

2014

Sender Side Transmission Rules for the Internet

Tejas N. Narechania

Tim Wu, *Columbia University*

Sender Side Transmission Rules for the Internet

Tejas N. Narechania*
Tim Wu**

TABLE OF CONTENTS

I. INTRODUCTION.....468

II. BACKGROUND470

 A. *The Original Antidiscrimination Regime*470

 B. *From Computer II to Information Service*.....475

III. PRESENT OPTIONS479

 A. *Sender Side Transmission Rules*.....480

 B. *Changed Circumstances*.....483

 C. *Proceeding by Adjudication*488

IV. CONCLUSION490

* Julius Silver Research Fellow, Columbia Law School.

** Isidor & Seville Sulzbacher Professor of Law, Columbia Law School.

- 467 -

I. INTRODUCTION

Since 1966, the Federal Communications Commission has, one way or another, protected businesses that deliver services over the nation's communications infrastructure. But in January 2014, the U.S. Court of Appeals for the D.C. Circuit struck down the FCC's net neutrality rules contained in its 2010 *Open Internet Order*.¹ FCC Chairman Tom Wheeler has since indicated that he will take up the D.C. Circuit's invitation to implement rules that, consistent with historic practice, "will meet the court's test for preventing improper blocking of and discrimination among Internet traffic."²

Chairman Wheeler's statement invites an obvious question: presuming that the FCC wants its rules to survive judicial scrutiny, what is the most prudent legal course? While the Commission has a variety of legal options, we focus here on two solutions that are almost certain to survive legal challenge, while not taking any position on the merits of possible alternatives.

We propose a novel option that relies on a partial return to the powers delegated to the FCC by Title II of the Communications Act.³ In particular, we suggest that the Commission take seriously the asymmetric framework suggested by the D.C. Circuit based on the premise that two distinct transmissions comprise a single broadband transaction. Consider a common usage of a broadband connection: first, the subscriber—the consumer—*calls* an application, service, or other content provider using the carrier facilities for which she has purchased access. Second, the content provider *sends a response* to the consumer, which necessarily traverses the broadband carrier's facilities to reach the original consumer. This two-stage process is the framework adopted by the D.C. Circuit; as the court emphasized, it may be "logical to conclude that [a broadband provider] may be a common carrier with regard to some activities but not others."⁴

1. Preserving the Open Internet Broadband Indus. Practices, *Report and Order*, FCC 10-201, 25 FCC Rcd. 17905 (2010) [hereinafter *2010 Open Internet Order*], *aff'd in part, vacated in part sub nom.* Verizon v. FCC, 740 F.3d 623, 636–42 (D.C. Cir. 2014).

2. Tom Wheeler, Chairman, FCC, Statement on the FCC's Open Internet Rules (Feb. 19, 2014), *available at* https://apps.fcc.gov/edocs_public/attachmatch/DOC-325654A1.pdf; *see* Open Internet Remand, *Public Notice*, FCC GN Docket No. 14-28 (rel. Feb. 19, 2014); *see also* Protecting and Promoting the Open Internet, *Notice of Proposed Rulemaking*, GN Docket No. 14-28, FCC 14-61 (2014), *available at* http://transition.fcc.gov/Daily_Releases/Daily_Business/2014/db0515/FCC-14-61A1.pdf.

3. 47 U.S.C. §§ 201-231 (2006).

4. *Verizon*, 740 F.3d at 653 (citing *NARUC v. FCC*, 533 F.2d 601, 608 (D.C. Cir. 1976)); *see also* *FCC v. Midwest Video Corp.*, 440 U.S. 689, 701 n.9 (1979).

The FCC may therefore decide, as a matter of first impression, that *response* transactions are subject to common carrier rules against discrimination and blocking. Indeed, as we explain below, none of the arguments that the information service designation applies to a broadband connection's call service can be said to apply to the response transaction. Cabining the reach of the Commission's *Cable Modem Order*, which designated the call transaction an information service,⁵ to *only* the first stage of the two-stage framework would restore the Commission's authority to enforce network neutrality rules over broadband-delivered content. In addition, because such sender-side regulation focuses on incoming traffic, it also provides a useful framework for addressing interconnection disputes between broadband carriers and content providers.

Alternatively, the FCC could simply examine whether changed circumstances have undermined its decade-old decision⁶ to reclassify broadband transmissions from telecommunications services to information services. Our examination of the Commission's analysis shows that the factual premises underlying its 2002 conclusion are now largely obsolete. That decision relied on the outdated premise that broadband subscriptions were akin to dial-up services including AOL, all of which offered a bundle of services including email access, branded web browsers, newsgroups, chat rooms, and other Internet-based services. Today, the relevance of these bundled services is highly diminished, as broadband subscribers overwhelmingly rely on third-party services and products such as Gmail, Firefox, Google Groups, Facebook, Twitter, and Instagram.⁷

Thus, the FCC has at least two available paths. The first is predominantly legal: by adopting the two-stage framework articulated by the D.C. Circuit in *Verizon*, the Commission need only decide whether sender-side transmissions fit more comfortably within the statutory definition of a telecommunications service or an information service. The second path is predominantly factual: Is the Commission still swayed by its analysis, now well over a decade old, analogizing broadband subscription services to dial-up Internet access? Regardless of the path the Commission chooses, it will reach a similar destination. Either course allows the Commission to develop a regime that resembles its approach in the 1980s and 1990s—a period notable for the exponential growth of the telecommunications and Internet industries.

5. Inquiry Concerning High-Speed Access to the Internet Over Cable & Other Facilities, *Declaratory Ruling and Notice of Proposed Rulemaking*, FCC 02-77, 17 FCC Rcd. 4798, paras. 34–41 (2002) [hereinafter *Cable Modem Order*].

6. *Id.*

7. See discussion *infra* Part II.B.

II. BACKGROUND

For nearly fifty years, the FCC has enforced a regime whose basic purpose has been to foster the growth of network application providers and protect them from the owners of network facilities.⁸ The most recent iteration of that regime, which attempted to enforce a form of basic network neutrality norms, was contained within the Commission's *Open Internet Order*,⁹ but in fact the history of that effort stretches back into the 1960s.

A. *The Original Antidiscrimination Regime*

The relevant history of the net neutrality regime begins with the FCC's *Computer Inquiries* that began in 1966.¹⁰ Context is important here. The late 1960s marked the beginning of a historic shift at the Commission and the White House away from support for a regulated monopoly and toward the encouragement of competitive markets—especially in new markets.¹¹ This shift was driven both by the FCC and the Office of Telecommunications Policy in the White House; its long-term effects were nothing short of monumental.¹²

The project began with selected segments of the communications industry, primarily long-distance telephony, satellite services, attachments, and what was then called “network data processing” (now known as Internet services).¹³ In each of these areas, the FCC developed a new regulatory initiative with two overarching goals.¹⁴

First, given the long history of regulation resulting in barriers to entry, the FCC attempted to avoid overregulation of new markets to encourage competition.¹⁵ Second, the Commission recognized that any new entrant in these markets would necessarily depend on monopoly carriers, and would therefore be exceptionably vulnerable to anticompetitive behavior.¹⁶ Hence, the project's second goal was to prevent the carriers from undermining these

8. See 2010 *Open Internet Order*, *supra* note 1, at 18044–45 (2010) (Copps, Comm'r, concurring).

9. See generally *id.*

10. See, e.g., *id.* at 18045 (Copps, Comm'r, concurring) (referring to the “Computer Inquiries”); Appropriate Framework for Broadband Access to the Internet over Wireline Facilities, *Report and Order and Notice of Proposed Rulemaking*, FCC 05-150, 20 FCC Rcd. 14853, paras. 4 & n.9, 21 (2005) [hereinafter *DSL Reclassification Order*].

11. See generally TIM WU, *THE MASTER SWITCH*, chs. 7, 14 (2010) (tracing FCC regulatory action from Hush-A-Phone through the Bell divestiture).

12. *Id.* at 187.

13. *Id.* at 189.

