principal categories: technology-based and economic-based. We begin by addressing the technology-based distinctions, and explain why Internet access appropriately belongs on the “basic” or “telecommunications” side of the line. We then address the economic arguments—the purported existence of broadband competition and the claimed need for deregulation to promote investment.

58. In a comprehensive report on broadband industry status, released in October, 1999, the Staff of the FCC's Cable Bureau stated:

The ILECs' aggressive deployment of DSL can be attributed in large part to the deployment of cable modem service. Although the ILECs have possessed DSL technology since the late 1980s, they did not offer the service, for concern that it would negatively impact their other lines of businesses. The deployment of cable modem service, however, spurred the ILECs to offer DSL or risk losing potential subscribers to cable. In various communities where cable modem service becomes available, the ILECs would soon deploy DSL service that was comparable in price and performance to the cable modem offering. Thus, prior to cable modem deployment, the ILECs had little incentive to deploy DSL and the consumer had no choice for highspeed Internet access.

Staff Report to William E. Kennard, Chairman, FCC, BROADBAND TODAY, 27 (Oct. 16, 1999), <http://www.fcc.gov/Bureaus/Cable/Reports/broadbandtoday.pdf>.

III. TECHNOLOGY-BASED CLAIMS THAT BROADBAND INTERNET ACCESS IS AN INFORMATION SERVICE

As discussed in the previous section, the FCC's broadband classification orders repeatedly refer back to the 1998 *Stevens Report* to support its characterization of Internet access services as involving "bundled" transmission and information services. The FCC has also relied upon analysis in the *Stevens Report* to conclude that Domain Name Services (DNS), an integral component of all forms of Internet access, is an information service. It is questionable whether either of these two conclusions was correct when they were adopted back in 1998 (or relied upon in 2002 and 2005), but they are certainly not correct as to the Internet and Internet services as these have come to exist today, in 2010 and beyond.

A. "Bundled" Information Services

In the earliest days of so-called "online" information services—such as CompuServe, Prodigy, and America Online, and even specialized online services such as Lexis/Nexis and the online reservation systems that were operated by several airlines and made available to travel agents and others—the information accessed was physically located on host computers belonging to entities known at the time as "enhanced service providers" (ESPs).⁵⁹ The subscriber sent data to the service provider, whose computers acted upon that data and sent information back to the subscriber.⁶⁰ As these services developed, service providers were able to offer end users more applications and content by adding information products developed by third parties, some of which did not reside on the service provider's own platform. Nonetheless, both the selection and the management of these third party applications or content sources continued to be within the control of the ISP.

59. The term "enhanced service provider" originated in the FCC's *Computer Inquiry II*, and was used to generically describe pre-Internet online service providers in the 1980s, such as Telenet, Tymnet, and Electronic Data Systems (EDS), and subsequently providers such as CompuServe and Prodigy. See, e.g., ADAPSO, the Computer Software and Services Industry Association, Inc., et al., *Order*, 10 F.C.C.R. 12128, para. 1 (1995). In the 1996 Act, the term "information services" was substituted for such "enhanced services." See Implementation of the Non-Accounting Safeguards of Sections 271 & 272 of the Communications Act of 1934, as Amended, *First Report and Order and Further Notice of Proposed Rulemaking*, 11 F.C.C.R. 21905, para. 103 (1996). While the acronym "ISP" today is generally used to denote Internet Service Providers, at the time the FCC was implementing the 1996 Act, the term "ISP" was understood to refer to the broader category of "Information Service Providers." See, e.g., Access Charge Reform, *First Report and Order*, 12 F.C.C.R. 15982, para. 50 (1997); Access Charge Reform Price Cap Performance Review for Local Exchange Carriers, *Notice of Proposed Rulemaking, Third Report and Order, and Notice of Inquiry*, 11 F.C.C.R. 21354, para. 313 (1996).

60. See generally *Computer Inquiry II*, *supra* note 8, at para. 97.

With the development of the public Internet, the role of the ISP has fundamentally changed. Whereas in 1996 and into the early 2000s, the prevailing model for ISPs was to maintain and provide applications and content on their own computing platforms, ISPs today (and especially providers that offer Internet access over their own local distribution facilities) act primarily, if not exclusively, as conduits, forwarding and transmitting their subscribers' data to or from one or more Internet gateways or "peering points" from which the data is routed to or from a website or other Internet location designated by the end user. Even if the ISP also offers its own proprietary "information services," it typically uses the public Internet for providing access to such proprietary content or applications.⁶¹

The nature of Internet services has also changed from the customer's perspective. Whereas with legacy information services, the customer interacted by default with the ISP's e-mail or web-browsing platforms, that customer is now required to affirmatively choose between content and applications offered by his ISP or the equivalent (and often preferred) services that are available from independent providers. This is true regardless of whether the ISP owns the underlying broadband transmission. For example, users are electing increasingly to utilize ISP-independent sources of e-mail services.⁶² While most ISPs offer their subscribers content-rich home pages as "portals" to news, sports, weather, financial data, entertainment, shopping, and other services, these same types of content and services are also available from any number of non-ISP portals, including both general purpose portals like yahoo.com and google.com, and specialized or special interest portals, such as those maintained by local

61. AOL is a rare exception to this model in that it maintains several proprietary data centers through which its subscribers gain access to various information and content on AOL's own platform or are sent on to any Internet site. *See* *Am. Online v. Pennsylvania*, 932 A.2d 332, 334 (Pa. Commw. Ct. 2007), *aff'd*, 963 A.2d 903 (Pa. 2008).

62. There are significant advantages to customers electing this form of e-mail, because it allows them to change ISPs without also having to change their e-mail addresses. Google's "Gmail" is an increasingly popular source of "free" e-mail, as are any number of other such services available either "free" or at relatively little cost. The top four non-facilities-based providers of "free" e-mail—Yahoo, Hotmail, Google, and AOL—had some 226 million unique visitors in July 2009. By comparison, the top four facilities-based broadband Internet access providers—Comcast, AT&T, Verizon, and TimeWarner Roadrunner—accounted for only about 17 million unique visitors during that same month. *Yahoo Mail Still King as Gmail Lurks*, CNET NEWS (Aug. 17, 2009, 10:53 AM), http://news.cnet.com/8301-30684_3-10311150-265.html. Some universities, for example, offer their alumni "lifetime" e-mail addresses that stay with the individual irrespective of the choice of ISP at any point in time. *See, e.g., GW Alumni Email Services*, GW ALUMNI, <http://www.alumni.gwu.edu/benefits/email/index.html> (last visited Nov. 16, 2010) (providing GW alumni free email for life: yourname@gwmail.gwu.edu). The Google search "alumni email" yields more than a hundred examples of similar alumni email offers.

newspapers, TV networks, and other organizations.⁶³ Conversely, ISP-owned portals (such as Comcast.net and Verizon.net) are no longer maintained on a purely proprietary basis for the benefit of the ISPs' own subscribers; rather, they can be accessed by anyone via the public Internet.⁶⁴

Given the ease with which standard Internet browsers enable users to select their "home" page, only the least sophisticated of Internet users are likely to retain the default setting directing them to their Internet access provider's default home page. Moreover, should the customer elect to access the provider's website or e-mail services, the routing to such services will be via the public Internet in much the same manner as for most other Internet-based applications and content. Thus, while nominally "included" within the "bundle" of services that constitute broadband wireline Internet access, the actual use of these "bundled" information services is diminishing to the point of near extinction. Whatever technical linkage the FCC had earlier identified as between the broadband telecommunications and information services components of the "bundle," such linkage certainly does not exist today, if indeed it ever did. At bottom, today's broadband Internet access service—whether provided via ILEC, cable, or wireless facilities—is telecommunications, nothing more.

Wireless carriers have attempted to engineer a somewhat tighter linkage between their wireless Internet access and the content and applications that they are also offering in conjunction with these services. Unlike a wireline Internet connection where users typically access bandwidth using their own device and software (e.g., a PC or a Macintosh, any of several operating systems, a web browser, and any number of specialized web-based applications), wireless carriers in the United States sell only carrier-approved handsets with carrier-limited software.⁶⁵

63. See, e.g., GOOGLE, <http://www.google.com> (last visited Nov. 16, 2010); YAHOO!, <http://www.yahoo.com> (last visited Nov. 16, 2010); CNN, <http://cnn.com> (last visited Nov. 16, 2010); THE NEW YORK TIMES, <http://www.nytimes.com> (last visited Nov. 16, 2010).

64. See, e.g., COMCAST.NET, <http://www.comcast.net> (last visited Nov. 16, 2010); VERIZON CENTRAL, <http://www.verizon.net> (last visited Nov. 16, 2010). For example, AT&T's portal, www.att.net, is actually run by Yahoo! and is substantively identical to the publicly available www.yahoo.com. AT&T, <http://www.att.net> (last visited Nov. 16, 2010). The att.net domain name resolves to <http://att.my.yahoo.com/>, and the contents of the site are available to any user, linking to regularly available [yahoo.com](http://www.yahoo.com) content. See AT&T, <http://att.my.yahoo.com> (last visited Nov. 16, 2010); YAHOO!, www.yahoo.com (last visited Nov. 16, 2010).

65. In its initial rules for cellular systems, the FCC had required full compatibility among all wireless services and handsets. An Inquiry into the Use of the Bands 825-845 MHz and 870-890 MHz for Cellular Communications Systems, *Report and Order*, 86 F.C.C.2d 469, paras. 84-95 (1981). In 1988, the FCC relaxed this requirement, allowing carriers individually to specify handset properties and protocols for use on their respective networks. Amendment of Parts 2 and 22 of the Commission's Rules to Permit Liberalization

In the case of traditional handsets (i.e., not the so-called “smartphones”), consumers are often limited to browsing the web through a carrier-designed browser that imposes severe limits upon the form of the web content that can be viewed.⁶⁶ The consumer can purchase a limited array of add-on features such as ringtones, “themes,” and games, but only through a carrier-operated portal.⁶⁷ There is no technical basis for any of these limitations; the underlying wireless data network, like the wireline Internet, is totally agnostic as to the type of content being carried and the application that receives the data at either end.⁶⁸

The introduction of “smartphones” further demonstrates that wireless data networks have the technical capability to communicate with most ordinary HTML websites via a traditional (non-carrier) web browser, to download photos, videos, and other content directly from the web rather than only through a carrier-sponsored portal, and to run applications authored by sources other than the carrier and handset manufacturers. However, wireless carriers have continued to limit the available uses of the underlying data stream running to and from their customers’ smartphones. For example, Apple and AT&T entered into an exclusive arrangement whereby Apple’s iPhone would be available in the United States only for use on the AT&T network, and Apple limits the applications offered to

of Technology and Auxiliary Service Offerings in the Domestic Public Cellular Radio Telecommunications Service, *Report and Order*, 3 F.C.C.R. 7033, paras. 41–43 (1988). Although consumers may still obtain carrier-approved wireless handsets from sources other than the carrier itself, the vast majority of wireless handsets sold in the United States are carrier-branded, i.e., are provided either directly through a carrier-owned retail outlet or through a carrier-authorized agent or reseller. See Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993, *Fourteenth Report*, 2010 FCC LEXIS 3186, paras. 239–41 (2010) [hereinafter *CMRS Competition Fourteenth Report*]. In either case, the carrier assumes the role of gatekeeper with respect to handset functionality.

