

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554**

In the Matter of)	
)	
Protecting and Promoting the Open Internet)	GN Docket No. 14-28
)	
Framework for Broadband Internet Services)	GN Docket No. 10-127
)	

REPLY COMMENTS OF AT&T SERVICES, INC.

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September 15, 2014

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INTRODUCTION AND EXECUTIVE SUMMARY

The comments filed in response to the *NPRM*¹ resoundingly confirm that the Commission struck the right balance in its 2010 open Internet rules. Although some parties would prefer more regulation, and some would prefer less, the record reflects a widely shared view that the 2010 rules effectively balanced the objective of Internet openness with the vital need to support further investment in broadband networks—investment that is essential to the Internet’s continued growth and to achievement of the Commission’s broadband goals.²

This consensus is based on real-world evidence that competition, investment, and innovation flourished throughout the Internet ecosystem under the 2010 rules,³ and that the Internet remained fully open. Indeed, AT&T alone invested more than \$60 billion of risk capital in the United States in the last three years,⁴ and its investment of \$20.9 billion last year earned it

¹ Notice of Proposed Rulemaking, *Protecting and Promoting the Open Internet*, GN Docket No. 14-28, FCC 14-61 (rel. May 15, 2014) (“*NPRM*”).

² See, e.g., CWA and NAACP Comments at 7, 13-14 (“The evidence conclusively shows that the 2010 *Open Internet Order* got it right in balancing the two important policy goals of Internet openness and network/edge provider investment.”); Mozilla Comments at 12, 14 (noting that “Mozilla supports the baseline policy framework as established in the 2010 *Open Internet Order*” and that “[t]he exact language and simple rules used in the 2010 *Open Internet Order* could be reintroduced without complexity”); AARP Comments at 3, 40-42 (“the Title II classification would be for the limited purpose of reestablishing the *Open Internet Order* framework”); T-Mobile Comments at 7-17; Center for Democracy and Technology (CDT) Comments at 8 (noting reclassification “would allow the 2010 rules for fixed Internet access service . . . to be reinstated largely in their prior form”); ADT Comments at iii, 4-8; Massachusetts Department of Telecommunications and Cable Comments at 4-5; Vonage Comments at 36 (“[T]he FCC needs to reinstate the rules adopted in the *Open Internet Order*.”); Microsoft Comments at 4-7 (noting that the 2010 rules “str[uck] a balance between the needs of edge providers and network operators in order to satisfy the demands of those who matter most, consumers”).

³ See, e.g., *NPRM* ¶¶ 29-32.

⁴ See Diana Carew & Dr. Michael Mandel, *U.S. Investment Heroes of 2014*, Progressive Policy Institute (Sept. 2014), available at http://www.progressivepolicy.org/wp-content/uploads/2014/09/2014.09-Carew_Mandel_US-Investment-Heroes-of-2014_Investing-at-

the title of “Investment Hero” by the Progressive Policy Institute.⁵ Other broadband providers too have made massive investments in their networks. Verizon, for example, trailed only AT&T in the last three years among all U.S. companies in domestic capital expenditures.⁶ These investments have propelled innovation throughout the Internet ecosystem and enabled consumers to access an ever-growing array of content, services, and applications.

Given the proven track record of the 2010 rules, there is no justification for the Commission to pursue a different path now. Speculation and rhetoric about implausible, theoretical harms to the open Internet that have never occurred—and that bear no relationship to what is actually happening and has happened in the marketplace—provide no basis for abandoning tried and true rules that have a demonstrated record of success. Regulatory decisions should be based on market realities, not misleading rhetoric. Thus, the Commission should reinstate the balance it struck in 2010 and that has worked so well since then.

One element of the 2010 compromise was a presumption against “paid prioritization” of wireline broadband traffic. In the wake of the *Verizon* decision,⁷ this issue has become a flashpoint for net neutrality proponents, and some of them have used it, some might say cynically, to stir up unfounded fears about the future of the open Internet. But such alarmists

Home-in-a-Connected-World.pdf (“*PPI 2014 Paper*”). Indeed, over the past six years, no public company has invested more capital into the U.S. economy than AT&T. See AT&T, *2013 Annual Report*, at 4 (Feb. 2014), http://www.att.com/Investor/ATT_Annual/2013/downloads/ar2013_annual_report.pdf.

⁵ *PPI 2014 Paper* at 2. See also Patrick Seitz, *AT&T, Verizon called ‘U.S. investment heroes,’* Investors.com (Sept. 10, 2014), <http://news.investors.com/091014-716825-t-vz-intc-top-list-for-domestic-capital-spending.htm?ven=yahoocp&src=aurilled&ven=yahoo>.

⁶ *PPI 2014 Paper* at 2-3, 5.

⁷ *Verizon v. FCC*, 740 F.3d 623 (D.C. Cir. 2014) (reviewing Order, *Preserving the Open Internet et al.*, 25 FCC Rcd 17905 (2010) (“*Open Internet Order*”).

ignore not just the facts, but also the broad consensus among commenters that the Commission may take reasonable steps under section 706 to prevent the Internet from bifurcating into “fast lanes” for some traffic and “slow lanes” for everything else.⁸ To that end, AT&T does not oppose rules that restrict non-user-directed paid prioritization as part of the Commission’s overall effort under section 706 to restore the equilibrium of the 2010 rules—even though AT&T continues to believe that concerns about paid prioritization are vastly overstated.

As AT&T noted in its opening comments, any such rules must properly define paid prioritization so as to clearly distinguish between what is categorically prohibited and what is not. To that end, drawing on comments filed in 2010 by some of the leading net neutrality advocates, AT&T proposed a distinction between paid prioritization that is not directed by end users, and prioritization arrangements that are user-driven.⁹ Leading net neutrality proponents already have distinguished between these scenarios, because even they recognize that *user-driven* prioritization can enhance consumer welfare and should be permissible.¹⁰ In fact, there are myriad reasons consumers might want to prioritize certain Internet traffic, and just as many benefits that could flow from such user-directed prioritization. For this reason, the Commission should not categorically foreclose such consumer-driven choices.

⁸ See, e.g., AT&T Comments at 26; Comcast Comments at 24 (“Comcast also would not be opposed to a rebuttable presumption that ‘paid prioritization’ arrangements are commercially unreasonable. . . . Comcast believes that few arrangements would be deemed to overcome the presumption.”); Verizon Comments at 36-38 (“If the Commission were to determine that certain types of paid prioritization do, in fact, harm competition or consumers, it could prohibit such arrangements without straying into impermissible common carriage so long as it left adequate room for other types of differentiated arrangements.”).

⁹ See AT&T Comments at 27-30.

¹⁰ See page 20 & n.53, *infra*.

If the Commission does restrict paid prioritization as AT&T proposes, that should fundamentally reframe consideration of the remaining open Internet issues. Once the perceived risks of non-user-directed paid prioritization are neutralized, there is no reason to adopt any of the various measures discussed in the *NPRM* that were evidently designed to address those risks. The Internet remained open for more than a decade without *any* prescriptive regulation; it has *continued to thrive* under the balanced 2010 model for the last four years; and if the Commission readopts the 2010 approach and thereby addresses the purported threat of paid prioritization, the Commission will have laid the proper foundation *going forward* for the Internet to continue its astonishing contributions to the nation's economic, cultural, political, and social health. In contrast, upsetting the balance with stricter rules that are fundamentally at odds with the facts on the ground would chill investment and innovation in unintended ways.

With those organizing principles in mind, AT&T's reply comments proceed as follows. In *Part I*, AT&T explains that section 706 gives the Commission all of the legal authority that it needs to achieve its open Internet objectives. As explained above, the Commission's *substantive* goal should be to restore the balance established in the 2010 rules. And section 706 plainly empowers the Commission to do so.

The D.C. Circuit in *Verizon* has already held that section 706 is a grant of substantive rulemaking authority, that promoting the "virtuous circle" through net neutrality rules falls within the scope of section 706's mandate, and that the 2010 transparency rule is lawful. Although the *Verizon* court vacated the Commission's "no-blocking" and nondiscrimination rules, it pointed to alternative rationales that could sustain the Commission's adoption of virtually identical rules that would restore the 2010 equilibrium. Many commenters urge the Commission to follow that path, as does AT&T.