14. *Id.*

15. See 2010 *Open Internet Order*, *supra* note 1, at para. 116.

16. See *id.* at para. 26.

new entrants.¹⁷ These two goals underlay the Commission's *Carterfone* decision and the subsequent liberalization of network attachments, the various MCI and Execunet decisions,¹⁸ which opened to competition the long-distance telephony market, the "Open Skies" policy for satellites,¹⁹ and, most relevant to our purposes, the *Computer Inquiries*.²⁰ The combined effect of these policies was to create a communications economy that relied on common carriage services as the foundation for other markets, and eventually, entire industries. Indeed, the entire Internet economy may be understood as an unexpected byproduct of the policies pursued in the *Computer Inquiries*.²¹

This philosophy of opening markets on top of the network drove the FCC's *First Computer Inquiry*. The 1966 Notice of Inquiry that began the FCC's first foray into this space sought "information, views, and recommendations" regarding the vast "number of regulatory and policy questions" that had come to the fore through the "the growing convergence of computers and communications."²² In the *Notice*, the Commission sought to determine "under what circumstances data processing, computer information, and message switching services . . . should be subject to the provisions of the Communications Act."²³

While the technologies of this era were different, the basic architecture of the regulatory problem is familiar. Companies, such as Electronic Data Systems (founded by entrepreneur Ross Perot), located at the "ends" of the telephone network, were offering computer services that ran "over" AT&T's wires.²⁴ Conceptually, firms such as EDS occupied a position similar to

17. WU, *supra* note 11, at 189–90.

18. See Jim Chen, *The Legal Process and Political Economy of Telecommunications Reform*, 97 COLUM. L. REV. 835, 845–47 (1997) (discussing FCC rulemaking and litigation regarding MCI and Execunet).

19. See Establishment of Domestic Commc'ns-Satellite Facilities by Non-Governmental Entities, *Report and Order*, FCC 70-306, 22 F.C.C. 2d 86 (1970); Establishment of Domestic Commc'ns-Satellite Facilities by Non-Governmental Entities, *Second Report and Order*, FCC 72-531, 35 F.C.C. 2d 844 (1972), *recon. in part*, Establishment of Domestic Commc'ns-Satellite Facilities by Non-Governmental Entities, *Memorandum Opinion and Order*, FCC 72-1198, 38 F.C.C. 2d 665 (1972).

20. See *infra* notes 22–34 and accompanying text.

21. See WU, *supra* note 11, at 197–99.

22. Reg. & Policy Problems Presented by the Interdependence of Computer & Commc'n Servs. & Facilities, *Notice of Inquiry*, FCC 66-1004, 7 F.C.C. 2d 11, para. 2 (1966) [hereinafter *Computer I Notice*].

23. *Id.* at para. 18.

24. See, e.g., Computer III Further Remand Proceedings: Bell Operating Co. Provision of Enhanced Servs., *Notice of Proposed Rulemaking*, FCC 95-48, 10 FCC Rcd. 8360, paras. 32, 33 n.81 (1995).

Netflix or Wikipedia today, while the role of AT&T is now played by such carriers as Comcast, Verizon, and AT&T.²⁵

As noted, the FCC was motivated by an interest in avoiding overregulation in the new data processing market and protecting that nascent industry from the monopoly carrier. The *First Computer Inquiry* achieved the first goal by exempting data processing services from common carrier regulation.²⁶ The FCC accomplished its second goal with the *Inquiry*'s "maximum separation" rule, which required an incumbent carrier to form an entirely separate corporate entity if it wished to offer data processing or computer networking services.²⁷ The FCC believed that if AT&T was allowed to freely enter the market for network services, it could give itself unfair advantages to quickly eliminate competitors.²⁸ The Commission feared that the Bell companies would "favor their own data processing activities by discriminatory services, cross subsidization, [and] improper pricing," and therefore required that any carrier seeking to provide both transmission and processing capabilities segregate its offerings into "separate corporate entit[ies]."²⁹

To address cases where the distinction between data "transmission" and "processing" was less clear, the FCC defined a category of "hybrid" services³⁰ that were regulated according to the regime that governed the "primary thrust" of the offering: Where transmission predominated, the service would be subject to regulation under the Communications Act; where data processing predominated, only the maximum separation rule applied.³¹ Importantly, the Commission deferred further guidance on the distinction within hybrid services.³² Instead, the FCC offered to conduct "ad hoc

25. In 2005, twenty-one years after AT&T's court-ordered divestiture, SBC—a Regional Bell Operating Company previously known as Southwestern Bell—acquired its former parent AT&T, thus creating the nation's largest unified telecommunications company. See WU, *supra* note 11, at 238–49.

26. Reg. & Policy Problems Presented by the Interdependence of Computer and Commc'n Servs. & Facilities, *Tentative Decision of the Commission*, 28 F.C.C. 2d 291, para. 24 (1970) [hereinafter *Computer I Initial Decision*].

27. *Id.* at para. 35.

28. *See id.* at paras. 25–26.

29. *Id.* at paras. 33, 36; *see also* Reg. & Policy Problems Presented by the Interdependence of Computer & Commc'n Servs. & Facilities, *Final Decision and Order*, FCC 71-255, 28 F.C.C. 2d 267, para. 12 (1971) [hereinafter *Computer I Final Decision*] (maintaining decision reached in *Computer I Initial Decision*); 47 C.F.R. § 64.702(c) (2013).

30. *Computer I Initial Decision*, *supra* note 26, at para. 39; *Computer I Final Decision*, *supra* note 29, at para. 31.

31. *Computer I Initial Decision*, *supra* note 26, at paras. 41–42; *Computer I Final Decision*, *supra* note 29, at paras. 31–32.

32. *See generally Computer I Initial Decision*, *supra* note 26.

evaluations . . . to determine whether a particular package offering was essentially data processing or communication.”³³

In 1979, the FCC’s *Second Computer Inquiry* eliminated the confusing “hybrid” service and established a regime with just two layers: basic and enhanced services.³⁴ The new taxonomy created the first clear horizontal regulatory model in FCC history,³⁵ with its rough recognition of a transport layer and an application layer. *Computer II* put all firms offering services over the network into the enhanced category³⁶ and exempted them from most regulation.³⁷ At the same time, it maintained the common carriage rules for the underlying transport services that supported this growing industry.³⁸

The *Computer II* approach was the governing regulatory regime during the period of the exponential growth during the 1980s and 1990s in the computer networking and Internet industries.³⁹ Notably, the explosion in network services during this time casts serious doubt on the claims that any regulation under Title II is necessarily inconsistent with economic growth.⁴⁰ To the contrary, the clever design of *Computer II*, which avoided overregulation of application-layer industries while simultaneously protecting them from carrier threats of blocking or discrimination, actually fueled growth in application-layer services.⁴¹ Thus, the *Computer II* model can be understood as a great boon to firms like AOL and MSN, which

33. *Computer I Final Decision*, *supra* note 29, at para. 27.

34. Amendment of Section 64.702 of the Comm’n’s Rules & Regs., *Final Decision*, 77 F.C.C. 2d 384, paras. 88–102 (1980) [hereinafter *Computer II Final Decision*].

35. See Richard S. Whitt, *A Horizontal Leap Forward: Formulating a New Communications Public Policy Framework Based on the Network Layers Model*, 56 FED. COMM. L.J. 587, 615 (2004).

36. *Computer II Final Decision*, *supra* note 34, at para. 114 (There is “no regulatory distinction between enhanced services.”); see *id.* at paras. 5, 96, 109.

37. *Id.* at paras. 107, 119–120.

38. *Id.* at paras. 7, 12. Basic services included voice services. The revised rules also limited the application of the “maximum separation” rule to only AT&T and GTE (now known as Verizon).

39. See Mark A. Lemley & Lawrence Lessig, *The End of End-to-End: Preserving the Architecture of the Internet in the Broadband Era*, 48 UCLA L. REV. 925, 930 (2001) (“The Internet is the fastest growing network in history. In its thirty years of existence, its population has grown a million times over.”).