66. See Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993, *Eleventh Report*, 21 F.C.C.R. 10947, para. 98 (2006).

67. For example, AT&T provides wireless access to the Internet via various applications embedded in the basic phone software. Users browse the web using the AT&T Mobility “Media Net” browser, shop for ringtones using the “AppCenter,” and can watch videos and listen to music using the AT&T CV/Mobile Video software. See, e.g., AT&T APPCENTER, <https://appcenter.wireless.att.com/> (last visited Nov. 16, 2010); AT&T MEDIA NET, <http://www.wireless.att.com/learn/messaging-internet/media-entertainment/media-net.jsp> (last visited Nov. 16, 2010).

68. For example, AT&T offers data plans that allow users to connect laptops and other computers to the same data network that 3G phones use. AT&T GET STARTED, <http://www.wireless.att.com/cell-phone-service/cell-phone-plans/data-connect-plans.jsp> (last visited Nov. 16, 2010). AT&T also offers data plans for phones that include “tethering” functionality that allows users to connect to the internet on their computers using the data connection provided by the users’ “tethered” phone. AT&T’s standard terms describe all of its available data plans, including those with “tethering.” AT&T WIRELESS CUSTOMER AGREEMENT, <http://www.wireless.att.com/cell-phone-service/legal/plan-terms.jsp> (last visited Nov. 16, 2010).

iPhone users by requiring that all be purchased solely through its proprietary “App Store.”⁶⁹ Some of the restrictions on the App Store are clearly set by Apple, but others (such as limitations on third party VoIP access to the 3G data stream) are likely carrier-imposed.⁷⁰ These restrictions are also artificial: When hackers have utilized a process known as “jailbreaking” to remove the Apple/AT&T restrictions on available applications, the user is able to gain unfettered access to the basic TCP/IP stream of the underlying wireless data network.⁷¹ But for these carrier-contrived, mechanical restrictions, there is no inherent difference between wireline and wireless Internet access—both require nothing more than the establishment of a telecommunications connection between users or between a user and a host content or application provider. Whatever artificial linkage may be created between wireless Internet access and certain “information services” does not alter the fundamental telecommunications character of the wireless Internet access service.

B. Domain Name Services

In the *BWIA Order*, the FCC makes a finding that Domain Name Services (DNS) provide the end user with “more than transparent transmission”⁷² That assessment is wrong. DNS is purely and simply a routing database that translates a web domain name (e.g., www.anything.com) into an IP address (e.g., 123.234.345.456).⁷³ A master DNS database is maintained by the Internet Assigned Numbers Authority, operated by the Internet Corporation for Assigned Names and Numbers (ICANN), and is replicated at multiple locations throughout the global Internet.⁷⁴ Individual access providers typically maintain their own DNS,

69. The trade press is rife with discussions of AT&T and Apple’s exclusive iPhone agreement, with debate only over just how long AT&T will retain this exclusive arrangement. See, e.g., *Report: iPhone Exclusive to AT&T Until 2012*, FIERCEWIRELESS (May 11, 2010, 9:42 AM), <http://www.fiercewireless.com/story/report-t-apple-originally-locked-down-iphone-until-2012/2010-05-11>; see also IPHONE APP STORE, <http://www.apple.com/iphone/features/app-store.html> (last visited Nov. 16, 2010).

70. See *CMRS Competition Fourteenth Report*, *supra* note 66, at para. 152.

71. Numerous websites offer software and instructions on how to “jailbreak” an iPhone, and the myriad benefits of doing so. One prominent jailbreak website, www.jailbreakme.com, details that jailbreaking “is simply the ability to run apps and use themes and tweaks not approved by Apple.” JAILBREAKME 2.0 ‘STAR’, <http://www.jailbreakme.com/faq.html> (last visited Nov. 16, 2010).

72. *BWIA Order*, *supra* note 24, at para. 15. As explained earlier, the analysis underlying this conclusion dates back to the *Stevens Report* on universal service matters. See *supra* Part II.A.

73. See *DNS*, TOPBITS.COM, <http://www.tech-faq.com/what-is-dns.html> (last visited Nov. 16, 2010).

74. *Introducing IANA*, INTERNET ASSIGNED NUMBERS AUTHORITY, <http://www.iana.org/about> (last visited Nov. 16, 2010).

updating it continuously as new or changed domain name registrations are propagated across the Internet by ICANN and certified domain name registrars.⁷⁵

The routing function supported by the DNS is completely analogous to various other database-driven routing schemes that have been in use within the public switched telephone network (PSTN) for decades.

• *800 Database.* The most well-known of these routing systems is the so-called “800 Database,” adopted by the FCC in 1989 as a means for de-linking customers’ 800 or other toll-free numbers from specific interexchange carriers.⁷⁶ Previously, customers could not switch carriers without also changing their 800-number, thereby undermining competitive opportunities in the toll-free services market.⁷⁷ When a caller dials a toll-free 800-type telephone number, the originating local exchange carrier (LEC) performs a “dip” into the 800 Database for the purpose of identifying the interexchange carrier (IXC) selected by the toll-free service customer.⁷⁸ The call is then routed by the originating LEC to the selected IXC, which performs a second “dip” into its own proprietary database for the purpose of translating the dialed toll-free number into a network routing address to the toll-free service customer.⁷⁹ Some toll-free service providers also offer so-called “enhanced 800 services” (not to be confused with “enhanced” as the term is used in the *Computer II* basic/enhanced services distinction⁸⁰) supporting dynamic or variable rather than simple fixed routing of the toll-free call.⁸¹

75. *ICANN-Accredited Registrars*, ICANN, <http://www.icann.org/en/registrars/accredited-list.html> (last visited Nov. 16, 2010).

76. See Provision of Access for 800 Service, *Report and Order*, 4 F.C.C.R. 2824 (1989); see also Toll Free Service Access Codes, *Fifth Report and Order*, 15 F.C.C.R. 11939, paras. 4–9 (2000) (describing the history of the 800 database and carrier-independent number administration).

77. The “800 Database” is maintained by a neutral third-party database administrator and by individual toll-free service providers. Toll Free Service Access Codes, 15 F.C.C.R. 11939, at paras. 2–3.

78. See, e.g., Qwest Corp. Tariff FCC No. 1, §§ 6.2.8, 6.2.9 (Aug. 8, 2007) (interstate access charges).

79. *Id.* The network routing address may be an ordinary ten-digit “Plain Old Telephone Service” (POTS) telephone number or a dedicated “special access” type connection to the toll-free service customer.

80. See *infra* note 98 and accompanying text.

81. See Qwest Corp. Tariff FCC No. 1, *supra* note 78. For example, an inbound 800-type call might be routed to any of several different “call centers” maintained by the toll-free service customer based upon time of day and/or traffic conditions at each location. In another application, the routing might be based upon the geographic location of the caller—for example, routing the call to the toll-free customer’s retail location closest to the caller. The term “enhanced” here reflects the common usage of the word, i.e., “augmented.” See Application of WorldCom, Inc. and MCI Communications Corporations for Transfer of Control, *Memorandum Opinion and Order*, 13 F.C.C.R. 18025, para. 26 (1998) (“[L]arger business users often demand advanced long distance features (advanced features), such as frame relay, virtual private networks (VPN), and enhanced 800 services (E800 services).”).

- *Local Number Portability (LNP)*. Paralleling its “800 Number Portability” ruling, the FCC in 1996 ordered that wireline LECs must offer customers the ability to retain their previously assigned telephone number when switching local carriers,⁸² “Local Number Portability” (“LNP”) was implemented in 1999,⁸³ and the requirement was subsequently extended to wireless carriers as well.⁸⁴ In some cases, customers may also “port” their existing telephone number even when switching between a wireline and a wireless phone.⁸⁵ Now, in order to route a call to its intended recipient, the “next-to-last” carrier must first check the dialed number against an LNP database to determine whether it has been ported to another carrier and, if it has, to retrieve the carrier and routing information needed to complete the call.⁸⁶
- Modern stored program controlled (SPC) digital central office switches and networks utilize a variety of routing data bases to associate logical network “addresses” with physical network elements. Digital electronic local telephone central office switches, such as the AT&T/Lucent Technologies No. 5 ESS, employ locally maintained intraswitch databases to translate the dialed telephone number into a hardware “switch port” address associated with the called party’s access line.⁸⁷
- Since the introduction of stored program control electronic switching in the 1970s, local telephone companies have offered “speed calling” services that permit the customer to maintain a small private database (list) of stored telephone numbers resident in the computer that controls the local

The tariffing of these services (as required by 47 U.S.C. § 203) is consistent with their classification as “basic” telecommunications services, subject to Title II regulation.

82. Telephone Number Portability, *First Report and Order and Further Notice of Proposed Rulemaking*, 11 F.C.C.R. 8352 (1996). Although the FCC initiated this proceeding in 1995, by the time it issued its *First Report and Order*, the 1996 Act codified the requirement for all LECs to provide local number portability in the manner specified by the FCC. Telecommunications Act of 1996, Pub. L. No. 104-104, § 101(a), 110 Stat. 56 (codified at 47 U.S.C. § 251(b)(2)).

83. See Long-Term Number Portability Tariff Filings, *Memorandum Opinion and Order*, 14 F.C.C.R. 11883 (1999).

84. Telephone Number Portability—Carrier Requests for Clarification of Wireless-Wireless Porting Issues, *Memorandum Opinion and Order*, 18 F.C.C.R. 20971, para. 15 (2003).

85. See Telephone Number Portability CTIA Petitions for Declaratory Ruling on Wireline-Wireless Porting Issues, *Memorandum Opinion and Order and Further Notice of Proposed Rulemaking*, 18 F.C.C.R. 23697, para. 1 (2003).

86. See Telephone Number Portability, *Memorandum Opinion and Order on Reconsideration and Order on Application for Review*, 17 F.C.C.R. 2578, para. 5 n.12 (2002).

87. See Jerry W. Johnson et al., *No. 5 ESS—Serving the Present, Serving the Future*, 59 BELL LAB. REC., 290, 290–293 (1981). See generally AT&T BELL TELEPHONE LABORATORIES, *ENGINEERING AND OPERATIONS IN THE BELL SYSTEM* 507–513 (2d ed. 1984).

central office switch, and to use one- or two-digit "abbreviated dialing" to access specific numbers in the customer's speed call list, which the computer will then translate into the full domestic or international telephone number.⁸⁸

In each of these cases, the database and translation functions arguably involve "computer processing applications that act on the format, content, code, protocol or similar aspects of the subscriber's transmitted information; provide the subscriber additional, different, or restructured information; or involve subscriber interaction with stored information."⁸⁹ In any event, these functions are entirely analogous to the database and translation functions performed by DNS, yet each of these PSTN database services are unambiguously "basic" Title II services. Nowhere has the FCC offered or attempted to offer any explanation as to how the routing functions supported by DNS differ in any substantive manner from the comparable routing functions supported by the various PSTN databases. This is hardly surprising, because the functions involved are essentially the same. There are, in fact, no specific, identifiable attributes of DNS that would cause this particular routing function to be classified as an "information service" whereas the comparable PSTN routing activities are treated as basic.