By contrast, those commenters questioning the Commission’s section 706 authority fall into two camps. First, there are those who express concern about whether effective no-blocking and nondiscrimination rules would survive judicial review under section 706. Those concerns are unfounded. The most common mistake made by these commenters is to assume that common carriage is an all-or-nothing proposition, such that any meaningful no-blocking or nondiscrimination rule will result in prohibited *per se* common-carrier status. That assumption cannot be squared with established precedent, which makes clear that there is a “gray area” between the extremes of *per se* private carriage and *per se* common carriage, and that the Commission receives deference in deciding where broadband providers fall between those extremes. These parties also overlook the key point, grounded in precedent, that the mere fact that a regulation bears some hallmarks of common-carrier regulation does not mean the regulation imposes *per se* common-carrier status.

Second, there is a small but vocal minority of commenters who attack the section 706 option, not because it would fail to serve as a basis for balanced open Internet rules, but because section 706 cannot achieve what they really seek—namely, full-scale Title II regulation of broadband providers. For these parties, with Free Press and Public Knowledge leading the charge, the endgame is to regulate the Internet top to bottom—including, for example, peering and interconnection—under an idealized monopoly-era regime designed decades ago for legacy telephone companies. These parties are not just wrong about the law, but also blind to the devastating policy consequences that would follow from Title II reclassification.

In **Part II**, AT&T explains why, unlike measured regulation under section 706, Title II reclassification is decidedly the wrong path forward. The simplest reason to reject Title II reclassification is because the Commission lacks legal authority to do it, as longstanding judicial

and regulatory precedent make clear. Perhaps most importantly, the Commission made *factual* judgments that broadband Internet access providers offer retail customers a functionally integrated Title I “information service” in a series of orders governing cable modem, DSL, broadband over powerline, and mobile broadband services. Based on those *factual* determinations, the Commission concluded—in reasoning affirmed by the Supreme Court—that there is no separate transmission component “offered” to consumers that could be deemed a “telecommunications service.” Internet service providers subsequently invested billions of dollars in reliance on that holding. Nothing about those *facts* has changed, and there is nothing new in the record that could possibly justify a reversal of the Commission’s longstanding findings. Thus, any effort to rewrite the facts to achieve a preordained policy outcome likely would not survive judicial review. Some commenters resurrect the argument that the “adjunct-to-basic” doctrine would permit the Commission to achieve an about-face, but the Commission and the Supreme Court have already rejected that argument, and for good reason. In short, the record in this proceeding makes clear that retail broadband Internet access remains, as it always has been, a functionally integrated information service offering.

Even if the Commission had the *legal* authority to reclassify broadband Internet access service, the *policy* consequences of doing so would be catastrophic. Subjecting broadband providers to burdensome monopoly-era, common-carrier regulations would blunt incentives to invest in next-generation networks, thereby stalling the “virtuous circle” that promotes innovation throughout the Internet ecosystem and undermining Congress’s and the Commission’s broadband objectives. At the very least, Title II reclassification inevitably would lead to years of costly litigation and regulatory disputes, throwing a cloud of uncertainty over the

Internet and thus undermining investment and innovation—an outcome that even some net neutrality advocates acknowledge.

Contrary to the claims of many reclassification proponents, forbearance would not address these concerns. The record makes abundantly clear that there is stark disagreement about which Title II provisions should apply to broadband providers, all but guaranteeing frequent regulatory disputes about, and litigation challenges to, the Commission’s forbearance decisions. To take just one example, Public Knowledge urges the Commission to apply nearly *every* provision in Title II to broadband Internet access providers.¹¹ That advocacy, although badly misguided, at least has the virtue of consistency; other commenters who urge the Commission to reclassify and then forbear from significant parts of Title II basically admit that Title II cannot sensibly be applied (and was never intended to apply) to broadband providers. And even if such forbearance issues could be resolved in an orderly, efficient manner at the federal level, reclassification could prompt far more burdensome obligations at the state level and abroad.

Finally, the record confirms that the Commission could not hope to confine the consequences of Title II regulation to broadband providers alone. The reason is simple: to reclassify, the Commission would need to identify a severable “telecommunications” offering that could be classified as a “telecommunications service.” But there is no limiting principle that could restrict this arbitrary partitioning to broadband Internet access alone. Instead, the radical surgery required to identify a “telecommunications” offering within broadband service would require reclassification of an array of services—including those provided by content-delivery networks, backbone providers, and even some edge providers—that similarly provide

¹¹ Public Knowledge Comments at 88-97.

information-processing capabilities using a “telecommunications” input. The Supreme Court has already recognized as much,¹² as has the Commission itself,¹³ and no party offers any plausible rationale for concluding otherwise. Instead, commenters simply urge the Commission to adopt a bright-line rule limiting its Title II reclassification to broadband providers. But such an artificial limit, with no anchor in the statutory text, facts, or logic, would not survive judicial scrutiny. The end result would be to expose huge swaths of the Internet to both extensive litigation and the risk of innovation-stifling Title II regulation.

Another area of substantial disagreement is whether mobile broadband services should be subject to the same rules as wireline broadband services. In *Part III*, AT&T explains why the Commission should reject calls to ramp up regulation of mobile broadband providers. In adopting the 2010 rules, the Commission correctly recognized that there are special circumstances in the mobile context that demand different rules—including the remarkable state of competition, investment, and innovation, and the unique operational constraints that mobile providers face on a daily basis in managing their networks. The record developed in this proceeding makes clear that those same considerations exist today—indeed, competition is even more intense than it was in 2010, and as streaming video services are increasingly used on mobile devices, operational challenges are more daunting than ever.

Here again, the facts on the ground demonstrate that the 2010 rules did precisely what they were supposed to do—protect the open Internet while preserving the incentives for investment and innovation that have propelled the remarkable growth of the mobile broadband

¹² See *Nat’l Cable & Telecomm. Ass’n v. Brand X Internet Servs.*, 545 U.S. 967, 994 (2005).

¹³ Report to Congress, *Federal-State Joint Board on Universal Service*, 13 FCC Rcd 11501, 11529 ¶ 57 (1998) (“*Stevens Report*”).

ecosystem. Indeed, investment and innovation in the mobile broadband ecosystem since 2010 have been nothing short of staggering, and there is *no* evidence of *any* conduct by mobile providers that has constituted a threat to the open Internet since the 2010 rules were put in place. And that should not be surprising: in a dynamic, competitive market like the mobile broadband marketplace, providers have overwhelming incentives to ensure that consumers can access the services, applications, and content that they want, when they want. If providers interfere with that access, they will be punished by very aggressive competitors that are only too happy to win new business. That is why consumers already freely use a range of services and applications that compete directly or indirectly with traditional voice and text messaging services. Those calling for more regulation of mobile broadband providers all but ignore these critical points.

Furthermore, the same operational constraints that mobile providers faced in 2010 remain serious challenges today. Although mobile providers work tirelessly to make the most efficient use of available spectrum, and despite some increases in such spectrum, consumers' demand for mobile broadband services—driven by innovation—is skyrocketing. Data usage on AT&T's network alone increased *50,000 percent* between 2007 and 2013, and it is continuing to grow at a blistering pace.¹⁴ This exponential increase in traffic and the challenges it poses will only accelerate, particularly as video streaming on mobile devices grows ever more popular. To handle this constantly escalating demand, mobile broadband providers devote enormous resources to managing their networks to ensure that all consumers in all cell sites receive the

¹⁴ See, e.g., John Donovan, *Wireless Data Volume on Our Network Continues to Double Annually* (Feb. 14, 2012), <http://www.attinnovationspace.com/innovation/story/a7781181> (noting that wireless data traffic doubled every year between 2007 and 2011); Taylor Bloom, *How AT&T Stadium is Prepared to Keep Final Four Fans Connected*, Sporttechie (April 4, 2014), <http://www.sporttechie.com/2014/04/04/how-att-stadium-is-prepared-to-keep-final-four-fans-connected> (noting that, over the last seven years, data traffic on AT&T's network grew 50,000 percent due to the proliferation of smartphones).

quality service that they expect and demand. In this dynamic environment, characterized by a parade of disruptive technologies and services, prescriptive regulation could interfere with network management in ways that would result in inefficient network operation and poorer service quality for consumers.