40. See, e.g., Christopher S. Yoo, *Is There a Role for Common Carriage in an Internet-Based World?*, 51 HOUS. L. REV. 545, 557 (2013) (“[T]o the extent that the Internet generates positive externalities, imposing regulation would represent the opposite policy, systematically causing the systematic bias toward underproduction to worsen.”).

41. See Robert Cannon, *The Legacy of the Federal Communications Commission’s Computer Inquiries*, 55 FED. COMM. L.J. 167, 169 (2003); Jonathan Weinberg, *The Internet and “Telecommunications Services,” Universal Service Mechanisms, Access Charges, and Other Flotsam of the Regulatory System*, 16 YALE J. ON REG. 211, 222 (1999).

provided low-cost network services simply by buying volumes of telephone numbers, as well as to the first wave of “dot-com” firms, such as Netscape and Yahoo!, which were able to reach users without paying costly termination fees to carriers.

The *Computer II* model survived until the early 2000s. Congress codified it in the Telecommunications Act of 1996, merely changing its nomenclature: an “enhanced service” was effectively renamed an “information service,” and “basic service” became “telecommunications service.”⁴² Although *Computer II* was largely codified in statute, some details of the regime were modified by the Commission’s lengthy *Third*

42. The Act’s definition of a “telecommunications service”—the commercial offering of the transmission of user information between two points without any change to the information—mirrored the FCC’s understanding of a “basic service” under *Computer II*. Compare 47 U.S.C. § 153(50), (53), with *Computer II Final Decision*, *supra* note 34, at para. 96 (basic service “offers a pure transmission capability over a communications path that is virtually transparent in terms of its interaction with customer supplied information.”). See also *Computer II Final Decision*, *supra* note 34, at para. 5. Similarly, the Act’s definition of “information service”—“the offering of a capability for generating, acquiring, storing, transforming, processing, retrieving, utilizing, or making available information via telecommunications”—sounds in *Computer II*’s “enhanced service” definition. Compare 47 U.S.C. § 153(24) with *Computer II Final Decision*, *supra* note 34, at para. 97 (in enhanced service, for example, “applications are used to act on the content, code, protocol, and other aspects of the subscriber’s information.”). See also *Computer II Final Decision*, *supra* note 34, at para. 5.

For more on the similarities between *Computer II* and the Telecommunications Act of 1996, see Fed.-State Joint Bd. on Universal Serv., *Report to Congress*, FCC 98-67, 13 FCC Rcd. 11501, para. 21 (1998) (“[W]e find that Congress intended the categories of ‘telecommunications service’ and ‘information service’ to parallel the definitions of ‘basic service’ and ‘enhanced service’ developed in our *Computer II* proceeding . . .”). See also *Nat’l Cable & Telecomms. Ass’n v. Brand X Internet Servs.*, 545 U.S. 967, 977 (2005) (“The definitions of the terms telecommunications service and information service established by the 1996 Act are similar to the *Computer II* basic- and enhanced-service classifications.” (internal quotation marks omitted)); Framework for Broadband Internet Serv., *Notice of Inquiry*, FCC 10-114, 25 FCC Rcd. 7866, para. 13 (2010) (the Telecommunications Act of 1996 “codif[ied] the Commission’s distinction” from the *Computer Inquiries*); Kevin Werbach, *The Network Utility*, 60 DUKE L.J. 1761, 1774–75 (2011) (noting subtle difference in definitions).

Computer Inquiry,⁴³ which, most notably, eliminated the “maximum separation” rule.⁴⁴

B. From Computer II to Information Service

Until the turn of the millennium, the Internet industry—that is, the set of application-layer data businesses that depended on networked telecommunications infrastructure—blossomed under a regime that both deregulated its services and protected them from carrier interference under Title II of the Communications Act of 1934. Shortly thereafter, the FCC sought to preserve these critical goals under a new regulatory structure. It moved to an alternative regime that reclassified all Internet services—including the underlying carrier services—as “information services,”⁴⁵ while still preventing carrier abuses through the enforcement of net neutrality norms.⁴⁶

In 1998, the Commission began considering how to appropriately classify broadband services, beginning with the puzzle posed by cable Internet service providers.⁴⁷ Cable broadband providers vertically integrated many of the functions that were sold separately by “enhanced service” providers like AOL. In fact, one of the justifications for the AOL-Time

43. Amendment of Section 64.702 of the Comm’n’s Rules & Regs (Third Computer Inquiry), *Notice of Proposed Rulemaking*, FCC 85-397, 50 Fed. Reg. 33581 (1985). This final proceeding in the trilogy of *Inquiries* lasted over a decade, spawning a plethora of orders and related litigation. *E.g.*, Amendment of Sections 64.702 of the Comm’n’s Rules & Regs (Third Computer Inquiry), *Report and Order*, FCC 86-252, 104 F.C.C. 2d 958 (1986), *vacated sub nom.* California v. FCC, 905 F.2d 1217 (9th Cir. 1990); California v. FCC, 4 F.3d 1505 (9th Cir. 1993); California v. FCC, 39 F.3d 919 (9th Cir. 1994). In the end, *Computer III* replaced the “maximum separation” rule with a variety of technical rules mandating interconnection and a series of accounting safeguards to prevent cross-subsidization and potentially anticompetitive pricing practices. *See generally* Computer III Remand Proceedings: Bell Operating Co. Safeguards and Tier 1 Local Exchange Co. Safeguards, *Report and Order*, FCC 91-381, 6 FCC Rcd. 7571 (1991), *vacated in part sub nom.* California v. FCC, 39 F.3d 919 (9th Cir. 1994).

44. The motivation to remove the maximum separation rule was driven, in part, by a Chicago School-based understanding of the benefits of vertical integration. But as we explain further, such an understanding of vertical integration understates the possibility for network platforms to make anticompetitive use of vertical agreements by, for example, exclusion.

45. *See Cable Modem Order*, *supra* note 5; *DSL Reclassification Order*, *supra* note 10.

46. Appropriate Framework for Broadband Access to the Internet over Wireline Facilities, *Policy Statement*, FCC 05-151, 20 FCC Rcd. 14986, para. 4 (2005), available at http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-05-151A1.pdf.

47. *See* Inquiry Concerning the Deployment of Advanced Telecomms. Capability to All Ams. in a Reasonable & Timely Fashion, *Notice of Inquiry*, FCC 98-187, 13 FCC Rcd. 15280, paras. 77–82 (1998).

Warner merger in 2000 was facilitating such integration.⁴⁸ Cable providers therefore seemed to be offering what, under the *Computer Inquiries* model, would have been two services: a telecommunications service and an information service.⁴⁹ Consequently, based on the statutory text of the Telecommunications Act—which, as we have noted, codified the *Computer II* regime—the Ninth Circuit concluded that cable operators were clearly offering both services.⁵⁰

In 2002, the FCC departed from the interpretation derived from its *Computer Inquiries* by reclassifying all of the layers of cable modem service as one single “information service.”⁵¹ This designation had the critical effect of exempting it from the regulatory structure of Title II.⁵² The Commission’s reclassification rested on a few critical facts. First, the Commission compared the commercial offering of a cable modem service provider with the predominant alternative at the time: a dial-up internet connection offered by an independent provider like Earthlink or AOL (before its merger).⁵³ Such Internet service providers typically offered a bundle of Internet services that were not themselves separable and had no separate legal status: a subscription to AOL came with access to an aol.com email address, to AOL-based newsgroups, as well as to the domain name system (“DNS”).⁵⁴ So too with cable modem service: A cable modem subscriber had access, for example, to a [provider].net email address, a DNS, and other related services.⁵⁵ Thus, because dial-up Internet services were considered information services,⁵⁶ the Commission reasoned that cable modem service must also be an information service.⁵⁷

Critical to the FCC’s decision was its enigmatic conclusion that the “telecommunications component is not . . . separable from the data-processing capabilities of the [cable modem] service.”⁵⁸ Dial-up Internet access providers, such as AOL, sold only data processing capabilities; the transmission component was separately sold and provided by each subscriber’s respective phone company.⁵⁹ By contrast, the Commission noted that, at the time, no “cable modem service provider ha[d] made a stand-

48. WU, *supra* note 11, at 264–65.

49. See discussion *supra* Part II.A.

50. AT&T Corp. v. City of Portland, 216 F.3d 871 (9th Cir. 2000).

51. *Cable Modem Order*, *supra* note 5, at para. 7.