C. Technology Transitions Are an Ongoing Part of Telecommunications Industry Progress

Other arguments in favor of treating Internet access as an information service rely upon the fact that various "translations" or "conversions" are required for Internet Protocol (IP) transmissions to coexist with transmissions via the circuit-switched PSTN. The FCC expected that its basic/enhanced distinction to be sufficiently robust to adapt "[a]s the market applications of computer technology increase," and it recognized that "[t]ransmission networks have benefitted [sic] from some of the productive breakthroughs which this relatively new field has made possible."⁹⁰ In fact, the FCC expressed confidence that its basic/enhanced distinction would "allow[] the provider of these basic services to integrate technological advances conducive to the more efficient transmission of information through the network without the threat of a sudden, fundamental change in the regulatory treatment of that service or firm."⁹¹ In

88. ENGINEERING AND OPERATIONS IN THE BELL SYSTEM, *supra* note 87, at 58; *see also* Bell Communications Research, *Features Common to Residence and Business Customers III*, LATA Switching Sys. Generic Requirements, July 1987, at 1-3.

89. 47 C.F.R. § 64.702(a) (1999).

90. *Computer Inquiry II*, *supra* note 8, at para. 100.

91. *Id.* at para. 101.

a 1983 ruling intended to clarify the *Computer Inquiry II* framework, the FCC specifically recognized that this framework must be sufficiently flexible to accommodate an evolutionary transition to new transport technology, and that under such conditions, the use of certain format, code, or protocol conversions (to permit communication between the legacy and the new technology) would not in and of itself transform a “basic” into an “enhanced” service.⁹²

Over time, there have been numerous examples of service arrangements involving such “passive” conversions that do not alter their “basic” character:

- Analog-to-digital conversion for transmission of voice or digital information on the public switched telephone network⁹³ (e.g., to permit transmissions to be passed between an electromechanical or analog electronic space-division central office switch and a time-division multiplexed digital switch, or from an analog voice wireline handset to a digital voice wireless handset;
- Analog-to-digital wireless conversions occurring on wireless networks and conversions required to permit traffic to be exchanged between wireless digital protocols (e.g., TDMA, CDMA, GSM);⁹⁴ and
- Utilization of computer processing to retrieve routing information from a database, as with the 800 Database and Local Number Portability databases.

The use of Internet Protocol to facilitate the transmission or routing of voice and data is consistent with these precedents and should be viewed in this same evolutionary context.

92. See Communications Protocols Under Section 64.702 of the Commission’s Rules and Regulations, *Memorandum Opinion, Order, and Statement of Principles*, 95 F.C.C.2d 584, para. 28 (1983) [hereinafter *Communications Protocols*] (“Clarification is warranted that protocol processing involved in the initiation, routing and termination of calls (or subelements of calls, e.g., packets) is inherent in switched transmission [sic] and is not within the definition of enhanced service, and we have done so herein. . . . Such protocol processing or conversion may be associated either with basic or enhanced service without affecting the classification of such service under Section 64.702(a) of our rules.”) (citation omitted).

93. See Amendment to Section 64.702 of the Commission’s Rules and Regulations (Third Computer Inquiry), *Report and Order*, 2 F.C.C.R. 3072 (1987) (citing *Communications Protocols*, *supra* note 92, at para. 16).

94. See generally Reexamination of Roaming Obligations of Commercial Mobile Radio Service Providers, *Report and Order and Further Notice of Proposed Rulemaking*, 22 F.C.C.R. 15817 (2007) (concluding that automatic roaming is a common carrier obligation).

D. Neither Its Eventual Destination (on the Public Internet) nor Its Bandwidth (Speed) Set Broadband Internet Access Apart from Other Last-Mile Telecommunications Services

Inasmuch as the functionality being provided by broadband Internet access is telecommunications, is there some other unique quality that justifies treating dedicated access to the Internet above a specified data speed differently from other access? Over the past decade, the owners of last-mile facilities have sought preferential treatment for broadband Internet access relative to other telecommunications services, but there is no technological or economic basis for such a distinction.

Although few would dispute the revolutionary and global impact that the Internet has had upon almost every aspect of human life and society, in terms of telecommunications technology, the IP network—particularly in the access segment—is far more evolutionary than revolutionary.⁹⁵ Despite advances in technology in transmission media (e.g., copper loop to coaxial cable or fiber), switching (manual to electromechanical to digital), and carrier systems (direct current to frequency-division multiplexing (FDM), then to time-division multiplexing (TDM), and then packet-based systems such as Frame Relay, MPLS, and Ethernet), the access function within telecommunications networks remains largely unchanged. In particular, with respect to the last-mile facilities that establish the end user's connection to the larger network (whether the PSTN or the Internet), there is no meaningful technological distinction between the dedicated facilities that provide access to the Internet and other, earlier versions of local access. Whatever occurs on the Internet is unaffected by whether a user relies upon copper, coaxial cable, fiber, wireless, or any other transmission medium to connect to the Internet from home. In addition, and perhaps most important, as explained below, the economic principles that make it impossible for new entrants to duplicate the incumbent providers' last-mile

95. The predecessor to what ultimately became known as the Internet was conceived and implemented over the course of the 1960s as a research project within the Advanced Research Projects Agency (ARPA) of the U.S. Department of Defense and was known as ARPANET. The core Internet protocols that we use today (TCP/IP) were described in a 1974 Institute of Electrical and Electronics Engineers (IEEE) paper. Vinton G. Cerf & Robert E. Kahn, *A Protocol for Packet Network Intercommunication*, 22 IEEE TRANSACTIONS ON COMM. 637 (May 1974). The early Internet was confined mainly to government, research, and educational uses, but beginning in the early 1990s was expanded to include commercial uses and noncommercial users. In its original form as a proprietary, private network, there was no need to classify the ARPANET or any of its segments for regulatory purposes, but this changed with public access to the Internet and its now wildly successful commercialization. For a brief overview of the history of the Internet, from ARPA through the formation of the public Internet, see Barbara Esbin, FCC, *Internet over Cable: Defining the Future in Terms of the Past*, 6-13 (Office of Plans & Pol'y, Staff Working Paper No. 30, 1998), http://www.fcc.gov/Bureaus/OPP/working_papers/oppwp30.pdf.

facilities are in no sense made inoperative merely because the underlying transmission path provides more bandwidth than “traditional” telecommunications facilities.

The policy set out at section 706 of the 1996 Act (“Advanced Telecommunications Incentives”) does not alter this conclusion.⁹⁶ Section 706 establishes a policy under which the FCC and individual states, in their capacity as regulators of telecommunications services,⁹⁷ are to

encourage the deployment on a reasonable and timely basis of advanced telecommunications capability to all Americans (including, in particular, elementary and secondary schools and classrooms) by utilizing, in a manner consistent with the public interest, convenience, and necessity, price cap regulation, regulatory forbearance, measures that promote competition in the local telecommunications market, or other regulating methods that remove barriers to infrastructure investment.⁹⁸

Beyond supporting “encouragement” of the deployment of advanced telecommunications capability,⁹⁹ section 706 does nothing whatsoever to amend or adapt the overall Title II framework. In particular, all of the regulatory mechanisms proposed to be used for promoting advanced telecommunications services arise under the FCC’s powers as the regulator of common carrier telecommunications (Title II) services. The section also suggests that in working toward this end, the objectives of promoting investment, of promoting the public interest, and of promoting local competition are all complementary, not competing goals. Ultimately, the assessments that the FCC needs to make in order to implement section 706 are very similar to what it must consider under other competition and forbearance provisions in the 1996 Act.¹⁰⁰

To gain forbearance and the elimination of any obligation to provide last-mile broadband transmission to rival nonintegrated ISPs and to downstream application and content providers, the ILECs advanced two patently inconsistent claims. On the one hand, they contended that the

96. Telecommunications Act of 1996, Pub. L. No. 104-104, § 706, 110 Stat. 56 (codified at 47 U.S.C. § 157).

97. See *id.* at § 706(a). One might question the basis for the FCC’s reliance on section 706 in connection with broadband Internet access if that service is not “telecommunications,” or why the various tools the FCC is encouraged to use to promote “advanced telecommunications capability,” such as price cap regulation and forbearance, arise under the FCC’s Title II powers. *Id.* at § 706(c)(1).

98. *Id.* at § 706(a).

99. *Id.* at § 706(c)(1). Under this section, “advanced telecommunications capability” is defined “without regard to any transmission medium or technology, as high-speed, switched, broadband telecommunications capability . . .” *Id.*

100. For example, see section 401 (forbearance) and section 271 (Bell Operating Company authorization for provision of long distance service)—each require the FCC to find that the requested relief is pro-competitive and in the public interest. *Id.* at §§ 401, 271.

broadband market is intensely competitive, such that continuing regulation and unbundling requirements are no longer necessary to protect consumers.¹⁰¹ But at the same time, the ILECs also contended that further broadband investment on their part would be unsupportable without the deregulation they demanded, and warned that without those ILEC broadband investments, ubiquitous broadband deployment would never take place and the U.S. would fall into a broadband backwater *vis-à-vis* other countries.¹⁰² Ironically, if the broadband market is as competitive as the ILECs contend, then how is it that absent their involvement no other provider can be expected to jump in and fill the gap? The FCC never seems to have focused upon or addressed that rather obvious inconsistency.

In the end, of course, the FCC gave the ILECs what they wanted.¹⁰³ The ILECs, however, still made no broadband investments anywhere other than those locations where they would have invested regardless of regulation—either because it was economically attractive (e.g., in high density areas) or because they needed to respond to the only other actual competitor (the local cable company). Broadband deployment in rural and in smaller urban areas has lagged.¹⁰⁴ Verizon has divested much of its footprint in these areas,¹⁰⁵ and most recently the company announced that it would discontinue further investment in its FiOS platform after the end of 2010.¹⁰⁶ AT&T's investment in mass market broadband has been confined to extremely modest upgrades to its existing infrastructure to support its U-verse offering, a decidedly inferior broadband service when compared with FiOS and with the current cable broadband state of the art.¹⁰⁷

101. See, e.g., Comments of Verizon Wireless at 7–10, Review of Regulatory Requirements for ILEC Broadband Telecommunications Services, FCC CC Docket No. 01-337 (rel. March 1, 2002), available at <http://fjallfoss.fcc.gov/ecfs/document/view.action?id=6513079790>.

102. See *id.* at 14.

103. See *BWIA Order*, *supra* note 24.

104. See, e.g., FCC, CONNECTING AMERICA: THE NATIONAL BROADBAND PLAN 20, 37, 136 (2010) [hereinafter NATIONAL BROADBAND PLAN]; Press Release, FCC, FCC Sends National Broadband Plan to Congress (Mar. 16, 2010), http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-296880A1.pdf.