Some parties acknowledge the unique constraints facing mobile broadband providers, but suggest that those constraints could be accounted for as part of a “reasonable network management” standard. The Commission declined to take that approach in 2010, and with good reason. The explosion in mobile broadband usage described above has made it extremely challenging for network engineers to continue providing the high-quality broadband experience that customers have come to expect. And the fact that mobile subscribers move means that providers must grapple with variable and unpredictable network demand, requiring them to make difficult judgments about how to manage their networks in response to complex and fast-changing congestion problems. These issues have forced providers to develop innovative approaches to network management that must evolve quickly as new challenges arise. Subjecting those decisions to the full range of open Internet regulations, and legitimizing them (or not) only through a vague carve-out for “reasonable network management,” would result in intolerable uncertainty about whether a regulator after-the-fact would deem a network or engineering decision “reasonable” or instead a violation of the Commission’s rules. And regulatory limitations that slow down network-management decisions and inhibit investment in novel solutions would undermine the very thing that the Commission is trying to foster—fast, broad-based, robust networks that enable the service offerings and functionalities that customers want. Particularly given the absence of any problem to be remedied and the rapidly evolving

nature of the mobile marketplace, there is simply no justification for such intrusive regulation of mobile networks.

Finally, in *Part IV*, AT&T addresses concerns raised in the record regarding peering and interconnection, transparency, and specialized services. With respect to all of these issues, advocates of regulation have failed to identify any actual problem in need of a remedy. Indeed, the purported “solutions” that these advocates call for would be far more harmful than the issues they purport to solve. The Commission should instead maintain its existing approaches, which were fundamental to the careful balance struck in 2010.

DISCUSSION

I. SECTION 706 EQUIPS THE COMMISSION WITH SUFFICIENT AUTHORITY TO RESTORE THE BALANCE OF THE 2010 RULES.

The record in this proceeding reflects widespread agreement that the Commission’s objective should be restoring the equilibrium established by the 2010 rules.¹⁵ As AT&T explained at length in its opening comments, the Commission can achieve that goal through reliance on its statutory authority under section 706.¹⁶ Some commenters are concerned, however, that section 706 will not enable the Commission to achieve that objective, leading them to advocate for Title II reclassification as a means to effect open Internet rules. They are wrong. The Commission has ample authority under section 706 to address all potential threats to Internet openness, including paid prioritization.

¹⁵ As discussed below in Part III, some parties argue that the Commission should apply the same rules to both wireline and mobile broadband providers. But even these commenters generally agree that such rules should mirror the 2010 rules for wireline providers.

¹⁶ See AT&T Comments at 31-36 (nondiscrimination), 73-74 (no-blocking).

A. Section 706 Provides Ample Authority for the Commission to Achieve Its Open Internet Objectives.

In considering “how . . . section 706 . . . could be applied to ensure that the Internet remains open,”¹⁷ it bears emphasis that the D.C. Circuit affirmed several basic principles in *Verizon* that should guide the Commission’s consideration of open Internet rules here.

First, the court of appeals held that the Commission had reasonably interpreted “section 706(a) as a grant of regulatory authority.”¹⁸ In addition, the court held that the Commission had “reasonably interpreted section 706(b) to empower it to take steps to accelerate broadband deployment if and when it determines that such deployment is not ‘reasonable and timely.’”¹⁹ The decision thus makes clear that section 706 provides meaningful substantive authority—a conclusion recently confirmed by the Tenth Circuit.²⁰

Second, the *Verizon* court held that the Commission’s “virtuous circle” rationale—the rationale underlying each of the 2010 open Internet rules—was supported by substantial evidence, reasonable, and otherwise lawful.²¹ That is important because it means that the Commission should not need to relitigate this issue in adopting new rules, so long as those rules reflect the same basic balance embodied in the 2010 rules.²²

¹⁷ *NPRM* ¶ 10.

¹⁸ *Verizon*, 740 F.3d at 637.

¹⁹ *Id.* at 641.

²⁰ *See In re FCC 11-161*, 753 F.3d 1015, 1054 (10th Cir. 2014) (“[W]e conclude that the FCC reasonably construed section 706(b) as an additional source of support for its broadband requirement”). *Compare with* COMPTTEL Comments at 24 (“The Commission’s statutory authority to promulgate its proposed open Internet rules under Section 706 of the Telecommunications Act remains very much subject to challenge.”).

²¹ 740 F.3d at 644.

²² *See NPRM* ¶ 118.

Third, the court made clear that open Internet rules that do not constitute *per se* common-carrier obligations could survive scrutiny. On that basis, the court upheld the Commission’s 2010 transparency rule.²³ And although the court struck down the no-blocking and nondiscrimination rules, it noted that the Commission had relied on a single flawed rationale in defending those rules, and it pointed to alternative rationales that would sustain the rules.²⁴ With respect to nondiscrimination, the court noted that the Commission had failed to explain how its 2010 rule would “differ[] from the nondiscrimination standard applied to common carriers generally” and it suggested that a nondiscrimination rule that was more “limited” and that did not “compel[] carriage . . . in all circumstances with respect to all edge providers” would be permissible.²⁵ With respect to the 2010 no-blocking rule, the court acknowledged that it was “somewhat less clear” whether the rule created “*per se* common carrier obligations.”²⁶ Although the court held that the rule did impose such obligations, it described in some detail an alternative rationale for a no-blocking rule that likely would “not . . . run afoul of the statutory prohibitions on common carrier treatment.”²⁷

AT&T has strongly urged the Commission to follow that basic “blueprint” laid out by the D.C. Circuit,²⁸ and many other commenters largely concur.²⁹ In particular, the Commission can,

²³ 740 F.3d at 658.

²⁴ See AT&T Comments at 18-36.

²⁵ 740 F.3d at 656.

²⁶ *Id.* at 657.

²⁷ *Id.* at 658.

²⁸ NPRM ¶ 4; see, e.g., AT&T Comments at 1-2.

²⁹ See, e.g., USTA Comments at 44 (“Two U.S. Courts of Appeals have endorsed the Commission’s authority under Section 706, and the D.C. Circuit, in particular, has provided the Commission with a ‘blueprint’ for adopting lawful open Internet rules.”) (internal citations

and should, establish a “commercial unreasonableness” standard for assessing broadband providers’ commercial arrangements with edge providers. This standard would enable the Commission to prohibit any prioritization arrangement that poses a threat to Internet openness.³⁰ In particular, under this standard, the Commission could ban non-user-directed paid prioritization on the ground that it constitutes a commercially unreasonable practice.³¹ Such an approach would not amount to prohibited *per se* common-carriage regulation because it would permit broadband providers to engage in user-directed prioritization as well as other individualized arrangements with edge providers that are commercially reasonable and that do not involve the

omitted); NCTA Comments at 45 (“the *Verizon* court’s decision upholding the Commission’s broad authority under Section 706 provides a much more certain and reliable legal foundation for any further requirements to promote Internet openness”); Comcast Comments at 13 (“The *Verizon* decision established a clear roadmap for the Commission to promulgate sensible and legally sound open Internet rules pursuant to Section 706 of the Telecommunications Act of 1996.”); Cisco Comments at 22-23 (“The D.C. Circuit has concluded that the Commission has authority to regulate broadband Internet access service under Section 706 of the Communications Act, and the Chairman has acknowledged that this authority is sufficient for the Commission ‘to adopt and implement robust and enforceable Open Internet rules.’”) (internal footnotes omitted); Consumer Electronics Association Comments at 2, 9 (the Commission “should rely on the path the court laid out for it in the *Verizon* decision and use its legally sound Section 706 authority to adopt rules that are no more burdensome than the 2010 no-blocking and non-discrimination rules”); Cox Communications Comments at iii (“In developing new rules, the Commission should follow the blueprint suggested by the D.C. Circuit in *Verizon* by relying on the authority conferred by Section 706 of the Telecommunications Act of 1996. As construed by the court, Section 706 provides ample leeway to achieve the goals embodied in the NPRM.”); Time Warner Cable Comments at 8 (“The NPRM appropriately proposes that the Commission follow the *Verizon* ‘blueprint’ in this proceeding, and TWC strongly urges it to do so.”) (internal citation omitted); *see also* AOL Comments at 7 (“Section 706 provides the Commission with both the obligation and the power to prevent broadband ISPs from undermining the virtuous circle.”).

³⁰ As AT&T discussed in its opening comments (at 93-94), the open Internet rules should apply only to the transmission of traffic over a consumer’s broadband Internet access service and not to any other services provided by ISPs.