52. See 47 U.S.C. § 153(51) (“A telecommunications carrier shall be treated as a common carrier under this [Act] only to the extent that it is engaged in providing telecommunications services.”).

53. *Cable Modem Order*, *supra* note 5, at para. 10.

54. *Id.*

55. *Id.* at para. 17.

56. *Id.* at para. 38.

57. *Id.*

58. *Id.* at para. 39.

59. *Id.* at para. 9, n.19.

alone offering of transmission for a fee directly to the public.”⁶⁰ Hence, the Commission found that “the telecommunications is part and parcel of cable modem service and is integral to its other capabilities” such as email and newsgroups.⁶¹ The Commission’s conclusion that this transmission capability was inseparable from the rest of the commercial offering was questionable in 2002; today, as we discuss below, it seems clearly erroneous given the widespread demand for independent services that compete with a provider’s bundled offering.⁶²

The Supreme Court ultimately reviewed the FCC’s *Cable Modem Order* in *National Cable & Telecommunications Association v. Brand X Internet Services*.⁶³ Although *Brand X* is a favorite of administrative law aficionados for its discussion of judicial deference to administrative agencies under *Chevron*,⁶⁴ the decision is, at its core, about telecommunications law. The majority in *Brand X* found sufficient ambiguity in the Telecommunications Act’s definition of “telecommunications service”—“the offering of telecommunications for a fee directly to the public”⁶⁵—that the Court deferred to the Commission’s conclusion that cable modem service fell outside of its ambit.⁶⁶ In particular, the Court noted that the critical question for the *Cable Modem Order* was whether “from the consumer’s point of view” the data transmission service is used “always in connection with the information-processing capabilities.”⁶⁷ The Court concluded that it was: The transmission component, after all, was in the Commission’s view “part and parcel” of the rest of the service.⁶⁸ Because the Court determined that “offering can reasonably be read to mean a ‘stand-alone’ offering,” it held that the Commission need not treat “the underlying telecommunications used to transmit that service” as a separate “offer” under the Telecommunications Act’s regime.⁶⁹

Although the Court deferred to the Commission’s conclusion in the *Cable Modem Order*, some members were doubtful. Justice Breyer noted that the Commission’s interpretation “just barely” fell within the “scope of the [FCC’s] statutorily delegated authority.”⁷⁰ Three justices dissented,

60. *Id.* at paras. 39–40.

61. *Id.* at para. 40.

62. See discussion *infra* Part III.A.

63. *Nat’l Cable & Telecomms. Ass’n v. Brand X Internet Servs.*, 545 U.S. 967, 973–74 (2005).

64. *Chevron, USA, Inc. v. Natural Res. Def. Council*, 467 U.S. 837 (1984); see also *Brand X*, 545 U.S. at 982–83 (under *Chevron*, an agency interpretation of an ambiguous statute can override prior judicial interpretation).

65. 47 U.S.C. § 153 (2010).

66. *Brand X*, 545 U.S. at 993.

67. *Id.* at 988.

68. *Id.* (quoting *Cable Modem Order*, *supra* note 5, at para. 39).

69. *Brand X*, 545 U.S. at 989.

70. *Id.* at 1003 (Breyer, J., concurring).

writing that “the telecommunications component of the cable-modem service retains such an ample independent identity that it *must* be regarded as being on offer.”⁷¹ Despite this skepticism from four justices, the Court upheld the Commission’s *Cable Modem Order*. Propelled by its victory in *Brand X*, the Commission extended the “information service” designation to Internet access via DSL (digital subscriber lines)⁷² and to other physical platforms,⁷³ including wireless networks.⁷⁴

These various reclassification orders threatened to undermine the FCC’s long-held regulatory aim of protecting application layer companies from the threat of discrimination and blocking by carriers.⁷⁵ Former FCC Chairman Michael Powell proposed that some behavior once prohibited by Title II would still be punished under a net neutrality regime that could be enforced even under the new classification. In a 2004 speech, Powell proposed four “Internet Freedoms,”⁷⁶ which the Commission later codified as a policy statement,⁷⁷ and which served as a baseline for the *Open Internet Order*.⁷⁸ Notably, in 2005, the Commission seemed to assume that it retained authority to enforce its policy statement under its Title II powers. Faced with the first major complaint regarding the blocking of Internet traffic, the Commission settled with Madison River Communications to resolve the claim that the company was blocking Voice over Internet Protocol applications in violation of Section 201 of the Telecommunications Act of 1996.⁷⁹ Since reaching that settlement, however, the Commission has faced

71. *Id.* at 1008 (Scalia, J., dissenting) (emphasis added). Justices Souter and Ginsburg joined Justice Scalia’s dissent.

72. *DSL Reclassification Order*, *supra* note 10.

73. United Power Line Council’s Petition for Declaratory Ruling Regarding the Classification of Broadband over Power Line Internet Access Serv. as an Info. Serv., *Memorandum Opinion and Order*, FCC 06-165, 21 FCC Rcd. 13281 (2006).

74. Appropriate Regulatory Treatment for Broadband Access to the Internet Over Wireless Networks, *Declaratory Ruling*, FCC 07-30, 22 FCC Rcd. 5901 (2007).

75. *See supra* notes 36–41 and accompanying text.

76. Michael K. Powell, Chairman, FCC, Remarks at the Silicon Flatirons Symposium on “The Digital Broadband Migration: Toward a Regulatory Regime for the Internet Age,” (Feb. 8, 2004), *available at* http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-243556A1.pdf.

77. Appropriate Framework for Broadband Access to the Internet over Wireline Facilities, *Policy Statement*, FCC 05-151, 20 FCC Rcd. 14986, para. 4 (2005), *available at* http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-05-151A1.pdf.

78. *2010 Open Internet Order*, *supra* note 1, at para. 5.

79. Madison River Communications, LLC and Affiliated Companies, *Consent Decree*, DA 05-543, 20 FCC Rcd. 4295, paras. 4 & 6 (2005), *available at* http://hraunfoss.fcc.gov/edocs_public/attachmatch/DA-05-543A2.pdf. The Consent Decree notes that the FCC was investigating “Madison River’s compliance with section 201(b) . . . with respect to the blocking of ports used for Voice over Internet Protocol (“VoIP”) applications.” *Id.* at para. 1. Section 201(b) provides that “[a]ll charges, practices, classifications, and regulations for and in connection with such

formidable legal challenges to its authority to enforce these principles, losing before the D.C. Circuit in 2010⁸⁰ and again in 2014.⁸¹

III. PRESENT OPTIONS

For half a century, the FCC has maintained some system for policing the power of carriers to block or discriminate against application layer businesses attempting to reach customers over carrier wires.⁸² The recent invalidation of the Commission's *Open Internet Order* in *Verizon*⁸³ casts that basic premise into doubt for the first time in the history of modern computer networking. Unsurprisingly, the Commission has responded by indicating that it will seek to reinforce its authority by whatever means necessary.⁸⁴ The operative question, then, is how the Commission can most easily accomplish this goal.

The FCC's decision to sweep the transmission of Internet traffic outside of the definitional scope of "telecommunications service" has significantly affected its ability to regulate such traffic.⁸⁵ The Telecommunications Act of 1996 explicitly provides that a "carrier shall be treated as a common carrier under this chapter *only to the extent that it is engaged in providing telecommunications services.*"⁸⁶ Thus, where a facilities owner—a carrier—is providing a service other than "telecommunications" (as the term is statutorily defined⁸⁷), the Commission

communication service, shall be just and reasonable, and any such charge, practice, classification, or regulation that is unjust or unreasonable is declared to be unlawful." 47 U.S.C. § 201(b) (2006).