105. See, e.g., VERIZON COMMUNICATIONS INC., QUARTERLY REPORT (FORM 10-Q) (May 9, 2005); Press Release, Verizon Communications Inc., Verizon Completes Spin-Off of Local Exchange and Related Businesses in Maine, New Hampshire and Vermont (Mar. 31, 2008); Press Release, Verizon Communications Inc., Verizon Completes Spinoff of Local Exchange Businesses and Related Landline Activities in 14 States (Jul. 1, 2010).

106. See Robert Cheng, *Verizon to End Rollout of FiOS*, WALL ST. J. (Mar. 30, 2010), http://online.wsj.com/article/NA_WSJ_PUB:SB10001424052702303410404575151773432729614.html.

107. For example, there are five tiers of U-verse download speeds available: 3, 6, 12, 18, and 24 Mbps. *AT&T U-verse High Speed Internet*, AT&T, <http://www.att.com/u-verse/explore/internet-landing.jsp> (last visited Nov. 16, 2010). Verizon offers FiOS at 15, 25, and 50 Mbps. *FiOS Internet*, VERIZON, <http://www22.verizon.com/residential/>

E. Regulating the Underlying Transmission in Internet Access Services is Not, and Would Not Amount to or Result in, the Regulation of Content or Application Providers

Those that have spoken most vociferously against net neutrality have characterized these principles as requiring “regulation of the entire Internet.”¹⁰⁸ Decades of effective separation of basic transmission (regulated) from “enhanced” services and customer premises equipment (unregulated) under the *Computer Inquiry II* framework show that this conclusion completely misses the mark. Under that framework, the FCC successfully deregulated all of the customer premises equipment and enhanced services offered by ILECs and ensured that there was no need for

fiosinternet/#plans (last visited Nov. 16, 2010). Comcast also offers plans ranging up to 50 Mbps. *High-Speed Internet: Speed Comparison*, COMCAST, <http://www.comcast.com/Corporate/Learn/HighSpeedInternet/speedcomparison.html> (last visited Nov. 16, 2010). Even Qwest, using an FTTH technology similar to AT&T’s, offers a 40 Mbps service. *Compare Qwest High-Speed Internet Plans*, QWEST, http://www.qwest.com/residential/internet/broadbandlanding/compare_plans.html (last visited Nov. 16, 2010).

108. For example, after Rep. Edward Markey (D-Mass.) introduced H.R. 5273, “A Bill [t]o promote open broadband networks and innovation, foster electronic commerce, and safeguard consumer access to online content and services,” known by the short name, *The Net Neutrality Act of 2006*, large telephone companies, as sponsors of an organization that went by the name “Hands Off the Internet,” took out a full page advertisement in the *Washington Post* depicting the eleven-page bill as thousands of pages long. Net Neutrality Act of 2006, H.R. 5273, 109th Cong. (2006); see *Hands off the Internet*, COMMON CAUSE, <http://www.commoncause.org/site/pp.asp?c=dkLNK1MQIwG&b=2007803> (last visited Nov. 16, 2010) (discussing the “Hands Off the Internet” advertisement in the *Washington Post*). More recently, in comments filed in the FCC proceeding Framework for Broadband Internet Service, AT&T asserted that “[i]f DNS look-up or security features were insufficient to maintain a Title I information-service classification for *broadband Internet access* providers even when those features are integrated with transmission functionality, there would be no limiting principle that would prevent Title II regulation from encompassing much of the rest of the Internet ecosystem.” Comments of AT&T Inc. at 89, Framework for Broadband Internet Service, FCC GN Docket No. 10-127 (rel. July 15, 2010). In the same proceeding, Verizon claimed that

Any theory under which the Commission concluded that broadband Internet access services included the offering of separate telecommunications service under Title II would implicate all of these players [referring to a broad range of content and application providers]. And the Commission’s plan to then assert Title I ancillary authority over the information service components of broadband Internet access in order to promulgate ‘net neutrality’ rules would allow it to sweep even more broadly and regulate other content, applications, and information services delivered over the Internet.

Reply Comments of Verizon and Verizon Wireless at 62, Framework for Broadband Internet Service, FCC GN Docket No. 10-127 (July 15, 2010). And, in a similar vein, the National Cable & Telecommunications Association warned that “[o]pening the door to the common carrier regulation of ‘connectivity’ will quickly reach these information services’ functionalities or other elements of the ‘Internet ecosystem,’ notwithstanding the Commission’s stated intent to snare in its net only broadband Internet access providers.” Comments of Nat’l Cable & Telecomm. Ass’n at 55, Framework for Broadband Internet Service, FCC GN Docket No. 10-127 (July 15, 2010).

any form of common carrier regulation to extend to non-ILEC providers of these services.¹⁰⁹

It is also clear that the *Computer Inquiry II* framework is not confined to a single technological vintage. Neither the speed of transmission, the format of the information being transmitted, nor the switching technology used to route the information make broadband access any different from earlier basic transmission services. Even today, the transmission component for dial-up Internet access continues to be a regulated common carrier service that end users can use to reach independent ISPs that connect the user to the (unregulated) Internet. If Internet access over dial-up facilities can exist without regulation of the Internet, it is hard to see why "Internet regulation" is the logical result of treating dedicated access as a Title II service. Applying these same principles, it is clear that no regulation of content- or application-related activity occurring on the Internet need result from regulating Internet access as a Title II common carrier telecommunications service.

IV. ECONOMIC REALITIES REQUIRE REGULATORY SUPPORT FOR NONDISCRIMINATORY ACCESS BY COMPETITORS TO BROADBAND TRANSMISSION USED FOR INTERNET ACCESS

In the previous section, we discussed why the model adopted by the FCC to promote a competitive information services market—requiring that the underlying transmission be offered on a nondiscriminatory, common carrier basis—must also apply to broadband Internet access in the same manner that it has with respect to "legacy" transmission services. Predictive judgments and optimistic aspirations as to the development and growth of facilities-based mass market broadband competition will not materialize if the fundamental economics cannot support such entry—and if we have learned nothing else over the fifteen years since adoption of the 1996 Act, it is that such entry is not economically viable. But the lack of economic feasibility of facilities-based competition does not mean that competition at the retail level cannot take place and, indeed, *Computer Inquiry II* and the 1996 Act contemplate—and are expressly aimed at facilitating—precisely this form of entry.

So long as wireline Internet access remains a closed duopoly controlled by the incumbent LEC and the incumbent cable company, the FCC will need to step in as the "traffic cop" for ensuring nondiscriminatory Internet access. If the FCC promotes access competition at the retail level by mandating that nonfacilities-based ISPs be afforded nondiscriminatory access to dominant facilities-based wireline and wireless distribution

¹⁰⁹ *Stevens Report*, *supra* note 5, at para. 45; *see also Computer Inquiry II*, *supra* note 8.

infrastructures, then marketplace forces, and not regulatory oversight, will ensure the development and growth of competition in all Internet segments—access, content, and applications. Put differently, and contrary to the claims of the dominant incumbents, reinstatement of full *Computer Inquiry II* safeguards with respect to broadband Internet access is a far more effective and far less regulatory approach to assuring net neutrality and an open Internet than ongoing administration of direct net neutrality regulations.

In this section, we discuss the importance of competition for broadband Internet access and how the FCC, using the tools provided in the 1996 Act and in its own *Computer Inquiry II* regulations, can ensure net neutrality by promoting Internet access entry and competition by nonfacilities-based providers.

A. Regardless of the Technology in the Upstream Network, Access Facilities Remain a Bottleneck

While *Computer Inquiry II* enabled competition to develop in markets adjacent to telecommunications, another market structure mechanism was largely responsible for enabling competition to develop for telecommunications services that were dependent upon the local access bottleneck. In 1982, U.S. District Court Judge Harold Greene approved the Consent Decree that required the restructuring of the Bell System in a manner intended to make the Bell operating companies provide access services on a nondiscriminatory basis to all providers of long distance service.¹¹⁰ Prior to the 1984 structural separation of AT&T from its local Bell exchange carriers, AT&T's long distance business received highly preferential treatment from the local Bell operating companies (its affiliates)—treatment that was simply not available to competing long distance carriers. Customers of MCI, Sprint, and other long distance entrants were forced to dial as many as twenty additional digits—rather than the eleven digits that AT&T's customers were required to dial—in order to place a long distance call.¹¹¹ Network interconnection arrangements available to competing carriers were subject to a number of technical limitations, and competitors had no access at all to important signaling protocols. The denial of access to one of these capabilities, known as “Answer Supervision,” made it almost impossible for rival long distance carriers to accurately time and bill their customers' calls;

110. See *United States v. American Tel. & Tel. Co.*, 552 F. Supp. 131, 220–22 (D.D.C. 1982).

111. Implementation of the Local Competition Provisions in the Telecommunications Act of 1996, *First Report and Order*, 11 F.C.C.R. 15499, para. 17 (1996) [hereinafter *First Local Competition Order*].

unavoidable charges to customers for unanswered calls caused harm to competitive carriers' business reputations and made it harder for them to gain commercial acceptance.¹¹²

Meaningful long distance competition did not become a reality until the structural separation of the local and long distance businesses made the local Bell companies indifferent as to their customers' choice of long distance carrier, thereby eliminating any business purpose in their maintaining these and other discriminatory practices. When the 1996 Act provided a glide path for the divested Bell companies to reenter the long distance market (upon satisfying certain requirements intended to facilitate competition at the local service level without any requirement to demonstrate that effective competition had actually developed for local exchange services¹¹³), and the FCC went on to permit the Bell companies to bundle their local and long distance services into a single flat-rate package,¹¹⁴ stand-alone long distance competition all but disappeared.

The anticompetitive conditions that existed before the courts and the FCC ensured equal access to local exchange services clearly demonstrate that the potential for competitive foreclosure is neither theoretical nor far-fetched.¹¹⁵ There is an unmistakable parallel between the long distance market prior to the break-up of the former Bell System and the broadband

112. With respect to long distance services, these inequalities were largely addressed through the FCC's equal access regime and the provisions in the *MFJ*. See GTE Sprint Communications Corp., US Telecom, Inc., Allnet Communications Services, Inc., & U.S. Transmission Systems, Inc., *Notice of Proposed Rulemaking*, 1985 FCC LEXIS 2207, para. 63 (1985); see also *Bill Correctors, Ltd. v. MCI Comm. Corp.*, *Memorandum Opinion and Order*, 1984 FCC LEXIS 1715, para. 4 (1984).