³¹ *See* AT&T Comments at 34-35; *see also* *FCC v. Midwest Video Corp.*, 440 U.S. 689, 706 n.16 (1979) (holding that the rule at issue in *United States v. Southwestern Cable Co.*, 392 U.S. 157 (1968) was not a common-carriage obligation because it was “limited to remedying a specific perceived evil”).

prioritization of packets.³² The regime described by AT&T, in other words, would not impose a “compelled carriage obligation . . . in *all* circumstances and with respect to *all* edge providers”—the core problem with the rules and the Commission’s defense of those rules in *Verizon*.³³

To be clear, AT&T rejects the parade of horrors hypothesized by some net neutrality advocates that have long sought to restrict paid prioritization. Their arguments are completely speculative because no provider has yet offered such a service, and there is every reason to think that if offered, any such service could actually benefit smaller edge providers by enabling them to offset the advantages of larger, incumbent edge providers without having to make enormous capital investments that are beyond their reach. And even those who advocate banning paid prioritization (for example, Free Press) recognize that any paid prioritization arrangements necessarily would be a very limited service provided to a small number of customers.³⁴ But if the Commission nonetheless credits concerns about the possibility of paid prioritization, AT&T agrees that the Commission can address those concerns now.³⁵ Though certainly not unbounded, the Commission’s authority under section 706 empowers it to restrict paid prioritization and the purported threat that it poses to Internet openness.

³² See *Midwest Video Corp.*, 440 U.S. at 701 (“A common carrier does not ‘make individualized decisions in particular cases, whether and on what terms to deal.’”); *Nat’l Ass’n of Regulatory Utility Comm’rs v. FCC*, 525 F.2d 630, 641 (D.C. Cir. 1976) (“[A] carrier will not be a common carrier . . . where its practice is to make individualized decisions, in particular cases, whether and on what terms to deal.”); see also AT&T Comments at 34-36.

³³ *Verizon*, 740 F.3d at 656 (emphases added).

³⁴ See, e.g., Free Press, *Paid Prioritization: The Antithesis of Openness on the Internet* (July 26, 2010), http://www.freepress.net/sites/default/files/resources/Paid_Prioritization.pdf.

³⁵ AT&T walked through the Commission’s authority to do so in detail in its opening comments. See AT&T Comments at 30-39.

B. Arguments That Section 706 Is Insufficient to Sustain Balanced Open Internet Rules Are Unconvincing.

The weight of the comments persuasively describe why the Commission should ground its open Internet rules in section 706. Although some commenters question the sustainability of a legal rationale based on section 706, those arguments are wide of the mark. Before proceeding to address specific concerns, it is worth noting that many of the commenters doubting the adequacy of section 706 commit two related mistakes.

First, these parties’ objections rest on the assumption that common carriage is an all-or-nothing proposition, such that any meaningful no-blocking or nondiscrimination rule will necessarily run afoul of the Communication Act’s prohibition on common-carriage regulation of information service providers.³⁶ That assumption is contrary to established precedent. As the D.C. Circuit has held, “common carriage is not all or nothing—there is a gray area in which although a given regulation might be applied to common carriers, the obligations imposed are not common carriage *per se*.”³⁷ Thus, as the court has explained, “there is an important distinction between the question whether a given regulatory regime is *consistent* with common carrier or private carrier status, and . . . whether that regime *necessarily confers* common carrier status.”³⁸ That a no-blocking or nondiscrimination rule might bear some attributes of a common-carrier regulation does not mean that such a rule amounts to *per se* common carriage.

Second, and relatedly, these parties ignore the D.C. Circuit’s holding that, in deciding whether a given regulation confers *per se* common-carrier status, the Commission is entitled to

³⁶ See 47 U.S.C. § 153(51).

³⁷ *Verizon*, 740 F.3d at 652.

³⁸ *Id.*

Chevron “deference.”³⁹ Specifically, the D.C. Circuit has previously held that the Communications Act does not expressly define “common carrier” and thus that the Commission’s interpretation of that ambiguous term is reviewed under *Chevron*’s second step.⁴⁰ Under that deferential standard of review, a court will uphold the Commission’s determination so long as “the agency’s interpretation is based on a permissible construction of the statute.”⁴¹

Commenters opposing reliance on section 706 all but ignore those key points. But under those principles, if the Commission adopts a sensible “commercially reasonable” framework, restricts non-user-directed paid prioritization, but explains why in its judgment those regulations do not amount to *per se* common-carrier status for broadband providers, courts will defer to the Commission’s judgment.⁴² By contrast, in *Verizon*, the Commission made a litigation choice in defense of the 2010 rules to focus almost entirely on the argument that broadband providers were not “carriers” with respect to edge providers.⁴³ The court of appeals expressly noted that the

³⁹ *Id.*; see also *Cellco P’ship v. FCC*, 700 F.3d 534, 544 (D.C. Cir. 2012) (“[T]he Commission’s interpretation and application of the term ‘common carrier’ warrants *Chevron* deference.”).

⁴⁰ *USTA v. FCC*, 295 F.3d 1326, 1332 (D.C. Cir. 2002).

⁴¹ *Id.* (internal quotation marks omitted).

⁴² Public Knowledge suggests that a “commercially reasonable” standard is “troubling” because “much of what makes the internet great is noncommercial in nature.” Public Knowledge Comments at 3; see also CDT Comments at 19 (“Unlike data roaming, Internet openness involves many relationships that are not business-to-business and serves many purposes that are noncommercial.”). But Public Knowledge’s argument places undue weight on the word “commercial”: in the *NPRM* itself, the Commission proposed numerous factors to assess commercial reasonableness that go beyond a narrow definition of commerce. See *NPRM* ¶¶ 122-135 (proposing factors such as “Impact on Speech and Civic Engagement” and “Impact on Consumers”). In any event, the key question is whether ISPs—which clearly are commercial entities—are behaving in ways that are not reasonable as a pure commercial matter and that make sense only if the ISP’s goal is an anticompetitive one.

⁴³ Brief of Respondent-Appellee FCC, *Verizon v. FCC*, No. 11-1355, at 60-68 (D.C. Cir. Sept. 10, 2012).

Commission made little effort to argue that the rules at issue would not impose *per se* common-carriage obligations.⁴⁴ In the wake of *Verizon*, there accordingly is ample room for the Commission to adopt new open Internet rules that fall between the extremes of *per se* common carriage and *per se* private carriage—line-drawing that, if reasonable, should receive judicial deference. Under Supreme Court precedent, there is no question that “there is room for permissible regulation of private carriers that shares some aspects of traditional common carrier obligations.”⁴⁵

With those principles in mind, the arguments made by commenters questioning the section 706 rationale are unpersuasive. The Center for Democracy & Technology (CDT) argues, for example, that “there is no guarantee that a reviewing court would uphold” new rules because the language from the D.C. Circuit’s opinion is “instructive” but “dicta.”⁴⁶ This concern is unfounded. As a practical matter, the Commission can assume that a future panel of the D.C. Circuit or other court of appeals would be extremely reluctant to strike down rules that follow a legal path laid out by a prior panel of the court, dicta or not. But more importantly, CDT offers no persuasive reason to believe that the conclusions outlined by the D.C. Circuit with respect to the no-blocking and nondiscrimination rules—based on the court’s synthesis of decades of Supreme Court and circuit common-carrier precedent—are wrong. And indeed they are not, for

⁴⁴ See 740 F.3d at 656 (“[h]aving relied almost entirely on the flawed argument that broadband providers are not carriers with respect to edge providers, the Commission offer[ed] little” argument that the nondiscrimination rule at issue did not impose common-carrier obligations).

⁴⁵ *Cellco P’ship*, 700 F.3d at 548.

⁴⁶ CDT Comments at 17; see also Mozilla Comments at 6 (“Certainly, the Commission recognizes the inherent risk of relying on a few phrases that are essentially dicta.”).

the reasons AT&T has explained.⁴⁷ Moreover, as discussed below, there certainly is no guarantee that a reviewing court would uphold a decision by the Commission to reclassify broadband Internet access as a Title II service.⁴⁸ To the contrary, given that any such decision would need to reverse longstanding factual determinations in the face of a record that shows no change in facts, a decision by the Commission to reclassify broadband Internet access would very likely be rejected.

CDT also points out that “rules based on section 706” would be “subject to ‘as applied’ challenges on an ongoing basis.”⁴⁹ But there is no evidence this has been a problem after *Cellco Partnership*, which similarly made clear that parties could challenge the Commission’s application of the new data-roaming standard on an as-applied basis.⁵⁰ In any event, this concern is easily avoided so long as the Commission is careful to ensure that broadband providers remain free to make individualized decisions with edge providers to accommodate commercially reasonable, user-directed prioritization arrangements and other arrangements that do not involve prioritization. Moreover, as discussed below, any attempt to restrict paid prioritization under the auspices of section 202 would certainly face legal challenges because Title II has always permitted differentiated arrangements that are generally available.