80. *Comcast Corp. v. FCC*, 600 F.3d 642, 661 (D.C. Cir. 2010).

81. *Verizon v. FCC*, 740 F.3d 623, 628 (D.C. Cir. 2014).

82. See discussion *supra* Part II (chronicling the FCC's Computer Inquiries and the Open Internet Order).

83. *Verizon*, 740 F.3d at 659.

84. Protecting & Promoting the Open Internet, *Notice of Proposed Rulemaking*, FCC 14-61, 29 FCC Rcd. 5561 (2014) [hereinafter *2014 Open Internet NPRM*]; see also New Docket Established to Address Open Internet Remand, *Public Notice*, DA 14-211 (Feb. 19, 2014), available at https://apps.fcc.gov/edocs_public/attachmatch/DA-14-211A1.pdf (establishing a new docket to consider path forward based on "authority under section 706 and all other available sources of Commission authority" (emphasis added)).

85. *2014 Open Internet NPRM*, *supra* note 84, at para. 149.

86. 47 U.S.C. § 153(51); see also *Nat'l Cable & Telecomms. Ass'n v. Brand X. Internet Servs.*, 545 U.S. 967, 975 (2005) ("The Act regulates telecommunications carriers, but not information-service providers, as common carriers."). The provision was originally codified at 47 U.S.C. § 153(49), and was moved to subsection 51 following subsequent amendments to the Telecommunications Act of 1996. See Pub. L. No. 105-33, § 3001(b) (1997) (adding new (49) and renumbering) and Pub. L. No. 111-260, § 101 (2010) (renumbering).

87. 47 U.S.C. § 153(50) (2006).

has disabled itself from regulating that service as a common carrier.⁸⁸ The Commission has twice sought alternative ways of regulating Internet traffic. Both attempts were squarely rejected by the D.C. Circuit. First, the Commission's attempt to rely on its ancillary authority was rejected in *Comcast*;⁸⁹ more recently, in *Verizon*, the court held that the Commission's *Open Internet Order* imposed on broadband providers rules tantamount to common carrier regulation in violation of the Communications Act's "specific prohibition[s]" described above.⁹⁰

Some have suggested that section 706 of the Telecommunications Act can provide the FCC with the authority to enforce basic network neutrality norms with some limitations.⁹¹ We do not express any opinion on this hypothesis. Our present focus, instead, is on the Commission's traditional power to regulate carriers. Some have called for the Commission to overturn its 2002 reclassification decision.⁹² As explained in more detail below, we agree that the *Cable Modem Order*'s conclusions no longer have a substantial basis in fact.⁹³ However, we begin with a more modest solution: a narrow application of the Commission's strongest and most secure grant of congressional power: Title II of the Telecommunications Act.⁹⁴

A. *Sender Side Transmission Rules*

Over the course of Verizon's challenge to the *Open Internet Order*, the FCC and Verizon articulated distinct and competing visions of the nature of the relationship between broadband carriers and content providers. The Commission argued that content providers were not, in any meaningful sense, "customers" of a broadband carrier; to the contrary, the Commission argued that broadband subscribers are the *only* necessary customers, and the relationship between a content provider and the carrier is simply *derivative*

88. What it means to be "treated as a common carrier" remains unclear and fiercely contested. *See, e.g.,* *Cellco P'ship v. FCC*, 700 F.3d 534, 538 (D.C. Cir. 2012) ("The Act's definition of 'common carrier' is unsatisfyingly circular . . .").

89. *See Comcast Corp. v. FCC*, 600 F.3d 642 (D.C. Cir. 2010).

90. *Verizon v. FCC*, 740 F.3d 623, 649–50 (D.C. Cir. 2014).

91. *E.g.,* Tom Wheeler, Chairman, FCC, Prepared Remarks at Silicon Flatirons, Univ. Colo. Law School (Feb. 10, 2014), *available at* http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-325531A1.pdf; Tejas N. Narechania, *Federal and State Authority for Network Neutrality and Broadband Regulation*, STAN. TECH. L. REV. (forthcoming 2014), *available at* <http://ssrn.com/abstract=2404996>.

92. *See, e.g.,* Comments of Pub. Knowledge & Common Cause at 11–12, *Open Internet Remand*, FCC GN Docket No. 14-28 (rel. Mar. 24, 2014), *available at* http://www.publicknowledge.org/assets/uploads/documents/Public_Knowledge_Common_Cause_Open_Internet_706_Public_Notice_Comments.pdf.

93. *See* discussion *infra* Part III.B.

94. *See generally* 47 U.S.C. §§ 201–221.

of any request by that customer to view specified content.⁹⁵ The D.C. Circuit rejected this construction.⁹⁶ Instead, it adopted the view proffered by Verizon, which argued that there were two distinct, separable, and equally important commercial relationships at issue: (1) the broadband provider's contract with "retail end-users" as well as (2) its relationship with "other providers that seek to deliver their own services over the common carrier's facilities."⁹⁷ The D.C. Circuit agreed that these were better treated as distinct relationships.⁹⁸ But in so doing, the court stated that it would be "logical to conclude that [a broadband provider] may be a common carrier with regard to some activities but not others."⁹⁹ In other words, by individuating these two commercial relationships, the court suggested the possibility for the distinct regulatory treatment of these separable transactions.

Therefore, rather than treat *all* Internet traffic as a monolithic entity subject to the same regulatory treatment, the FCC can split the facilities-based services offered by broadband carriers into two discrete transactions: first, a *call* by a broadband subscriber to request data from a third-party content provider; and second, a content provider's *response* to the subscriber. Imposing this two-stage call-and-response framework on the structure of Internet traffic—a framework derived from the D.C. Circuit's recent decision in *Verizon*—would allow the Commission to separately consider the appropriate regulatory treatment for each type of transaction.

This creates an obvious opportunity for the FCC to classify—in the first instance—one of these relationships as subject to some form of regulation under Title II. In particular, the Commission should consider the appropriate regulatory treatment of traffic that is sent by content providers in response to requests from retail end-users.¹⁰⁰ One important reason to

95. Brief for Appellee/Respondents at 60–63, *Verizon v. FCC*, 740 F.3d 623 (D.C. Cir. 2014) (No. 11-1355) [hereinafter FCC Brief].

96. *Verizon v. FCC*, 740 F.3d 623, 653 (D.C. Cir. 2014); *but see* *City of Arlington v. FCC*, 133 S. Ct. 1863, 1869 (2013) (under a hypothetical statute, a court must defer to agency's definition of "common carrier").

97. Joint Reply Brief for Verizon & MetroPCS at 1, 6–8, *Verizon v. FCC*, 740 F.3d 623 (D.C. Cir. 2014) (No. 11-1355) [hereinafter Verizon Reply Brief].

98. *Verizon*, 740 F.3d at 653.

99. *Id.* (citing *NARUC v. FCC*, 533 F.2d 601, 608 (D.C. Cir. 1976)); *see also* *FCC v. Midwest Video Corp.*, 440 U.S. 689, 701 n.9 (1979).

100. Here, we use the term "response" somewhat loosely. We do not mean to cabin the applicability of our proposed framework to only particularized sorts of real-time "dialogues" between a user and a content provider. The framework is equally applicable to asynchronous communications (e.g., a user, who hosts her own email service, who receives an email days after an offline communication with an acquaintance). Rather, the point is that the commercial offer to deliver *incoming* traffic (incoming from the perspective of the access network) is distinguishable from the offer to the consumer for a broadband subscription. Happily, the offer to deliver *unwanted* incoming traffic, such as spam or malware, is also distinguishable,

consider distinct regulatory treatment for this aspect of the broadband transaction is that the broadband carrier is endowed with a terminating monopoly.¹⁰¹ That is, the content provider has no alternative to the carrier to complete its response to the calling consumer. Such terminating monopolies have traditionally been subject to enhanced regulatory scrutiny, and the Commission's policies have, in recent years, strongly disfavored "access charges" imposed by terminating monopolists.