113. See 47 U.S.C. § 271(c)(2)(B) (2006) ("Competitive Checklist").

114. It took until December 2003 for Bell operating companies to receive authority to offer in-region long distance services in all of their operating states. Application of Qwest Communications International Inc. for Authorization to Provide In-Region, InterLATA Serv. in Ariz., *Memorandum Opinion and Order*, 18 F.C.C.R. 25504, paras. 1-2 (2003). By 2005, when the FCC was reviewing the proposed Verizon-MCI merger, it noted "significant evidence in the record that long distance service purchased on a stand-alone basis is becoming a fringe market." Verizon Communications Inc. & MCI, Inc. Applications for Approval of Transfer of Control, *Memorandum Opinion and Order*, 20 F.C.C. R. 18433, para. 92 (2005).

115. In her recent article, *Transporting Communications*, Professor Susan Crawford provides an excellent overview of how, throughout the history of telecommunications, "companies providing general-purpose access services given sufficient legal discretion will both discriminate against particular communications in favor of their own complementary businesses and act on the content of messages they are asked to transmit, to their own commercial advantage." Susan P. Crawford, *Transporting Communications*, 89 B.U. L. REV. 871, 876 (2009). While we do not disagree with Professor Crawford's conclusion that structural separation of the common carrier's Internet access transmission offerings from its competitive activities would be a highly effective means of preventing such discrimination, *id.* at 927-28, such an approach may not be practical to implement at the present time, due to the legal and political hurdles it is likely to face.

Internet access market as it exists today. Net neutrality is about a great many things, but fundamentally it should be viewed as key to preserving and protecting competition in all non-last-mile adjacent network, application, and content markets. When a last-mile broadband provider is able to act as a gatekeeper for access to consumer “eyeballs,”¹¹⁶ it has the very same ability to restrict or deny access to downstream application and content providers as the local pre-1984 AT&T telephone operating companies had with respect to downstream (non-AT&T) long distance carriers. Absent effective competition for last-mile broadband (wireline or wireless) Internet access, the last-mile broadband provider has both the incentive and the ability to impose excessive fees for such access and/or to force downstream application and content providers to direct their traffic to the last-mile provider’s own backbone network—threatening the continued viability of backbone network providers that do not also have last-mile end user customers of their own. Application and content providers unwilling or unable to pay the required “tribute” could be cut off altogether from the last-mile provider’s end users, or otherwise be forced to accept a degraded connection. The parallels between pre-Bell System break-up long distance competition and the current potential for vertical market foreclosure arising from the last-mile broadband access providers’ market power are strikingly similar.

Although competition among interexchange carriers flourished following the Bell System break-up, the Bell ILECs subject to the *MFJ* insisted (almost from the outset) that a structural approach enforcing nondiscrimination for access services (thus enabling competition) was unnecessary. To respond to these claims, in 1994, our firm, Economics and Technology, Inc., jointly with Hatfield Associates, Inc. of Boulder, Colorado, were engaged by (old) AT&T and MCI to prepare a detailed technical and economic analysis of the role of exchange access facilities. The resulting study, *The Enduring Local Bottleneck*, demonstrated that long after regulatory and judicial mandates had permitted competition to arise in customer premises equipment, inside wiring, and long distance services, the last-mile facilities (whether switched or dedicated) that connected customers to the PSTN were available from a single source and thus remained a “bottleneck.”¹¹⁷ The conclusion of that study was clear: Last-mile telecommunications infrastructure involves enormous capital investments and persistently high fixed costs, and is characterized by

116. “Eyeballs” is a term of art used to refer to the target audience of mass media. In the present context, it refers to those end users potentially able to view particular content and applications on the Internet.

117. ECONOMICS AND TECHNOLOGY, INC. & HATFIELD ASSOCIATES, INC., *THE ENDURING LOCAL BOTTLENECK: MONOPOLY POWER AND THE LOCAL EXCHANGE CARRIERS* (1994), www.econtech.com/Bottleneck.pdf.

extensive economies of scale and of scope.¹¹⁸

Incumbency and other “first mover” advantages are massive, and “greenfield” facilities-based entry by an entity with no existing infrastructure is unrealistic—if not altogether impossible—as an economic matter. In 1994, there was much speculation as to the potential entry of cable television providers into the local telephone business, but it was not until the advent of Voice over Internet Protocol (VoIP) around 2005 that such entry became feasible.¹¹⁹ Even so, and as the FCC has recently noted, no inference can be drawn that such entry by others can be anticipated from a cable company’s entry into the local telecommunications market:

We see no persuasive economic reason to predict that, just because a cable company might find it profitable to make incremental investments in a preexisting network, subsequent entrants also would find it profitable to incur the costs of building an entire new network from scratch. Indeed, given that an incumbent, such as a cable company, may have an additional incentive to invest in facilities to deter additional entry from potential rivals, even less can be inferred about subsequent entrants from the fact that most cable companies have found it profitable to upgrade their cable television networks to provide telephone and data services. Supporting this view, we have seen few new entrants in any domestic telecommunications markets that have been willing to invest in a totally new wireline network, at least to serve residential customers.¹²⁰

Our 1994 study was undertaken at a time when the U.S. Congress was engaged in the massive rewrite of the Communications Act of 1934 that resulted in the enactment of the 1996 Act. The 1996 Act preempted all remaining state regulatory restrictions on local exchange service competition and expanded the structural approach to nondiscrimination to include competitive local services that relied upon incumbents’ local exchange facilities.¹²¹ In addition to guaranteeing competitors comprehensive interconnection rights, section 251 required that ILECs

118. *Id.* at 4.

119. According to the National Cable Television Association (NCTA), the number of cable telephone subscribers rose from 5.9 million in 2005 to 22.2 million in 2009. *Cable Phone Customers 1998-2009*, CABLE: NATIONAL CABLE & TELECOMMUNICATIONS ASSOCIATION, <http://www.ncta.com/Stats/CablePhoneSubscribers.aspx> (last visited Nov. 16, 2010).

120. Petition of Qwest Corporation for Forbearance Pursuant to 47 U.S.C. § 160(c) in the Phoenix, Arizona Metropolitan Statistical Area, *Memorandum Opinion and Order*, 2010 FCC LEXIS 3841, para. 36 (2010) (citations omitted) [hereinafter *Qwest Phoenix Forbearance Order*].

121. Section 271 of the 1996 Act made provision for eliminating the *MFJ*’s long distance line of business restriction, permitting the incumbent Bell companies to offer long distance services once local competition was established, in which case, so the argument went, the incentive to discriminate against competitors would no longer exist. See Telecommunications Act of 1996, Pub. L. No. 104-104, § 151(a), 110 Stat. 56 (codified at 47 U.S.C. § 271).

offer any requesting carrier “nondiscriminatory access to network elements on an unbundled basis at any technically feasible point on rates, terms, and conditions that are just, reasonable, and nondiscriminatory”¹²² In its initial implementation of section 251, the FCC required that ILECs provide a broad set of unbundled network elements (UNEs),¹²³ which entrants used (along with total service resale and a limited amount of their own facilities) to expand their competitive local telecommunications service offerings and their geographic footprints.¹²⁴ The three-pronged approach to entry under section 251 (interconnection of competitor-owned facilities, unbundled access, and resale) reflected recognition by Congress and by the FCC that economic barriers made it unrealistic to expect competitors ever to fully replicate the incumbents’ networks with their own facilities.¹²⁵

The availability of wholesale UNEs permitted competitors to expand their own networks gradually, giving them the ability to achieve a broad geographic footprint and, in the case of enterprise customers, to be capable of serving all of a customer’s locations, while adding its own facilities where committed revenues permitted recovery of their investment. Using UNEs (and, in particular, the local loop-switching combination, known as the UNE-Platform), carriers that had previously been competitive only in the long distance market were able to offer residential customers an alternative to ILEC local exchange service.¹²⁶ Under its section 251 authority, the FCC also required ILECs to offer other carriers access to the high frequency portion of the local loop, so that they could make a competitive offering of Digital Subscriber Line (DSL) high-speed Internet access service even when the customer retained wireline voice telephone service from the ILEC.¹²⁷

122. *Id.* at 47 U.S.C. § 251(c)(3).

123. *First Local Competition Order*, *supra* note 111, at para. 4.

124. *Id.* at para. 12.

125. *See id.* at para. 13–14 (citing Joint Managers’ Statement, S. Conf. Rep. No. 104-230, 104th Cong. 113, 121 (1996)).

126. “Today, the combination of unbundled elements called ‘UNE-P’ or ‘UNE-Platform’—a combination of unbundled loops, switching, transport and signaling—is the most successful mode of competitive entry created by the 1996 Act, and its growth substantially exceeds the alternative modes of entry.” T. Randolph Beard, George S. Ford, & Christopher C. Klein, *The Financial Implications of the UNE-Platform: A Review of the Evidence*, 12 *COMMLAW CONSPPECTUS* 5, 6 (2004). Ironically, by the time this article was published, the FCC had acceded to ILEC demands for the elimination of UNE-Platform, and CLECs that had depended upon UNE-P to serve residential customers were no longer viable competitors. *See* Press Release, AT&T Corp., AT&T Announces Second-Quarter 2004 Earnings, Company to Stop Investing in Traditional Consumer Services; Concentrate Efforts on Business Markets (July 22, 2004), <http://www.corp.att.com/news/2004/07/22-13163> (“As a result of recent changes in regulatory policy governing local telephone service, AT&T will no longer be competing for residential local and standalone long distance (LD) customers.”).

127. Deployment of Wireline Services Offering Advanced Telecommunications

The details of how the implementation of section 251 devolved from the comprehensive requirements of the 1996 *Local Competition Order*¹²⁸ to the largely decimated set of UNEs that survived the 2003 *Triennial Review* and 2005 *Triennial Review Remand Orders*¹²⁹ is generally beyond the scope of this Article, except with respect to “elements” and capabilities that relate specifically to the provision of broadband Internet access. However, there are several policy judgments that the FCC’s broadband access deregulation has in common with other deregulatory policies adopted by the FCC during the Bush years, including the decision to cut off competitor access to numerous UNEs, the maintenance of special access pricing flexibility, and the various forbearance decisions. First, the FCC embraced the notion (promoted by ILECs) that nonfacilities-based competition was detrimental to ILEC investment incentives and that, despite significant empirical evidence to the contrary, such competition was not a legitimate contributor to the long-term competitive objectives of the 1996 Act. Second, although the FCC, between 2000 and 2008, had relied repeatedly upon the “investment incentive”¹³⁰ rationale, it never looked back to reexamine the result of this “predictive judgment.” In that regard, our 1994 *Enduring Local Bottleneck* study’s “predictive judgments” as to the realistic prospects for facilities-based local last-mile entry have turned out to have been far more prescient than those that had been advanced—and relied upon—by the FCC.¹³¹

Capability and Implementation of the Local Competition Provisions of the Telecommunications Act of 1996, *Third Report and Order in CC Docket No. 98-147 and Fourth Report and Order in CC Docket No. 96-98*, 14 F.C.C.R. 20912, para. 6 (1999).

128. See *First Local Competition Order*, *supra* note 111, at para. 366.

129. See *Triennial Review Order*, *supra* note 45; *Unbundled Access to Network Elements, Order on Remand*, 20 F.C.C.R. 2533 (2005) [hereinafter *Triennial Review Remand Order*].