Finally, Free Press, CDT, and others contend that there is a fundamental tension between nondiscrimination and the Communications Act’s prohibition on common-carriage treatment of

⁴⁷ See AT&T Comments at 31-36 (explaining why that is so with respect to nondiscrimination); *id.* at 73-74 (explaining why that is so with respect to no-blocking).

⁴⁸ See Part II.A, *infra*.

⁴⁹ CDT Comments at 17.

⁵⁰ *Cellco P’ship*, 700 F.3d at 549.

information service providers.⁵¹ According to this argument, any nondiscrimination rule that would be effective would necessarily amount to a prohibited common-carrier regulation.⁵² This line of argument is deeply flawed.

Even the most strident net neutrality advocates concede that an effective nondiscrimination rule need not ban *all* forms of paid prioritization. Indeed, in their opening comments and numerous other filings, they have urged the Commission *not* to proscribe user-directed prioritization because they recognize that it can provide many benefits to consumers.⁵³ Thus, by these advocates' own admission, effective rules would not constitute prohibited *per se*

⁵¹ See Free Press Comments at 125-128; CDT Comments at 17; Public Knowledge Comments at 32.

⁵² See, e.g., Free Press Comments at 135 (“[A]ny nondiscrimination standard that the Commission could adopt using [section 706] authority would be either wildly ineffective or immediately struck down. There is no middle ground.”); *id.* at 128 (“A restoration of basic common carriage is the Commission’s only option to achieve the high-level goals of the *Notice*. Section 706 simply fails to give the Commission the authority to do what the Chairman says the *Notice* will do.”) (internal citations omitted); see also Netflix Comments at 21 (“To the extent that the Commission intends to pursue meaningful open Internet protections, continuing to rely on section 706 authority by itself is a recipe for ‘weak tea’ that is likely to prove both legally unsatisfying to the courts and substantively unsatisfying to Internet users.”).

⁵³ See, e.g., CDT Comments at 5-6 (“Nor is the goal to prevent all differential treatment of traffic or all negotiation of commercial deals between network operators and content providers. Significantly, the 2010 rules always envisioned that network operators could strike deals for the delivery of selected content or traffic via ‘specialized services.’ They also permitted end-user controlled discrimination, under which subscribers themselves designate traffic for special treatment”); TechAmerica Comments at 8 (“Some consumers . . . may want prioritized access to certain content and should be able to have it if they’re willing to pay for it. If ISPs simply offer faster access to certain content, without forcing it upon their customers, those types of arrangements between ISPs and edge providers should be deemed ‘commercially reasonable.’”); Ad Hoc Comments at 21-23; see also AT&T Comments at 27-28 (collecting prior advocacy to the same effect). Likewise, Matt Wood, policy director at Free Press, recently was quoted as saying, in reference to user-directed paid prioritization: “People should be free to use their connection any way they want. That’s the point of all this.” Nancy Scola, *Net Neutrality Defenders Actually Fine if Internet Users Decide What Goes Fast*, Wash. Post (July 21, 2014), <http://www.washingtonpost.com/blogs/the-switch/wp/2014/07/21/net-neutrality-defenders-actually-fine-if-internet-users-decide-what-goes-fast/>.

common-carriage regulation because they would not impose a “compelled carriage obligation . . . in *all* circumstances and with respect to *all* edge providers,”⁵⁴ but instead would permit traffic differentiation in many circumstances. Said another way, effective rules would fall squarely within the gray area between *per se* common carriage and *per se* private carriage—an area that the Commission has discretion to define.⁵⁵ For that reason, Free Press is entirely mistaken with its overheated rhetoric (repeated in various ways) that “the Commission’s turn away from common carriage [under Title II] means it will never be able to preserve the open Internet.”⁵⁶

Compounding this error, advocates fundamentally misstate the nondiscrimination standard that would apply under section 202, and what it could accomplish.⁵⁷ Under section 202

⁵⁴ *Verizon*, 740 F.3d at 656 (emphases added)

⁵⁵ This explains why commenters are also wrong to argue that a no-blocking rule would amount to common carriage because broadband providers would have a basic obligation to provide *some* level of service to edge providers for free. *E.g.*, Free Press Comments at 129-134. As the D.C. Circuit recognized, if a no-blocking rule rested on the premise that the service that broadband providers offer to edge providers is “access to their subscribers generally,” then that rule, “while perhaps establishing a lower limit on the forms that broadband providers’ arrangements with edge providers could take, might nonetheless leave sufficient room for individualized bargaining and discrimination in terms so as not to run afoul of the statutory prohibitions on common carrier treatment.” *Verizon*, 740 F.3d at 658 (internal citations and quotation marks omitted). As the Commission recognized in the *NPRM*, a no-blocking rule that did not require broadband providers “to hold themselves out to serve all comers indiscriminately on the same or standardized terms” and that permitted individualized bargaining above a basic level of service would not amount to *per se* common carriage. *NPRM* ¶ 93 (internal quotation marks omitted). Thus, even if the minimum level of service required by a no-blocking rule resembles a common-carriage regulation, that does not mean it treats broadband providers as *per se* common carriers.

⁵⁶ Free Press Comments at 126; *see also id.* at 8 (“The court in *Verizon v. FCC* confirmed what we’ve all along known to be true: nondiscrimination, which is the entire point of Net Neutrality, is a common carrier obligation. The FCC cannot protect Net Neutrality – before or after a violation – using Section 706 Authority.”).

⁵⁷ AT&T discussed this issue at length in the 2010 net neutrality proceeding. *See, e.g.*, Reply Comments of AT&T Inc., *Preserving the Open Internet; Broadband Industry Practices*, GN Docket No. 09-191 & WC Docket No. 07-52, at 29-34, 164-66 (filed Apr. 26, 2010) (“*AT&T 2010 Net Neutrality Reply Comments*”).

and decades of common-carrier precedent, it is not even “discriminatory,” much less “unreasonably” so,⁵⁸ for the owner of a transmission resource to sell different tiers of service to different purchasers, even though buyers of the higher-tiered services may receive priority over other users to the same shared resource.⁵⁹ Such arrangements are not “discriminatory” so long as they are generally available because, even though the purchasers of different service tiers are treated differently, they are by definition not buying “like” services and are by choice not similarly situated.⁶⁰ Thus, even if Title II applied here, it would not prohibit edge providers from purchasing packet-prioritization or other QoS-enhancement services from ISPs in order to ensure, for example, the proper performance of real-time high-definition video. Instead, Title II would entitle an edge provider that has purchased such a service to complain, at most, that the ISP has “unreasonabl[y] discriminat[ed]” against it under section 202(a) if the ISP has sold the *same* service to another, similarly situated provider at a lower price without any reasonable justification for that disparity. Accordingly, the picture painted by some commenters—namely, that section 202 embodies a hallowed and virtually unqualified nondiscrimination norm or rule—

⁵⁸ 47 U.S.C. § 202(a).

⁵⁹ See *AT&T 2010 Net Neutrality Reply Comments* at 30-32 (discussing (1) the legacy special-priority services that telecommunications carriers offer enterprise customers today as tariffed or otherwise commercially available Title II services, and the lack of any “discrimination” objection to them; and (2) judicial and administrative precedent concerning similar practices); see also *Algonquin Gas Transmission Co. v. FERC*, 948 F.2d 1305, 1309 n.5 (D.C. Cir. 1991) (“‘Firm’ sales service is provided under rate schedules or contracts that expressly obligate the gas company to deliver specific volumes of gas within a given time period. . . . Firm service differs from ‘interruptible’ service which provides gas on a ‘when available’ basis and may be interrupted after notice to the subscriber.”) (citations omitted); *Fort Pierce Util. Auth. v. FERC*, 730 F.2d 778, 785-86 (D.C. Cir. 1984) (“Electric utilities often distinguish between ‘firm’ service, under which customers can demand power or transmission at any time, and ‘interruptible’ service, which the utility is entitled to shut off at any point when there is not enough excess capacity beyond that required to guarantee the needs of the utility’s firm customers.”).

⁶⁰ See *Competitive Telecomm’ns Ass’n v. FCC*, 998 F.2d 1058, 1061 (D.C. Cir. 1993).

is incorrect.⁶¹ Instead, it would not even prohibit the types of arrangements that the Commission has the authority to bar under section 706.