Classifying "sender-side" traffic as a telecommunications service is also, perhaps surprisingly, consistent with the *Cable Modem Order*. As we described above,¹⁰² the Commission's analysis in that *Order* focused squarely on the broadband provider's relationship with the end user. In considering the "business relationships" between "cable operators" and "consumers," the Commission examined only *retail* subscribers to broadband service.¹⁰³ Indeed, even the Supreme Court agreed that the critical question addressed in the *Cable Modem Order* was what a broadband subscription looked like "from the consumer's point of view."¹⁰⁴ Thus, this specific focus on the set of bundled services that broadband providers sold their subscribers excluded any analysis of the opposing offer to charge for the delivery of traffic in the second stage of the two-stage framework described above.¹⁰⁵

Despite this exclusion, both the D.C. Circuit and the FCC have proceeded on the assumption that the conclusion reached in the *Cable Modem Order* applies equally across both the call and the response transactions.¹⁰⁶ But the decision in *Verizon* makes clear that this need not be so. Indeed, the Commission has a long history of regulating a carrier in its

creating space for the FCC to create narrow exceptions for *reasonable network management*, as it had in the Open Internet Order.

101. See 2014 *Open Internet NPRM*, *supra* note 84, at para. 42 (finding that broadband providers are "terminating monopolies" for content providers needing to reach end users, because "most residential customers have only one or two options for wireline broadband Internet access service.").

102. See discussion *supra* Part II.B.

103. *Cable Modem Order*, *supra* note 5, at para. 30.

104. Nat'l Cable & Telecomms. Ass'n v. Brand X. Internet Servs., 545 U.S. 967, 988 (2005).

105. Even to the extent that the *Cable Modem Order* considered content offered through internet service providers, it emphasized that this content is typically bundled—from the consumer's perspective—with the broadband service. See *Cable Modem Order*, *supra* note 5, at paras. 52–53 (arrangements with unaffiliated ISPs offer an integrated service for which both the provider and the ISP take dual responsibility). The same cannot be said for YouTube or Netflix content that is delivered by Comcast. Cf. *The ISP Speed Index From Netflix*, NETFLIX, <http://ispspeedindex.netflix.com/> (last visited April 2014) (Netflix reporting on differences among facilities owners over which it sends content).

106. *Verizon v. FCC*, 740 F.3d 623, 654–655 (D.C. Cir. 2014) (noting classification decision as applicable).

capacity as a terminating monopolist differently than in its capacity as a vendor of retail, end-user services.¹⁰⁷

A closer analysis of the service that a broadband provider, in its capacity as a terminating monopolist, offers to a content provider in sender-side response transactions bears none of the hallmarks of an information service as described by the *Cable Modem Order*.¹⁰⁸ When Verizon delivers Netflix content to Verizon subscribers, it does not also offer Netflix “e-mail, newsgroups, and the ability to create a web page”¹⁰⁹ Instead, Verizon provides a discrete transmission service: It delivers traffic from the point of interconnection to a specified subscriber.

Verizon now wants to charge some content providers for this delivery.¹¹⁰ Notably, the *Cable Modem Order*’s conclusion rested in part on the observation that no broadband “provider ha[d] made a stand-alone offering of transmission for a fee.”¹¹¹ But Verizon’s new proposal is exactly that.¹¹² It is a stand-alone offer of “transmission” “between . . . points” that Netflix (for example) has “specified.”¹¹³ This is paradigmatic “telecommunications service” that may be subject to regulation under Title II.¹¹⁴ That is, the transmission of data from the Internet *to* an individual subscriber not only retains an “independent identity that it must be regarded as being on offer”—it seems to be the *only* identity that can be regarded as on offer.¹¹⁵ Thus, relying on the distinction drawn by Verizon in its challenge to the *Open Internet Order*, the Commission can classify commercial offers to deliver sender-side traffic, beginning at the point of interconnection, as a telecommunications service under the 1996 Act.¹¹⁶

B. Changed Circumstances

As an alternative to the limited classification of sender-side traffic, the FCC could return to its original position that the transmission of all Internet traffic is a “telecommunications service.”¹¹⁷ That is, rather than simply

107. See, e.g., Verizon Reply Brief, *supra* note 97, at 6–7.

108. See *Cable Modem Order*, *supra* note 5, at paras. 34–37.

109. See *id.* at para. 37.

110. See *Verizon*, 740 F.3d at 645–46.

111. *Cable Modem Order*, *supra* note 5, at paras. 39–40.

112. *Verizon*, 740 F.3d at 646 (“[B]ut for the Open Internet Order [Verizon] would be exploring . . . commercial arrangements” to charge for the delivery of sender-side traffic).

113. 47 U.S.C. § 153(50) (2006). Here, the “user” is Netflix, and “points . . . specified” are the point of interconnection and the “calling” subscriber.

114. See 47 U.S.C. § 153(53) (2006).

115. *Nat’l Cable & Telecomms. Ass’n v. Brand X. Internet Servs.*, 545 U.S. 967, 1008 (2005) (Scalia, J., dissenting).

116. See Verizon Reply Brief, *supra* note 97, at 1.

117. There is one further wrinkle with regard to mobile Internet service. Section 332 of the Telecommunications Act states that providers of “commercial mobile

cabining the reach of *Cable Modem Order* to its original context—the call transaction—the Commission could undertake to address both stages of traffic by revisiting its conclusions in the *Cable Modem Order*.¹¹⁸

On this point, it is important to emphasize that no legal bar prevents the FCC from undoing its decision in the *Cable Modem Order*. Indeed, the Supreme Court has repeatedly recognized that agencies have “ample latitude to ‘adapt their rules and policies to the demands of changing circumstances.’”¹¹⁹ Indeed, changed circumstances seem to have invalidated many of the factual premises underlying the Commission’s 2002 *Cable Modem Order*. That decision rests on a now-outdated understanding of cable-based broadband offerings: subscribers then “d[id] not need to contract separately” for “discrete services or applications.”¹²⁰ Not only were these integrated applications “part and parcel” of the subscription package,¹²¹ but—in the view of the *Cable Modem Order*—they formed a critical part of the value of the service to consumers.¹²²

Today, it is no longer clear that these additional services add measurable value to broadband subscriptions. To be sure, the *Cable Modem Order* acknowledged the existence of competing content at the time it was adopted; it noted that, “by ‘click-through’ access,” cable modem service offers “many functions from companies with whom the cable operator has not even a contractual relationship. For example, a subscriber . . . is free to download and use . . . a web browser from Netscape, content from Fox

services” are common carriers, whereas providers of other mobile services are exempt from common carrier regulation. 47 U.S.C. § 332 (2006). The FCC has concluded that wireless transmission of Internet traffic both “is an ‘information service’ and is not a ‘commercial mobile service.’” *Cellco P’ship v. FCC*, 700 F.3d 534, 538 (D.C. Cir. 2012). Thus, “mobile-data providers are statutorily immune, perhaps twice over, from treatment as common carriers.” *Id.*

Reclassification for wireless broadband would require undoing both layers of protection. *See id.* For present purposes we focus on the question that is common to all physical platforms for the transmission of Internet traffic: the information service designation. For now, it suffices to note that the FCC would have to also address the “commercial mobile service” finding of the *Wireless Classification Order*. 22 FCC Rcd. 5901, para. 37 (2007). That would require the FCC to conclude that wireless internet service is “for profit,” is an “interconnected service,” and is available “to the public or . . . to a substantial portion of the public,” as those terms are defined in the Telecommunication Act. 47 U.S.C. § 332(d)(1) (2006).

118. *See generally Cable Modem Order*, *supra* note 5.

119. *See, e.g., Motor Vehicles Mfrs. Ass’n of the U.S. v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 42 (1983) (quoting *Permian Basin Area Rate Cases*, 390 U.S. 747, 784 (1968)).

120. *See Cable Modem Order*, *supra* note 5, at para. 11.

121. *Id.* at paras. 11, 39.