130. See, e.g., *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, para. 7 (1999) (“Unbundling rules that encourage competitors to deploy their own facilities in the long run will provide incentives for both incumbents and competitors to invest and innovate.”) [hereinafter *UNE Remand Order*]; *id.* at para. 46 (“We agree with the incumbent LECs’ concerns regarding the preservation of their investment incentives.”); see also *Triennial Review Order*, *supra* note 45, at para. 178 (“In general, the incumbent LECs and equipment manufacturers take the position that unbundling deters both incumbent LEC and competitive LEC capital investment.”). The FCC has relied most strongly on the “investment incentives” argument in connection with broadband services. See, e.g., *Triennial Review Order*, *supra* note 45, at para. 541; *Triennial Review Remand Order*, *supra* note 129, at paras. 11, 40.

131. Despite the absence of any hard evidence in support of the ILECs’ “regulation-discourages-investment” claim, its proponents persist in advancing this argument, perhaps believing that if it is repeated often enough, it will come to be accepted as fact. A recent reiteration of this same theme was offered by Janusz A. Ordovery, Greg Shaffer, and Doug Fontaine in an unpublished “Vodafone Public Policy” series paper, “The Economics of Price Discrimination,” commissioned by Vodafone and submitted to the FCC in an *ex parte*

The FCC also began to make various “predictive judgments” about competition based upon the fallacy that a CLEC’s deployment of facilities at a particular location was evidence that the CLEC (or another competitive provider) could justify the investment to deploy facilities at any “similar” location in the MSA.¹³² As the FCC’s reliance upon this predictive competition analysis expanded, local competition (other than from the uniquely facilities-based cable CLEC) actually began to shrink. Only recently, in its *Order*¹³³ denying Qwest’s *Petition for Forbearance in the Phoenix MSA*,¹³⁴ has the FCC demonstrated an awareness of the theoretical and factual flaws underlying the analytical framework it had been using to assess the status of competitive telecommunications markets.

Recognizing the theoretical and empirical concerns associated with duopoly, the Commission, in the *Qwest Omaha Forbearance Order*, offered three predictive judgments, which it concluded would mitigate those concerns. It first predicted that Qwest would continue to make wholesale facilities, such as DS0, DS1, and DS3 facilities, available to competitors at “competitive rates and terms.” Second, and relatedly, it predicted that non-cable competitors could “rely on the wholesale access rights and other rights they have under *sections 251(c)* and *section 271* . . . [to] minimize[] the risk of duopoly and of coordinated behavior or other anticompetitive conduct in this market.” Third, it predicted that the areas where Cox currently had facilities would see further investment by Cox and by other competitors even without access to unbundled loops or transport. . . . Upon further consideration, we find that these predictions have not been borne out by subsequent developments, were inconsistent with prior Commission findings, and

filing on April 23, 2010 in GN Docket No. 09-191 and WC Docket No. 07-52. Janusz A. Ordover et al., *The Economics of Price Discrimination*, in *THE ECONOMICS OF THE INTERNET* (Vodafone Group Plc. 2010) [hereinafter *Ordover* et al.]. A central theme of the *Ordover* et al. paper is the authors’ claim that “[c]ontrary to the position taken by some net neutrality proponents, the Commission’s proposed ban on price discrimination can have a significant deleterious effect on the incentives of broadband access providers to undertake necessary investments in network innovation and expansion.” *Id.* at 28. The paper contains no actual data or analysis to support this claim or any of the purported negative (yet entirely unquantified) economy-wide welfare impacts that the authors describe. Moreover, the authors conveniently ignore the fact that any increase in telecommunications costs confronting application and content providers to reach end users would have a negative impact upon their willingness to invest—particularly if the payments being made to the access providers amount to a transfer of some portion of the application and content providers’ potential economic profits—an outcome that would also have negative welfare impacts. An analysis such as that proffered by *Ordover* et al. that ignores the economic effects of activities dependent upon Internet access services cannot be considered as either complete or remotely accurate.

132. *Triennial Review Remand Order*, *supra* note 129, at paras. 87–90.

133. See *Qwest Phoenix Forbearance Order*, *supra* note 120, at paras. 33–34.

134. *Petition of Qwest Corporation for Forbearance Pursuant to 47 U.S.C. § 160(c) in the Phoenix Arizona Metropolitan Statistical Area*, WC Docket No. 09-135 (filed Mar. 24, 2009).

are not otherwise supported by economic theory.¹³⁵

Nowhere has the FCC been more aggressive in eliminating competitor access than in the area of mass market broadband. While continuing to recognize significant impairment in certain legacy last-mile facilities,¹³⁶ the FCC, in its 2003 *Triennial Review Order*, nonetheless eliminated ILECs' obligation to offer unbundled access to: (1) the high-frequency portion of the local loop (HFPL) (also referred to as "line sharing"), used by so-called "Data CLECs" to provide DSL to mass market residential and small business customers; (2) hybrid fiber-coaxial cable (HFC) loops; and (3) so-called "greenfield" fiber loops.¹³⁷ The FCC swept away these UNEs largely based upon broad generalizations about competitive growth. For example, in support of its decision to end line sharing, the FCC concluded that its earlier findings about "local competition and the lack of viable alternatives for a provider of broadband services"¹³⁸ no longer applied, and offered in its place a nonspecific assessment to the effect that, while "these circumstances have not been completely reversed, significant strides have been made by competitors in the local market."¹³⁹ The FCC also explicitly relied upon section 706 as justification for accepting "some level of impairment," because of the countervailing objective of encouraging more rapid deployment of broadband by the incumbent providers.¹⁴⁰ However, the *TRO*, like other FCC orders from this era, contains little analysis on the factual basis for expecting the elimination of wholesale access to the high frequency portion of the loop to lead to increased investment levels.

In the *TRO*, the FCC also found evidence of significant wholesale availability of the HFPL, noting that

we can no longer find that competitive LECs are unable to obtain the HFPL from other competitive LECs through line splitting. For example, the largest non-incumbent LEC provider of xDSL service, Covad, recently announced plans to offer ADSL service to "more of AT&T's 50 million consumer customers" through line splitting.¹⁴¹

But the FCC never took a second look at this finding after the AT&T and SBC merger—i.e., once there was no longer an AT&T CLEC to split

135. *Qwest Phoenix Forbearance Order*, *supra* note 120, at paras. 33–34 (citations omitted).

136. *See Triennial Review Order*, *supra* note 45, at paras. 248–49.

137. *See id.* at paras. 237, 247, 275. The FCC made this finding notwithstanding the fact that "[t]he record further indicate[d] that FTTH loops display several economic and operational entry barriers in common with copper loops—that is, the costs of FTTH loops are both fixed and sunk, and deployment is expensive." *Id.* at para. 274.

138. *Id.* at para. 259 (citing *Line Sharing Order*, 14 F.C.C.R. 20938, paras. 53, 56 (1999)).

139. *Id.*

140. *Id.* at para. 173.

141. *Id.* at para. 259.

lines with a data CLEC, such as Covad.

Other FCC decisions made it still harder for entrants to provide broadband Internet access in competition with the ILEC and cable provider. Shortly after the *TRO*, the FCC granted the Verizon, SBC, Qwest, and BellSouth petitions for forbearance from their section 271 obligations for all of the broadband elements for which the FCC, in the *TRO*, had found a lack of impairment. As in the *TRO*, the decision to eliminate RBOC broadband access provisioning obligations relies less upon market analysis than upon broad generalizations about investment incentives and “emerging” intermodal competition.¹⁴² Finally, with its various reclassification decisions, and in particular in its *BWIA Order*, the FCC removed the issue of broadband competition from any further consideration under section 251 criteria by making broadband Internet access capability unreachable by competitors as a wholesale telecommunications service.¹⁴³

B. Reevaluation of FCC Competition Analysis Needs to Extend to Broadband Access

There are several assumptions and predictions that appear frequently in the FCC’s broadband-related decisions. Although it has relied upon these assumptions and predictions repeatedly over the past decade, the FCC has never gone back to analyze the actual experience under deregulation in sufficient detail to determine if its predictions were correct.

Assumption/Prediction #1: That permitting ILECs and cable companies to exclude LEC and ISP competitors from using the facilities-based incumbents’ broadband facilities is (a) necessary to promote investment by incumbents; (b) likely to provide greater incentives for investment by competitors; or (c) the necessary and best approach to implementing the policy stated in section 706.

Reality: ILEC and cable company broadband investment decisions (as well as those of other CLECs) depend critically upon available revenues and anticipated costs. Deployment data, including that contained in the record of the *National Broadband Plan* proceeding, demonstrates that

142. Petition for Forbearance of the Verizon Telephone Companies Pursuant to 47 U.S.C. § 160(c), *Memorandum Opinion and Order*, 19 F.C.C.R. 21496, n.66 (2004) [hereinafter *Section 271 Forbearance Order*] (“The preconditions for monopoly appear absent . . . [W]e see the potential for this market to accommodate different technologies such as DSL, cable modems, utility fiber to the home, satellite and terrestrial radio.”) (citing *Inquiry Concerning the Deployment of Advanced Telecommunications Capability*, 14 F.C.C.R. 2398, para. 48 (1999)). Some six years later, the FCC now expresses serious reservations about competition under the ILEC-cable duopoly that has emerged. *Qwest Phoenix Forbearance Order*, *supra* note 120, at para. 82. The other predicted competition for mass market broadband access services, including competitors on intermodal platforms, has still yet to materialize. *See id.* at paras. 82–83.

143. *See BWIA Order*, *supra* note 24, at paras. 18–19.

facilities-based providers may well not make broadband investments in areas that do not satisfy standard investment criteria—e.g., high-cost (remote) or low-revenue (low-income) areas—even with the incentive of deregulation.¹⁴⁴ Conversely, where the incentive to invest has existed, broadband deployment has occurred even in the presence of regulation.¹⁴⁵

Insulating ILECs and cable companies from wholesale obligations means that they obtain the benefits of market power that they would not have in the presence of additional competitors. However, there is no assurance that the incumbents will use the supracompetitive profits that they derive from serving customers in one area to build out to customers in remote, higher cost, and/or lower income areas. Verizon's decision to shed those portions of its operating footprint that consist mainly of rural customers rather than submit to pressures to extend broadband deployment to such areas provides compelling evidence of this reality. As to competitor investment, with the exception of cable companies, the FCC has not demonstrated (nor could it) that CLEC investment (with the exception of cable companies) has increased as a result of the elimination of broadband unbundling requirements.

Assumption/Prediction #2: That “emerging” intermodal competition will expand consumer options beyond the duopoly of wireline ILEC and cableco-provided access.¹⁴⁶

Reality: For more than a decade, the FCC has relied upon the anticipated presence of “intermodal” competition, including (among others) broadband over power lines, satellite, fixed microwave, and, finally, wireless. However, the FCC's own data show that the reality has not come even remotely close to meeting such expectations. According to the FCC's most recent report on *High-Speed Services for Internet Access (Status as of December 31, 2008)*, the combined categories of satellite, fixed wireless, and “power line and other” accounted for just over one percent of total fixed broadband in June 2005 and remained at essentially that same level (it had actually decreased slightly) as of December 2008.¹⁴⁷ In its *National*

144. *See id.* at para. 19.