In short, it is in the best interest of *every* party to this proceeding that the Commission ground new open Internet rules on a solid legal foundation. Section 706 is undoubtedly the surest and most reliable way for the Commission to achieve its open Internet objectives. The D.C. Circuit has already upheld the 2010 transparency rule under section 706. And the court laid out a clear path for the Commission to follow with respect to no-blocking and nondiscrimination rules, as described by AT&T's proposal in its opening comments. Particularly when weighed against the serious legal problems with, and the dire policy consequences that would flow from, Title II reclassification, the Commission's tentative conclusion to "exercise its authority under section 706, consistent with the D.C. Circuit's opinion in *Verizon v. FCC*, to adopt our proposed rules" is the only sensible path forward.⁶²

II. THE COMMISSION SHOULD REJECT CALLS TO REGULATE BROADBAND INTERNET ACCESS SERVICE UNDER TITLE II.

As detailed above, the Commission can achieve its open Internet goals under section 706. Indeed, the record makes clear that such an approach would have a much stronger legal and policy foundation than one grounded in Title II. There is no sound legal rationale for

⁶¹ Many other parties detailed the limits of Title II in their comments. *See, e.g.*, Cox Comments at 36 ("At the same time, the purported benefits of reclassification are illusory"); Time Warner Cable Comments at 15 ("it is highly unlikely that Title II would support a flat ban on an entire category of potential business arrangements, such as paid prioritization"); Alcatel-Lucent Comments at 10 ("Proponents of Title II have erroneously argued that pay-for-priority service would be inconsistent with Title II. Title II has always permitted common carriers to engage in 'reasonable' discrimination, for example by prioritizing certain traffic, making sales concessions, and offering volume discounts. Because Title II has never been interpreted to prohibit all forms of preferential treatment, the Commission could not rely upon its Title II authority to declare all forms of paid prioritization inherently unreasonable.").

⁶² *NPRM* ¶ 142.

reclassifying broadband Internet access as a “telecommunications service.” Nor is there any reasonable policy rationale for doing so. To the contrary, reclassification likely would prompt another reversal by the courts, and even if it were somehow upheld, it would have dramatic negative policy consequences for the entire Internet ecosystem.

A. The Commission Lacks Legal Authority to Classify Broadband Internet Access Service as a Telecommunications Service.

Broadband Internet access service is an “information service” because it provides “a capability for generating, acquiring, storing, transforming, processing, retrieving, utilizing, or making available information via telecommunications.”⁶³ Some commenters nonetheless argue that there is a severable transmission component that can be regulated as a “telecommunications service.”⁶⁴ These parties ignore more than a decade of Commission and Supreme Court precedent, as well as considerable record evidence that the telecommunications component of broadband Internet access is inextricably intertwined with several information-processing components. There simply is no basis in law or fact for the Commission to reverse course and reclassify broadband Internet access as a Title II telecommunications service.

1. Broadband Internet Access Is a Functionally Integrated Title I “Information Service.”

In a series of orders issued from 2002 through 2007, the Commission concluded that various broadband Internet access services are integrated Title I “information services” without a severable Title II “telecommunications service” component.⁶⁵ Although the Commission

⁶³ 47 U.S.C. § 153(24).

⁶⁴ See, e.g., EFF Comments at 13-14; Free Press Comments at 63-71; CDT Comments at 9-15; i2Coalition Comments at 9-14.

⁶⁵ See, e.g., Declaratory Ruling and Notice of Proposed Rulemaking, *Appropriate Regulatory Treatment for Broadband Access to the Internet Over Cable Facilities*, 17 FCC Rcd

recognized that transmission—and thus “telecommunications”—was an essential *input* to broadband Internet access, it concluded that a single integrated retail offering could not be *both* an “information service” *and* a “telecommunications service.”⁶⁶ Instead, if a service combines transmission with data-processing or data-storage/retrieval capabilities, it is an information service.⁶⁷ Moreover, the Commission concluded that the determinative factor under the statutory language is what is “offered” to consumers: only if the transmission (or “telecommunications”) component is offered *separately* is that offering a “telecommunications service.”⁶⁸ Applying that test, the Commission concluded that, as a factual matter, broadband ISPs “offer” consumers a functionally integrated information service that combines telecommunications with data-processing components such as email, DNS look-up, and caching.⁶⁹

4798, 4822-23 ¶¶ 38-40 (2002) (“*Cable Modem Order*”), *aff’d* *Brand X*, 545 U.S. 967 (intermediate history omitted); Report and Order, *Appropriate Framework for Broadband Access to the Internet over Wireline Facilities*, 20 FCC Rcd 14853, 14855-56 ¶¶ 1-3 (2005) (“*Wireline Broadband Order*”); Declaratory Ruling, *Appropriate Regulatory Treatment for Broadband Access to the Internet Over Wireless Networks*, 22 FCC Rcd 5901, 5902 ¶ 2 (2007) (“*Wireless Broadband Order*”); Report and Order, *United Power Line Council’s Petition for Declaratory Ruling Regarding the Classification of Broadband over Power Line Internet Access Service as an Information Service*, 21 FCC Rcd 13281 (2006); *see also* *Stevens Report*, 13 FCC Rcd at 11537-39 ¶¶ 76-80.

⁶⁶ *See* *Stevens Report*, 13 FCC Rcd at 11507-08, 11524 ¶¶ 13, 43. AT&T explained in its opening comments (at 41-44) why this “mutual exclusivity” principle is not only reasonable, but compelled by the statutory text.

⁶⁷ *See* *Stevens Report*, 13 FCC Rcd at 11520 ¶¶ 39 (“[W]hen an entity offers transmission incorporating the ‘capability for generating, acquiring, storing, transforming, processing, retrieving, utilizing, or making available information,’ it does not offer telecommunications. Rather, it offers an ‘information service’ even though it uses telecommunications to do so.”).

⁶⁸ *See* *Cable Modem Order*, 17 FCC Rcd at 4822-23 ¶ 38; *Stevens Report*, 13 FCC Rcd at 11520 ¶ 39 (“an entity offering a simple transparent transmission path, without the capability of providing enhanced functionality, offers ‘telecommunications.’”).

⁶⁹ *See, e.g.,* *Cable Modem Order*, 17 FCC Rcd at 4822-23 ¶ 38; *Wireless Broadband Order*, 22 FCC Rcd at 5910-11 ¶¶ 25-26.

The Supreme Court affirmed the Commission’s analysis in *Brand X*.⁷⁰ As the Court explained, “[i]t is common usage to describe what a company ‘offers’ to a consumer as what *the consumer perceives to be the integrated finished product*, even to the exclusion of discrete components that compose the product[.]”⁷¹ In fact, the Court added, it would be “odd” to construe the statutory language any other way.⁷² The Court then held that “[t]he entire question is whether the products here are functionally integrated (like the components of a car) or functionally separate (like pets and leashes).”⁷³ Importantly, the Court emphasized that this is not a legal question, but instead “turns . . . on the *factual particulars of how Internet technology works and how it is provided*.”⁷⁴ The Court held that the Commission had appropriately answered that factual question when it concluded that ISPs “offer” consumers a unified service consisting of functionally integrated telecommunications and data-processing components.⁷⁵

That determination is critical because, as the Court later explained in *FCC v. Fox Television Stations Inc.*, when an agency’s new policy “rests upon *factual findings that contradict those which underlay its prior policy*,” the agency must “provide a more detailed justification than what would suffice for a new policy created on a blank slate.”⁷⁶ And here, as Comcast notes, “reclassification . . . would be precisely the sort of reversal that would require

⁷⁰ *Brand X*, 545 U.S. at 973-74.

⁷¹ *Id.* at 990 (emphasis added).

⁷² *Id.*

⁷³ *Id.* at 991.

⁷⁴ *Id.* (emphasis added).

⁷⁵ *Id.*

⁷⁶ *FCC v. Fox Television Stations, Inc.*, 556 U.S. 502, 515 (2009) (emphasis added); *see also id.* at 537 (Kennedy, J., concurring in part and concurring in the judgment) (an “agency cannot simply disregard contrary or inconvenient factual determinations that it made in the past”).

repudiation of consistent factual findings.”⁷⁷ Thus, the Commission would face a high bar if it were to reverse course now—a bar that it could not possibly clear because none of the relevant facts has changed since the Commission last addressed this issue.⁷⁸ Indeed, the record in this proceeding would not support reclassification even if the Commission were writing on a blank slate.