122. *Id.* at para. 11 (accessing “unaffiliated” content “may require the subscriber to pay those entities an additional fee”); *see also Nat’l Cable & Telecomms. Ass’n v. Brand X. Internet Servs.*, 545 U.S. 967, 988 (2005).

News, and e-mail in the form of Microsoft's 'Hotmail.'"¹²³ The *Cable Modem Order*, however, de-emphasized the import of these options, suggesting that they were simply redundant because such "functions currently are all [also] included in the standard cable modem service offering."¹²⁴

The FCC did, however, wisely note the inchoate nature of the broadband business and conceded that "[c]ustomers, for their part, are still learning the capabilities of cable modem service and deciding which applications they prefer."¹²⁵ The intervening decade of experience has provided the Commission with vast data regarding actual consumer preferences between those affiliated applications that were critical to its determination that broadband access was properly classified an information service and other unaffiliated options. These data indicate that independent email services, such as Gmail and Outlook.com (formerly Hotmail), dominate comparable services that are supplied by broadband providers.¹²⁶ And the majority of Internet traffic is for content outside of the "services or applications" that are provisioned through the broadband subscription.¹²⁷

Furthermore, while the FCC once expressed concern that "additional fee[s]" might deter a broadband subscriber from accessing "unaffiliated" content, the recent proliferation of paid broadband-based services, such as Netflix, suggests that such a concern is no longer well-founded.¹²⁸ That is, consumers are not only willing to access unaffiliated advertisement-supported content, they are also willing to pay to access content outside of that which is built into a broadband carrier's offering.¹²⁹

123. *Cable Modem Order*, *supra* note 5, at para. 25.

124. *Id.*

125. *Id.* at para. 30.

126. See MARK GAYNOR, NETWORK SERVICES INVESTMENT GUIDE 124–125 (2002) ("By 1999, more Web-based email boxes existed in the United States and internationally than the total number of ISP-based email accounts . . ."); see also *What Does Your ISP Say About You?*, MAILCHIMP (Nov. 26, 2013), <http://blog.mailchimp.com/what-does-your-isp-say-about-you/> (data from an web-based email service provider showing that web-based email services outpace the popularity of ISP-based services); *Cable Modem Order*, *supra* note 5, at para. 25 (contrast between outside service providers and affiliated services).

127. See SANDVINE, GLOBAL INTERNET PHENOMENA REPORT 5-6 (2H 2013) (28% of traffic associated with Netflix, 17% with YouTube, 7% with BitTorrent, 3% with iTunes, 1% each for Amazon Video, Hulu, and Facebook, for a total of 58%).

128. Netflix has 33 million U.S. members, as compared to an estimated 115 million households in the U.S. Without controlling for household broadband access, Netflix *alone* has achieved 29% market penetration. Compare Letter from Reed Hastings, CEO, Netflix, Inc., to Shareholders (Jan. 22, 2014), with Daphne Lofquist et al., U.S. Census Bureau, *Households and Families: 2010*, in 2010 U.S. CENSUS BRIEFS (Apr. 2012).

129. See SANDVINE, *supra* note 127, at 6 (28% traffic for Netflix, 17% for YouTube).

Taken together, this evidence suggests a consumer preference to use the provider's transmission service to connect to third-party content services. Unlike the conclusions reached in the *Cable Modem Order*, end users do not use broadband transmission capabilities "always in connection" with the services offered by the provider.¹³⁰ To the contrary, end users increasingly view broadband service as providing predominantly a transmission service that connects them to content services provided by other entities, rather than as an integrated information service.¹³¹ Viewed on the terms of *Cable Modem Order*—which emphasized the retail subscriber's view of the commercial "offer"¹³²—the information service designation based on bundled services now seems quaint.

One bundled service bears special attention. Of critical importance to practically every broadband subscriber is the Domain Name System ("DNS") service. Stated simply, DNS service allows a web user to reach a particular website; www.fcc.gov, for example, is a signifier for a unique numerical address—an IP address—such as 192.104.54.5. A DNS service acts as an automated phone book, translating between the easily-remembered website name and its unique address. Standard web traffic, which still comprises roughly ten percent of all Internet traffic in North America,¹³³ depends on accurate DNS service. End users, then, seem to contract for DNS service when they subscribe for broadband access.¹³⁴

That broadband subscribers contract for DNS service, however, need not mean that they are purchasing an information service. Indeed, even the *Cable Modem Order* itself provides no clear guidance as to whether DNS services are categorized as "data processing" or "transmission" services.¹³⁵ Turning to the statute, "telecommunications" is defined to mean "the

130. Nat'l Cable & Telecomms. Ass'n v. Brand X. Internet Servs., 545 U.S. 967, 988 (2005).

131. For a list of capabilities that even the *Cable Modem Order* considers to be within the "basic level" transmission functions, see *Cable Modem Order*, *supra* note 5, at para. 17 ("physical connection between the cable system and the Internet by operating or interconnecting with Internet backbone facilities . . . protocol conversion, IP address number assignment, domain name resolution through a domain name system (DNS), network security, and caching").

132. See *Brand X*, 545 U.S. at 988; see also *Cable Modem Order*, *supra* note 5, at para. 35 (examining "the functions that cable modem service makes available to its end users").

133. SANDVINE, *supra* note 127, at 5 (HTTP traffic comprises 9% of internet traffic).

134. Although most DNS service comes with broadband service, it is increasingly offered on a stand-alone basis by independent entities (e.g., OpenDNS, Google DNS).

135. Compare *Cable Modem Order*, *supra* note 5, at para. 17 ("[B]asic" "functions" to "transmit data" include "domain name resolution through a domain name system (DNS)"), with *id.* at para. 37 ("DNS constitutes a general purpose information processing . . . capability").

transmission, between or among points specified by the user, of information of the user's choosing.”¹³⁶ DNS service, then, merely enables telecommunications: In seeking to visit a website, the user identifies the information they want (the website) and the location from which they want it (www.fcc.gov), and requests that it be transmitted back to them. Any intermediate action to translate the website name to a particular address¹³⁷ is no more than a functional step carried out in service of that transmission.

Other policy considerations undercut the prevailing “information service” designation. The *DSL Reclassification Order*—one of the proceedings that followed soon after the *Cable Modem Order*—concluded that an “access requirement impedes deployment of innovative wireline broadband services.”¹³⁸ The Commission has since rejected this reasoning, stating in its *Open Internet Order* that “openness is critical to . . . increased end-user demand for broadband, which drives network improvements.”¹³⁹ That is, the Commission now believes that the statutory aims of the Telecommunications Act are more easily met through regulated access rules rather than deregulated access.

“Regulatory agencies do not establish rules of conduct to last forever,” the Supreme Court has explained; the “forces of change do not always or necessarily point in the direction of deregulation.”¹⁴⁰ The FCC retains the ability to re-examine the conclusions it reached in the *Cable Modem Order*

136. 47 U.S.C. § 153 (50) (2006).

137. The fact that either the address or the content might be cached, that different DNS services might point to two distinct but identical copies of the same website, or even that a single DNS might dynamically cycle through different locations for the same content need not change this conclusion. The instruction is best understood as a command to retrieve information from *any* of the available end points that matches www.fcc.gov. This is a reasonable construction of the phrase “points specified by the user;” the statute does not require that user command be so specific as to identify the IP address with particularity. *But see* Christopher Yoo, *supra* note 40, at 567 (“The fact that DNS determines from which of the multiple available endpoints a particular query will be served makes it hard to characterize Internet communications as being between “points specified by the user” as required by the definition of telecommunications service.”). The FCC can permissibly construe the “points specified by the user” as simply “my computer” and “FCC,” and allow the user to defer to the network’s best judgment as to how to deliver that content. The point is further illustrated by a call forwarding service. Telephone service subscribers can request that incoming calls to them be forwarded to an alternate number even before reaching the end point (that is, the call forwarding is carried out by the network, not by the handset). In such cases, the network will dynamically reroute the call to an appropriate location in order to effectuate the intent of the caller. Yet the use of call forwarding does not mean that the telephone call is no longer a telecommunications service.