145. In the wake of the 1996 Act (from 1997 to 2001), a period of decidedly increasing regulation, Verizon undertook \$48.8 billion in additional telephone plant in service (TPIS), as compared to TPIS additions of \$35.4 billion during the subsequent period of deregulation (from 2002 to 2006)—meaning that Verizon spent 37.7 percent more on telecommunications plant during the period of regulation than the subsequent period of deregulation. (This thirty-six percent growth represents the growth attributable to both of Verizon's predecessor companies: Bell Atlantic and non-RBOC GTE. Bell Atlantic's individual TPIS additions experienced growth of more than fifty-seven percent during the same period.) *See* FCC, ARMIS USOA REPORT 43-02 tbl. B-1.B. (years ending 1997–2006).

146. *See, e.g., Section 271 Forbearance Order, supra* note 142, at para. 22.

147. INDUS. ANALYSIS & TECH. DIVISION, WIRELINE COMPETITION BUREAU, FCC, HIGH-

Broadband Plan, the FCC recommends that a significant amount of new spectrum be allocated for broadband uses, but still acknowledges that “[w]ireless broadband may not be an effective substitute in the foreseeable future for consumers seeking high-speed connections at prices competitive with wireline offers.”¹⁴⁸

Assumption/Prediction #3: That because broadband involves new (rather than legacy) facilities, incumbents and new entrants have the same opportunities for deployment.¹⁴⁹

Reality: This conclusion partakes of both the “new technology” fallacy and the FCC’s ongoing misconceptions about the ability of competitors to replicate an incumbent’s network in its entirety. Broadband access facilities are deployed incrementally to carriers’ (or cable companies’) preexisting networks. For the ILEC, incumbency and the existence of a legacy network provide both unique cost advantages and unique revenue opportunities. As we discuss more fully below, the time has passed for the FCC to reassess the factual evidence with respect to competition, to acknowledge that competitors are unable to duplicate incumbents’ ubiquitous network access facilities, and to realign its policies according to these market realities.

Ironically, while the FCC has premised the various steps in its comprehensive deregulation of broadband access services upon an expectation of impending competitive entry, these actions have had the effect of frustrating and discouraging new entry and creating a stampede of exits from the competitive telecommunications market. Indeed, it is difficult to square the various deregulatory initiatives for broadband access with the FCC’s recent finding that “the [facilities-based wireline broadband] industry will probably always have a relatively small number of facilities-based competitors”¹⁵⁰ or with the DOJ’s conclusion that wireline broadband services are characterized by “the presence of large economies of scale, which preclude having many small suppliers and thus often lead to oligopolistic market structures.”¹⁵¹

C. *Reconciling Recent FCC Decisions with Existing Policies on*

SPEED SERVICES FOR INTERNET ACCESS: STATUS AS OF DECEMBER 31, 2008, at 9, tbl.1 (2010).

148. NATIONAL BROADBAND PLAN, *supra* note 104, at 41 (citing Robert C. Atkinson & Ivy E. Schultz, COLUMBIA INSTITUTE FOR TELE-INFORMATION, BROADBAND IN AMERICA: WHERE IT IS AND WHERE IT IS GOING (ACCORDING TO BROADBAND SERVICE PROVIDERS) 7 (2009)).

149. *Triennial Review Order*, *supra* note 45, at para. 227.

150. NATIONAL BROADBAND PLAN, *supra* note 104, at 36.

151. *Id.* at 62 n.4 (citing Economic Issues in Broadband Competition: A National Broadband Plan for Our Future, Ex Parte *Submission of the United States Department of Justice* 11 (filed Jan. 4, 2010)).

Broadband Internet Access

Shortly after the D.C. Circuit vacated the FCC's *Comcast* decision, the FCC issued a *Notice of Inquiry* in which it proposed to classify broadband Internet access as a telecommunications service, while maintaining "restrained oversight" of broadband Internet access service.¹⁵² In what the FCC describes as a "third way"—that is, something other than complete deregulation or the reimposition of full Title II obligations—the *NOI* suggests that the FCC could:

classify the Internet connectivity portion of broadband Internet service as a telecommunications service but . . . simultaneously forbear, using the section 10 authority Congress delegated to us, from all but a small handful of provisions necessary for effective implementation of universal service, competition and small business opportunity, and consumer protection policies.¹⁵³

Leaving aside the question of whether such a broad-brush approach to forbearance comports with the statutory requirements, the larger concern is whether the FCC can achieve its stated objectives with regard to an open and competitive Internet if it simply reclassifies Internet access, but fails to adopt the additional steps necessary to ensure that ILECs, cable companies, and wireless carriers make broadband "bottleneck" facilities available in accordance with all of the provisions of Title II that support the competitive provision of telecommunications and information services.¹⁵⁴

Indeed, just a few months prior to the Chairman's "third way" proposal, the FCC had released its Congressionally-mandated *National Broadband Plan*, in which it specifically noted that additional wireline facilities-based broadband entry (beyond the incumbent LEC and the

152. Framework for Broadband Internet Service, *Notice of Inquiry*, 25 F.C.C.R. 7866, para. 7 (2010).

153. *Id.* at para. 28 (citation omitted).

154. While Professor Crawford accurately describes the problems created by failing to require the provision of broadband last-mile transmission on a nondiscriminatory basis as common carrier services, her proposed solution appears to be confined to last- and middle-mile fiber optic transmission facilities, and not copper, coaxial cable, or wireless. See Crawford, *supra* note 115, at 928–29. To achieve Professor Crawford's solution would require extensive deployment of last-mile and middle-mile fiber facilities where few exist today. Whereas some form of "terrestrial, fixed broadband infrastructure capable of supporting actual download speeds of at least 4 Mbps" is presently available to ninety-five percent of all households (and a slightly higher percentage of businesses), fiber-to-the-premises (FTTP) is projected to become available, over the next several years, to merely fifteen percent of U.S. households. NATIONAL BROADBAND PLAN, *supra* note 104, at 20, 42. While Congress may in the long run determine that the massive investment required to attain ubiquitous FTTP deployment is in the public interest, this resource-intensive solution could only be achieved at a significant cost, and in any event not for many years in the future. In our view, there is no justification for deferring the conditions necessary to achieve net neutrality by tying it to a technology that currently exists in a relatively small portion of the United States, when a competitive Internet access market could be achieved today by requiring nondiscriminatory access on a technology-neutral basis.

incumbent cable provider) is unlikely:

Building broadband networks—especially wireline—requires large fixed and sunk investments. Consequently, the industry will probably always have a relatively small number of facilities-based competitors, at least for wireline service. Bringing down the cost of entry for facilities-based wireline services may encourage new competitors to enter in a few areas, but it is unlikely to create several new facilities-based entrants competing across broad geographic areas.¹⁵⁵

The same conclusion with respect to broadband competition appears in an *ex parte* submission by the DOJ (which the FCC cites in the *National Broadband Plan* report):

We do not find it especially helpful to define some abstract notion of whether or not broadband markets are ‘competitive.’ Such a dichotomy makes little sense in the presence of large economies of scale, which preclude having many small suppliers and thus often lead to oligopolistic market structures. The operative question in competition policy is whether there are policy levers that can be used to produce superior outcomes, not whether the market resembles the textbook model of perfect competition. In highly concentrated markets, the policy levers often include: (a) merger control policies; (b) limits on business practices that thwart innovation (e.g., by blocking interconnection); and (c) public policies that affirmatively lower entry barriers facing new entrants and new technologies.¹⁵⁶

While reinstating Internet access to its appropriate Title II status will certainly put the FCC in a better position to foster competition than if the service remained outside its direct jurisdiction, this policy change alone is unlikely to prevent incumbent broadband providers from consolidating their market power and continuing to discriminate against nonaffiliated ISPs and application and content providers.

The competitive realities of retail and wholesale access markets, which the FCC is just now acknowledging in other regulatory contexts, should inform the FCC’s approach to the regulation of Internet access. Not long after releasing its *Reclassification NOI*, the FCC issued a decision denying Qwest forbearance from various forms of retail and wholesale regulation for services in the Phoenix, Arizona MSA.¹⁵⁷ In that *Order*, the FCC admits that the competitive analysis used in its forbearance decisions in recent years has been flawed on both theoretical and factual levels. The FCC rejects both the theoretical and factual foundations for earlier decisions that had relied upon “predicted” competitive growth based upon anecdotal and “proxy” evidence of some competitive presence. Instead, the

155. NATIONAL BROADBAND PLAN, *supra* note 104, at 36.

156. *Id.* at 62 n.4 (citing Economic Issues in Broadband Competition: A National Broadband Plan for Our Future, *Ex Parte Submission of the United States Department of Justice* 11 (filed Jan. 4, 2010)) (internal quotation marks omitted).

157. See *Qwest Phoenix Forbearance Order*, *supra* note 120.

FCC now adopts a comprehensive antitrust type of market power analysis, with a strong emphasis upon market definition, market share, and other quantitative indicia of actual competition.

Unlike some of its earlier forbearance orders, this time the FCC views markets as “competitive” if the level of competition is sufficient to constrain the incumbent’s ability to “profitably impose a small but significant and nontransitory increase in price (SSNIP).”¹⁵⁸ Consistent with its precedents, the FCC finds that the relevant geographic market is the individual customer location because customers cannot be expected to relocate in response to an SSNIP;¹⁵⁹ in addition, the FCC recognizes that in order for an entrant to serve a multilocation enterprise customer, the entrant must be able to serve the entirety of the customer’s requirements at all of its business locations.¹⁶⁰ The FCC examines the actual levels of competition, as well as the likelihood of *de novo* entry or supply-side substitution, separately for each of the various product markets (enterprise and residential, retail and wholesale), and concludes that neither effective competition nor the short-term potential for effective competition, exists in any of them.¹⁶¹ With respect to enterprise services, the FCC’s analysis places particular emphasis upon competition at the wholesale level, which it finds to be almost nonexistent.¹⁶² While it continues to consider “potential competition” (in accordance with the directive of the federal courts), the FCC also recognizes that the “potential” needs to be based on a realistic expectation of either *de novo* entry or supply-side substitution.¹⁶³

In the *Qwest Order*, the FCC quotes extensively from earlier FCC decisions that had recognized the presence of formidable entry barriers and appears to re-embrace its earlier interpretation of the 1996 Act as supporting the development of local competition through both facilities- and nonfacilities-based entry.¹⁶⁴ And, as noted above, the FCC determined that the expansion of facilities by cable companies is not predictive of new entry by other competitors that lack cable’s existing infrastructure platform

158. *Id.* at para 56; *see also id.* at para. 42 & n.142–43.

159. *Id.* at para. 64.

160. *Id.* at para. 74.

161. *Id.* at paras. 71–72, 81–86, 88–91.

162. *See id.* at para. 73.

163. *Id.* at para. 72.