Moreover, the Commission’s classification of broadband Internet access as an information service “has engendered *serious reliance interests*”—a second *Fox* factor that would compel the Commission to supply a strong justification if it were to reverse course.⁷⁹ Broadband providers have made massive network investments in reliance on the Commission’s prior orders.⁸⁰ In the past three years alone, AT&T has sunk more than \$60 billion into capital expenditures in the United States—more than any other U.S. company—much of it on broadband infrastructure.⁸¹ In 2013, AT&T invested \$20.9 billion domestically—again, the most of any U.S. company.⁸² And although Verizon trailed AT&T with \$15.4 billion in capital

⁷⁷ Comcast Comments at 54. *See also* Alcatel-Lucent Comments at 11-12.

⁷⁸ *See, e.g.*, ACA Comments at 43, 57-58; Comcast Comments at 56-59; Alcatel-Lucent Comments at 11-12.

⁷⁹ *Fox*, 556 U.S. at 515 (emphasis added).

⁸⁰ *See, e.g.*, Comcast Comments at 54-55 (“Since the Commission first classified retail broadband Internet access service in 2002, Comcast and other broadband providers have built their broadband networks in reliance on the Commission’s consistent pledge that they would not be regulated as ‘common carriers’ under Title II of the Communications Act.”); Alcatel-Lucent Comments at 12.

⁸¹ *PPI 2014 Paper* at 2; Patrick Seitz, *AT&T, Verizon called ‘U.S. investment heroes’*, Investors.com (Sept. 10, 2014), <http://news.investors.com/091014-716825-t-vz-intc-top-list-for-domestic-capital-spending.htm?ven=yahoocp&src=aurilled&ven=yahoo>; Press Release, “AT&T to Invest \$14 Billion to Significantly Expand Wireless and Wireline Broadband Networks, Support Future IP Data Growth and New Services,” AT&T (Nov. 7, 2012), <http://www.att.com/gen/press-room?pid=23506&cdvn=news&newsarticleid=35661&mapcode>.

⁸² *PPI 2014 Paper* at 2.

investment in 2013, it still garnered the second spot overall—prompting the Progressive Policy Institute to crown both ISPs as “investment heroes.”⁸³ And other ISPs are near the top of the list as well. Comcast came in at number seven in 2013, up three spots from the preceding year.⁸⁴ And over the past three years, Comcast was ninth overall in domestic capital expenditures.⁸⁵ These investments unquestionably constitute “serious reliance interests” that the Commission must accord substantial weight under *Fox*.

In short, the Commission would need to make a compelling showing to reclassify broadband Internet access as a Title II “telecommunications service.” And for the reasons discussed below, nothing in the record comes even close to meeting that standard.

a. Email, storage, content, parental controls, and other enhanced features.

When consumers purchase broadband Internet access, they receive not only transmission to all points on the Internet, but also a number of enhanced features. These include, among other things, email, data storage, parental controls, unique programming content, spam protection, pop-up blockers, instant messaging services, on-the-go access to Wi-Fi hotspots, and various widgets, toolbars, and applications.⁸⁶ The Commission relied on exactly these types of features in its prior classification decisions.⁸⁷

⁸³ *PPI 2014 Paper* at 2-3, 5. See also Paul Davidson, *AT&T, Verizon, Exxon are top corporate spenders*, USA Today, (Sept. 9, 2014), <http://www.usatoday.com/story/money/business/2014/09/10/us-capital-spending-ranking/15335991/>.

⁸⁴ *PPI 2014 Paper* at 2.

⁸⁵ *Id.* at 5.

⁸⁶ AT&T Comments at 48-49.

⁸⁷ See, e.g., *Cable Modem Order*, 17 FCC Rcd at 4811, 4821-4823, ¶¶ 18, 36-38.

Some commenters argue that the Commission erred, or that its findings are out of date.⁸⁸ Specifically, they contend that such features are not functionally integrated with transmission in a unified broadband Internet access “offering.”⁸⁹ Chief among their arguments is that consumers can elect to use third-party alternatives for many of these features.⁹⁰ But although some broadband customers do use such alternatives, many do not. For example, AT&T’s internal data show that 46 percent of its broadband Internet access customers *actively* use their AT&T email accounts, and millions more maintain accounts that they have actively used in the past.

More importantly, the fact that other entities offer rival services that duplicate certain features of broadband Internet access does not mean that those features are not functionally integrated in the distinct, comprehensive service that ISPs “offer” to consumers. It makes no difference that users can seek out, for instance, third-party parental controls in addition to those combined with their broadband service, just as it makes no difference that a consumer can buy a car at a car dealership and then replace the wheels or install custom seats. Just as a car dealer is not properly viewed “as ‘offering’ consumers the car’s components in addition to the car itself,”⁹¹ a broadband provider does not offer consumers the individual components of broadband Internet access; instead, it offers them a single integrated service. Indeed, the Commission has so concluded in past orders, noting that broadband Internet access is an integrated information service “*regardless* of whether subscribers *use* all of the functions provided as part of the service,

⁸⁸ See, e.g., EFF Comments at 14 n.43; ACA Comments at 4-7; CDT Comments at 9-13; Free Press Comments at 69-71.

⁸⁹ See, e.g., Free Press Comments at 69-71, 78; Public Knowledge Comments at 70-71; CDT Comments at 9-13.

⁹⁰ See, e.g., ACA Comments at 5-6; Public Knowledge Comments at 73; CDT Comments at 11.

⁹¹ *Brand X*, 545 U.S. at 990.

such as e-mail or web-hosting”⁹² The Supreme Court affirmed this conclusion in *Brand X*, holding that the relevant question is “what the consumer perceives to be the integrated finished product, even to the exclusion of discrete components that compose the product.”⁹³

Commenters favoring Title II reclassification all but ignore this standard when trying to explain how broadband Internet access could be, or contain, a Title II “telecommunications service.” Public Knowledge, for example, claims that “[o]nly when a service is so linked to internet access that it is *impossible to use the internet without it* does it become part of the same ‘offer’ as internet access.”⁹⁴ On that basis, Public Knowledge suggests that the many information-processing features that consumers obtain when they purchase broadband Internet access are irrelevant to the classification analysis.⁹⁵ But Public Knowledge has reinvented the legal test for identifying information services. The question is not whether the enhanced features of a service are *indispensable* to transmission, but “what the consumer perceives to be the integrated finished product, even to the exclusion of discrete components that compose the product.”⁹⁶

Broadband providers’ advertising materials confirm the integrated nature of the offering made to consumers. Although some commenters cherry-pick ads that focus on speed claims and other transmission-related statements,⁹⁷ broadband providers in fact tout many enhanced features

⁹² *Cable Modem Order*, 17 FCC Rcd at 4822-23 ¶ 38 (emphasis added).

⁹³ *Brand X*, 545 U.S. at 990.

⁹⁴ Public Knowledge Comments at 73 (emphasis added).

⁹⁵ *Id.*

⁹⁶ *Brand X*, 545 U.S. at 990.

⁹⁷ Public Knowledge Comments at 63; CDT Comments at 9-10.

in their advertising. AT&T, for example, highlights a variety of non-“connectivity” features as essential selling points, including “access to advanced features, entertainment, email, and more”:

AT&T Mail with up to 11 email accounts and virtually unlimited storage, POP access, and SpamGuard; The att.net Toolbar for quick access back to your homepage, email, search, and AT&T support tools; [and] On-the-go access to the entire national AT&T Wi-Fi Hot Spot network.”⁹⁸

AT&T also highlights its parental controls, pop-up blocker, and spam filter,⁹⁹ as well as the security features discussed below, such as the “AT&T Internet Security Suite powered by McAfee,” “email protection,” anti-virus software, anti-spyware protection, and firewalls.¹⁰⁰

Other ISPs tout similar features as an integral part of their retail broadband “offerings” too—driving home the point that consumers perceive broadband Internet access service to be a single unified offering.¹⁰¹

⁹⁸ AT&T, *AT&T Shop*, <http://www.att.com/shop/internet.html?tab=2#fbid=EIAIRpw4KjV>.

⁹⁹ *Id.*; AT&T, *Safety & Security*, http://www.att.com/shop/Upper_Funnel_Promo_Modals/internet_promo_modals/safety-security.html#mainpar_genericmodal.