138. *DSL Reclassification Order*, *supra* note 10, at para. 97.

139. *2010 Open Internet Order*, *supra* note 1, at para. 14.

140. *Motor Vehicles Mfrs. Ass’n of the U.S. v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 37, 42 (1983) (alterations and citations omitted).

and its subsequent related decisions. A number of “chang[ed] circumstances” support the decision to treat broadband access as a telecommunications service. For one, consumer behavior suggests the users increasingly view broadband as a transmission service providing access to independent content providers and other subscription services, rather than as a bundle of applications that rely on an underlying faster-than-dial-up transmission service. That is, the “offer,” which has always been capacious enough to include a telecommunications service,¹⁴¹ is increasingly seen as *predominantly* a telecommunications service.¹⁴² Furthermore, the Commission’s view of how to best promote the statutory aims of the Telecommunications Act has fundamentally shifted:¹⁴³ where the Commission once thought that a nondiscrimination rule would deter network investment, it now believes that such rules will “increase incentives to invest in broadband infrastructure.”¹⁴⁴ Given these “chang[ed] circumstances,” including the shift in the “agency’s view of what is in the public interest,” the Commission can provide an amply reasoned analysis for reinstituting its classification of the transmission of Internet traffic as a telecommunications service.¹⁴⁵

C. Proceeding by Adjudication

So far we have examined two routes for the FCC to consider as it forges a path forward from *Verizon*. But there are more permutations to consider; the Commission has a variety of procedural options, regardless of the substantive path it chooses.

Consider, for example, section 208 of the Communications Act,¹⁴⁶ which gives the Commission the adjudicatory authority to investigate and resolve complaints against common carriers.¹⁴⁷ In particular, it allows the

141. Nat’l Cable & Telecomms. Ass’n v. Brand X. Internet Servs., 545 U.S. 967, 967 (2005).

142. Cf. *Computer I Final Decision*, *supra* note 29, at para. 1.

143. See 47 U.S.C. § 1302(a) (2006) (“The Commission . . . shall encourage the deployment on a reasonable and timely basis of advanced telecommunications [broadband] capability to all Americans.”).

144. 2010 *Open Internet Order*, *supra* note 1, at para. 40.

145. *State Farm*, 463 U.S. at 57.

146. 47 U.S.C. § 208 (2006). Although we briefly discuss Section 208 here, we do not mean to opine on the proper scope of the rules that the FCC should impose under Title II. We note only that the FCC has, in the past, noted that it could “forbear . . . from all but a small handful of provisions necessary for effective implementation” of its policy goals. Framework for Broadband Internet Serv., *Notice of Inquiry*, FCC 10-114, 25 FCC Rcd. 7866, para. 28 (2010). We do not comment on which provisions of Title II are ripe for such forbearance.

147. Section 403 offers similar authority, but allows the FCC to act *sua sponte*. 47 U.S.C. § 403 (2006) (“The Commission shall have full authority and power at

FCC to initiate an inquiry into conduct that is inconsistent with the Commission's long-held goal of protecting application layer services from untoward carrier behavior.¹⁴⁸ If, for example, broadband carriers were to begin to discriminate against unaffiliated competing content, the Commission might reconsider its classification decisions through a series of adjudicatory proceedings. One such proceeding might address only sender-side traffic if the alleged violation affects only incoming traffic, or if it involves an interconnection dispute. A subsequent adjudication might expand the scope of inquiry as necessary.

The Commission, of course, retains the discretion to choose the mode of policymaking that it believes best serves the public interest.¹⁴⁹ So long as the Commission's "adjudicative procedures . . . produce the relevant information to mature and fair consideration of the issues," it is entitled to "proceed with caution, developing its standards in a case-by-case manner"¹⁵⁰

In other words, the FCC can establish by adjudication that an offer to transmit data sent by a content provider to a subscriber is a "telecommunications service" subject to regulation under Title II.¹⁵¹ And the Commission can then make an individual determination as to whether the particular practice at issue is "unjust" or an "unreasonable discrimination" against an application-layer service,¹⁵² and enjoin the practice as necessary.¹⁵³ This approach has the notable benefit of allowing the Commission to operate on a case-by-case basis,¹⁵⁴ thereby creating room for the flexible administration of policy in a still-evolving technological space.¹⁵⁵

any time to institute an inquiry, on its own motion, in any case and as to any matter or thing concerning which complaint is authorized to be made").

148. See *supra* notes 36–41 and accompanying text.

149. *NLRB v. Bell Aerospace Co.*, 416 U.S. 267 (1974); see also *Verizon Tel. Cos. v. FCC*, 269 F.3d 1098 (D.C. Cir. 2001).

150. *Bell Aerospace*, 416 U.S. at 268; see generally Benjamin Kapnik, *Affirming the Status Quo?: The FCC, ALJs, and Agency Adjudications*, 80 GEO. WASH. L. REV. 1527 (2012) (reviewing quality of FCC adjudicatory process).

151. See *supra* Part III.A.

152. 47 U.S.C. § 202 (2006).

153. We note, for the sake of completeness, that the FCC would likely be unable to impose retrospective fines in cases that present first-of-their-kind departures from governing standards (including settled expectations regarding the reach of various classification decisions). See generally *Verizon Tel. Cos.*, 269 F.3d at 1098. Nevertheless, the FCC can clearly order injunctive relief, which is the more important—and more practical—remedy.

154. Wheeler, *supra* note 91.

155. See Formal Complaint of Free Press & Pub. Knowledge Against Comcast Corp. for Secretly Degrading Peer-to-Peer Applications, *Memorandum Opinion and Order*, FCC 08-183, 23 FCC Rcd. 13028, paras. 30–32 (2008) (arguments in favor

IV. CONCLUSION

For nearly a half-century, the FCC has attempted to nurture the growth of the various application-layer industries by protecting them from the potential for owners of basic network infrastructure to block their content and discriminate against their services. The D.C. Circuit's decision in *Verizon v. FCC* to strike down the Commission's *Open Internet Order* has undermined the agency's ability to continue its efforts in service of that goal.

The FCC, however, is hardly helpless in the face of this setback. As we have explained, the Commission might follow a previously unconsidered option under Title II of the Communications Act. As Verizon itself argued, a broadband transaction can be understood as occurring in two-stages: a call and a response. This framework, which was adopted by the D.C. Circuit, allows the Commission to correctly characterize the response as no more than a telecommunications service. Such a conclusion would return the scope of the *Cable Modem Order* to its original context, while giving the Commission the ability to protect application service providers from anticompetitive carrier conduct.

Alternatively, the Commission could expand its frame of inquiry to both the call and response, and hold a proceeding to examine whether changed circumstances have undermined the Commission's 2002 classification of broadband services. As described above, we are confident that the factual premises underlying that decision are now obsolete.

As a legal matter, either possibility is less novel than it first appears. Both resemble the approach the FCC took in its *Computer Inquiries*. Furthermore, the Commission's regulatory authority under Title II is not subject to serious doubt, but is naturally cabined to the context of telecommunications. Most recently, the D.C. Circuit mentioned that, in enacting the Telecommunications Act of 1996, "Congress clearly contemplated that the Commission would continue regulating internet providers in the manner it had previously."¹⁵⁶ In short, we believe that the proposals described here represent the most straightforward and legally secure measures for ensuring the continued growth of the application industries that have blossomed while they remained insulated from the anticompetitive carrier conduct.

of an adjudicatory approach), *vacated sub nom.* Comcast Corp. v. FCC, 600 F.3d 642, 661 (D.C. Cir. 2010).

156. *Verizon v. FCC*, 740 F.3d 623, 639 (D.C. Cir. 2014) (citing Deployment of Wireline Services Offering Advanced Telecomms. Capability, *Memorandum Opinion and Order; and Notice of Proposed Rulemaking*, FCC 98-188, 13 F.C.C.R. at 24029-30 para. 35 (1998) ("We conclude that advanced services are telecommunications services.")).