164. *See id.* at para. 32. Explaining the advantages of a market that includes nonfacilities-based competitors over a cable/ILEC duopoly, the FCC states:

Were that level of competition sufficient to fulfill Congress’ goals for telephone services, the 1996 Act only would have needed to require interconnection. Instead, Congress established means for additional competitors to enter without fully duplicating the incumbent’s local network. It is clear Congress wanted to enable entry by multiple competitors through use of the incumbent LEC’s network.

Id. (citations omitted).

and that the cable/ILEC duopoly cannot be relied upon to produce competitive conditions.¹⁶⁵

In this forbearance analysis,¹⁶⁶ the FCC here reinforces its theoretical market power analysis with empirical findings regarding the status of competition, concluding, *inter alia*, that:

- Even the largest CLECs rely upon ILEC last-mile facilities to connect to the vast majority of the enterprise customers they serve.¹⁶⁷
- Contrary to the FCC's previously stated expectations, ILECs have not continued to provide competitors with wholesale inputs at fair and reasonable prices after the FCC had forbore from requiring it—an outcome that the FCC now concedes should not have been surprising, noting that “assuming that Qwest is profit-maximizing, we would expect it to exploit its monopoly position as a wholesaler and charge supracompetitive rates, especially given that (absent regulation) Qwest may have the incentive to foreclose competitors from the market altogether.”¹⁶⁸
- Intermodal alternatives (such as fixed microwave service for enterprise customers) have not emerged or are not available at anywhere near the level necessary to represent a competitive alternative to ILEC special access services.¹⁶⁹

The analytical framework used in *Qwest* would also be well-suited for application in any FCC proceeding involving competition policy. In particular, although the FCC suggests that a somewhat different approach may be called for in broadband proceedings, the rationalizations that have been put forward for treating broadband differently from other types of access should not be elevated over the compelling competitive concerns expressed by the FCC in the *Qwest* ruling. Today, according to the FCC's *National Broadband Plan* report, seventy-eight percent of all U.S. housing units have a choice of two terrestrial broadband providers (the ILEC and cable company), but the number of customers that can select among three

165. *Id.* at para. 30 (“[T]he move from monopoly to duopoly is not alone necessarily sufficient to justify forbearance” This is because “economic theory holds that firms operating in a market with two or a few firms (*i.e.*, an oligopoly) are likely to recognize their mutual interdependence and, unless certain conditions are met, in many cases may engage in strategic behavior, resulting in prices above competitive levels.”).

166. In a Public Notice issued the same day as the *Qwest Order*, the FCC asked whether it was appropriate to extend the analytical framework applied in *Qwest* to other forbearance proceedings. Public Notice, FCC WIRELINE COMPETITION BUREAU SEEKS COMMENT ON APPLYING THE *QWEST PHOENIX FORBEARANCE ORDER* ANALYTIC FRAMEWORK IN SIMILAR PROCEEDINGS, DA No. 10-1115 (June 22, 2010).

167. *Qwest Phoenix Forbearance Order*, *supra* note 120, at para. 87.

168. *Id.* at para. 34.

169. *See id.* at paras. 69, 89.

(or more) providers is far smaller (four percent) than the number that has only one provider (thirteen percent) or no broadband availability at all (five percent).¹⁷⁰ The retail access duopoly that the FCC dismisses as ineffective in disciplining rates, terms, and conditions for other wireline telecommunications services is no different in the broadband context—except to the extent that the absence of wholesale competition, rather than being a de facto condition, is legally sanctioned.

While the FCC appears to be struggling to justify restoring a framework under which broadband Internet access is classified as telecommunications and provided in a manner that shields retail competitors from discriminatory practices by incumbent providers, there is nothing particularly radical about this approach. In fact, a structural approach that facilitates the expansion of retail competition is precisely what has been adopted in Canada, where both ILECs and “cable carriers” are required to offer wholesale high-speed access facilities to retail competitors, at all speed options that the ILEC or cable carrier offers to its own retail Internet customers.¹⁷¹ The CRTC recently examined—and soundly rejected—arguments by ILECs and cable companies that wholesale access was no longer necessary to ensure retail competition.¹⁷² The CRTC found that retail Internet access would not be competitive without the continuation of a wholesale access requirement, finding that (1) a cable/ILEC duopoly was not sufficient to protect consumers’ interests, and also that (2) nonwireline platforms, such as wireless and satellite, were not presently substitutes for retail Internet services provisioned over wireline facilities.¹⁷³ The CRTC thus found that, under these conditions, the only reliable way to ensure retail Internet access competition was through mandated wholesale access to high-speed ILEC and cable facilities.¹⁷⁴

V. CONCLUSION: NET NEUTRALITY CAN BEST BE ACHIEVED BY THE FULL RESTORATION OF NONDISCRIMINATORY ACCESS TO BROADBAND LAST-MILE FACILITIES

As we have explained in some detail above, there is no technical basis for any requirement that a broadband Internet access service come bundled with any provider-supplied content. Facilities-based ISPs have the same opportunity as any other ISP to offer their customers various content and applications sold and priced separately from the underlying transmission.

170. NATIONAL BROADBAND PLAN, *supra* note 104, at 37 tbl.4-A.

171. *Telecom Regulatory Policy CRTC*, *supra* note 23, at para. 10 n.11 (citing CRTC 2006 and 2007 “Speed Matching” orders).

172. *Id.* at paras. 53–54.

173. *Id.* at paras. 53–55.

174. *Id.* at para. 55.

At the same time, under the current regulatory treatment of broadband Internet access, the access provider is under no obligation to furnish the underlying telecommunications service to rival content providers. Declaring Internet access to be a bundled information service when it is not, serves only to add deregulation to the numerous other advantages that ILECs, cable providers, and wireless carriers have over competing stand-alone downstream application and content providers—i.e., those that do not also provide broadband access. This disparity in market position creates the opportunity for a facilities-based broadband provider to leverage its market power in the wireline or wireless Internet access market to discriminate against, and hence competitively disadvantage, their nonvertically integrated rivals.

The FCC is attempting to obliquely address the potential for such vertical foreclosure through the promulgation of “third way” net neutrality rules that would prohibit the integrated provider’s ability to favor its own content or discriminate against rival content providers. A prohibition of this sort targets conduct—after the fact—but does little if anything to diminish the opportunity or incentives for such discrimination. If the FCC merely fixes its classification problem with respect to Internet access services, but fails to address the competitive consequences that have resulted from the misclassification, it will only solve, at the most, half of the problem.

Along with reclassification, the FCC needs also to determine what will be the most effective and efficient way to prevent abuses of market power by the owners of last-mile facilities. There are several reasons why *ex post* enforcement—which requires after-the-fact policing of discriminatory behavior either on the FCC’s own initiative or, more likely, in response to specific, formal complaints filed by consumers, third-party competitive content or applications providers, or others—is less effective than an *ex ante* structural approach that removes the opportunity and incentives for discriminatory behavior in the first place. With the Internet and its derivative application and content markets moving along at lightning speed, the “snail’s pace” at which the FCC responds when confronted with controversial issues¹⁷⁵ can permit aggrieved parties to suffer extensive damage while awaiting relief, and, as such, affords no real deterrent to discriminatory conduct by dominant incumbents.

The FCC should know from years of experience that enforcement is slow, costly, and inefficient at addressing pervasive or systematic misconduct. Complainants in FCC proceedings have the burden of proof, but are often afforded minimal discovery opportunities to develop the

175. See, e.g., *Core Comm.*, 531 F.3d 849 (2008) (compelling the FCC by mandamus to resolve issues on reciprocal compensation that had been outstanding since 2000).

evidentiary record.¹⁷⁶ And because any given enforcement action typically targets only one particular incident or manifestation of misconduct, it is likely that the discrimination may persist for extended periods of time and/or be perpetrated against multiple competitors before any sanction or injunction is applied. In most cases, the penalties for unlawful conduct, when they are ultimately imposed, fall far short of the gain realized by the perpetrator from its unlawful conduct.¹⁷⁷ The potential for such conduct on the part of dominant telecommunications carriers has been recognized for many decades, and needs to be addressed before the fact, not afterwards.¹⁷⁸ The mechanisms adopted in *Computer II* and in the 1996 Act represent a middle ground between outright structural separation with explicit line-of-business restrictions and the alternative of ceding all adjacent telecommunications and information services markets to the incumbent last-mile monopolies.

These extremes can be avoided if the FCC uses its existing authority to require that a nondiscriminatory offering of “basic” broadband access be made available, on an unbundled and nondiscriminatory basis, by all dominant facilities-based providers to their nonfacilities-based competitors. The findings in the *National Broadband Plan* and the evidence accumulating before the FCC in various pending proceedings all support a reversal of FCC decisions that find that competitors are not “impaired” without access to incumbents’ unbundled broadband access facilities, at forward-looking, cost-based rates. These empirical results are completely consistent with what economic theory would predict with respect to the duplication of an extensive physical network. Although some of the factors affecting network expansions differ between the enterprise and mass market sectors, additional replication of the ubiquitous facilities already deployed by wireline ILECs and cable companies and by wireless carriers to provide Internet access is equally unlikely.

With a competitive market at both wholesale and retail levels,

176. See, e.g., 47 C.F.R. §§ 1.720(b), 1.721(a)(5), 1.729 (a) (1999) (permitting complainant ten initial and five follow-up interrogatories). In recognition of the tendency for complaints to go unresolved for extended periods of time, the FCC in 1998 adopted an “accelerated docket” procedure that FCC staff may use in particular cases, but at its discretion. See Biennial Review 2000 Staff Report, 15 F.C.C.R. 21084, paras. 172–73 (2000); see also 47 C.F.R. § 1.730 (1999).

177. For example, if it costs \$40 to park a car in a parking lot versus a \$10 fine for parking in a no-parking zone, it is cheaper to park illegally and pay the \$10 than to park legally for \$40. Similarly, if the fine for illegal parking is \$1,000 but there is only a one-in-one-thousand chance of getting a fine, all but the most risk-averse drivers would opt to take their chances and park illegally.

178. Professor Crawford comes to a similar conclusion about the futility of nondiscrimination mandates and after-the-fact enforcement efforts. See Crawford, *supra* note 115, at 916–19.

application and content providers will have a choice of multiple Internet access providers to reach their consumer “eyeballs” and will thus be inoculated against attempted discriminatory conduct by any particular provider. Conversely, without the ability to profit from this type of discrimination, such practices are unlikely to be pursued by those offering broadband Internet access at the retail level. Thus, by restoring competitors’ right to purchase “basic” broadband access as a platform for retail Internet access competition, the FCC has the opportunity to create more competition, with less regulation, than by reclassification alone. If real and effective competition for retail mass market Internet access is able to develop, that competitive marketplace will operate to enforce the FCC’s net neutrality principles, and will do so far more efficiently, effectively, and transparently than ongoing FCC involvement in the network management and other day-to-day operating decisions of wireline and wireless broadband Internet access providers. The result: a far more effective, and far less regulatory, strategy for achieving the important net neutrality goals.