¹⁰⁰ *Id.*

¹⁰¹ For example, Verizon’s advertising highlights email accounts, “10MB of personal web space,” “access to Verizon Wi-Fi hotspots in airports, hotels and more,” “Anti-Virus, Anti-spyware, Anti-phishing” services, Firewall, a “password manager-safe key,” anti-spam filters, mobile apps that control streaming video and the Verizon DVR, and other features. Verizon, *Verizon Internet Security Suite*, <http://www.verizon.com/home/utilities/security-backup/>; Verizon, *Broadband Internet*, <http://www.verizon.com/info/broadband-internet/>; Verizon, *High Speed Internet Service*, <http://www.verizon.com/home/highspeedinternet/>. Similarly, Comcast provides a variety of information-processing features as part of its broadband Internet access service, including email, spam protection, security features, and XFINITY Connect, advertised as “your online hub for all your communications – email, voicemail, contacts, calendar and more. Plus, you can access from anywhere – from any computer connected to the Internet or from your mobile device with the XFINITY Connect app. Check your XFINITY email. You can even combine external email accounts in one inbox. Stay up to date with Twitter and Facebook feeds.” Comcast, *Xfinity Connect*, <http://xfinity.comcast.net/learn/internet/xfinityconnect>.

b. DNS look-up.

“DNS look-up” is an even more straightforward example of a functionally integrated information-processing feature. Among other things, DNS matches the Web site address that an end user types into a browser with the IP address of the Web page’s host server.¹⁰²

The Commission has determined that DNS lookup is integral to the provision of broadband Internet access service.¹⁰³ The Supreme Court expressly affirmed that determination, holding that the functional integration of DNS look-up with broadband transmission is sufficient to make broadband Internet access a unitary “information service”:

A user cannot reach a third-party’s Web site without DNS, which (among other things) matches the Web site address the end user types into his browser . . . with the IP address of the Web page’s host server. See P. Albitz & C. Liu, DNS and BIND 10 (4th ed. 2001) (For an Internet user, “DNS is a must. . . . [N]early all of the Internet’s network services use DNS. That includes the World Wide Web, electronic mail, remote terminal access, and file transfer”). . . . In other words, subscribers can reach third-party Web sites via “the World Wide Web, and browse their contents, [only] because their service provider offers the ‘capability for . . . acquiring, [storing] . . . retrieving [and] utilizing . . . information.’” “The service that Internet access providers offer to members of the public is Internet access,” “not a transparent ability (from the end user’s perspective) to transmit information.”¹⁰⁴

Some commenters argue that both the Commission and the Supreme Court got it wrong. As with the other functionalities discussed above, they insist that consumers can elect to use third-party DNS lookup services.¹⁰⁵ That argument is not correct as to most mobile subscribers, and it is unavailing as to fixed broadband Internet access subscribers because virtually all of them actually do rely on their ISP’s DNS look-up functionality. Moreover, commenters have not

¹⁰² See *Brand X*, 545 U.S. at 999.

¹⁰³ See *Cable Modem Order*, 17 FCC Rcd at 4822 ¶ 38 n.153.

¹⁰⁴ *Brand X*, 545 U.S. at 999-1000 (emphasis added; citations omitted).

¹⁰⁵ See Free Press Comments at 70-71 & n.153; CDT Comments at 14-15.

identified a single broadband Internet access service *without* DNS look-up; to the contrary, “if broadband Internet access providers suddenly chose to disable DNS functionality, Internet access services would be essentially useless to virtually all of the tens of millions of broadband Internet access customers in the U.S. today.”¹⁰⁶

To their credit, even some commenters who support reclassification acknowledge that DNS look-up is inextricably intertwined with transmission in broadband Internet access service. Public Knowledge, for example, concedes that “DNS is an essential part of internet connectivity” because “internet access without DNS is of little value to an ordinary internet user: URLs would not work, email could not be sent, and links would be broken.”¹⁰⁷

c. Security features.

Advanced security features are another information-processing capability that is functionally integrated with broadband transmission. Indeed, if anything, security is *more* integral to broadband Internet access today than it was several years ago.

A significant and growing number of providers, including AT&T, now offer broadband Internet access with a variety of network-implemented, security-related features that address threats against their networks and their customers. Such features include processing of Internet traffic flows to check for telltale patterns of worms, viruses, botnets, denial-of-service attacks,

¹⁰⁶ See Letter from National Cable & Telecommunications Association, CTIA—The Wireless Association, United States Telecom Association, Telecommunications Industry Association, Independent Telephone and Telecommunications Alliance, Verizon, AT&T Inc., Time Warner Cable, and Qwest to Chairman Julius Genachowski, FCC, GN Docket No. 09-191, at 8 n.27 (filed Feb. 22, 2010).

¹⁰⁷ Public Knowledge Comments at 76-78. Public Knowledge nonetheless claims (at 74) that “DNS is not an information service,” reasoning that DNS falls within the “telecommunications management” exception of 47 U.S.C. § 153(24). That is wrong for the reasons discussed in Part II.A.2 below.

and the like; scrubbing email traffic to remove spam; and other techniques that involve interaction with stored information (*e.g.*, databases of known threats) to address security and other concerns. All of these offerings fall squarely within the definition of an “information service”: “a capability for generating, acquiring, storing, transforming, processing, retrieving, utilizing, or making available information via telecommunications.”¹⁰⁸

For example, AT&T has made significant investments in its Global Network Operations Center, which employs an Internet security analysis platform known as “FLOOD.” That platform processes detailed network flow data sent to and received by AT&T’s wireline and wireless users (including source, destination, IP protocol, source port, designation TCP flags, packet count, byte count, start/end time for activity) in an effort to detect anomalies and track changes in network activity over time. AT&T uses this platform not only to secure its network as a whole, but also to help individual end users address specific security problems with their computers, personal data, and software. When AT&T’s network analysis detects that a given user’s system is behaving oddly and may be infected by malware, for example, AT&T may directly inform that user by email and, when appropriate, instruct the user on how to download the anti-virus software, provided by AT&T, needed to eliminate the infection. AT&T also forwards system-side threat information to a leading Internet security company, whose services AT&T brands in its own name (“AT&T Internet Security Suite powered by McAfee”) and includes at no extra charge in many of its most popular broadband Internet access packages.¹⁰⁹

¹⁰⁸ 47 U.S.C. § 153(24).

¹⁰⁹ AT&T, *AT&T Internet Security Suite*, <http://www.att.net/iss>.

The security company incorporates the new information into its own security measures and then—on AT&T’s behalf—sends security updates to AT&T customers that use its service.¹¹⁰

AT&T also provides a number of other security features directly to consumers as part of its retail broadband offering.¹¹¹ And other ISPs also provide integrated network security features and consumer tools that are highly valuable to individual end users.¹¹²

Indeed, security features have become more tightly integrated with broadband service in recent years, and that trend is poised to accelerate under the Commission’s new cybersecurity

¹¹⁰ AT&T complements FLOOD with many additional activities that are not used to help with ongoing real-time communications but are critical to the overall service AT&T offers its subscribers. These include malware analysis (the process of executing malware in a safe environment to observe its behavior to determine a means by which malware can be identified to prevent further distribution), forensics analysis (determining the root cause—what, when, how and who—of attacks), exploit research (researching the latest exploits and attack techniques used by attackers), vulnerability assessment (determining the susceptibility of networks to attacks through testing and source code analysis), algorithmic research, and general security research.

¹¹¹ Among these features is “integrated protection for [a customer’s] email account.” AT&T, *AT&T U-Verse High Speed Internet*, <http://www.att.com/shop/internet/u-verse-internet.html#fbid=f2wwd04iFwP>. Specifically, AT&T offers: SpamGuard to “[a]utomatically protect[] your inbox from spam [which] grows stronger as it learns from you over time;” AddressGuard to protect “the privacy of your email address from spammers and strangers;” and email Anti-Virus protections to “[s]afeguard[] your computer from emails containing harmful viruses.” *Id.* AT&T also offers customers the ability to “guard against online threats and nuisances” through AT&T’s Security Suite powered by McAfee, which “[d]etects, blocks and removes viruses before they get” to a user’s computer, “adds security ratings to Web sites to help you avoid online dangers and alerts you to web sites that may try to steal your identity,” and protects user’s identity through “anti-phishing and Side Advisor software” during financial transactions and other actions. *Id.*; AT&T, *AT&T Internet Security Suite*, <http://www.att.net/iss>.

¹¹² For example, Comcast actively monitors network traffic to help fight spam, phishing attacks, and viruses, and it sends users alerts when threats are detected. Comcast, *Alerts*, <http://constantguard.comcast.net/alerts>. Comcast also provides a “Constant Guard” security program that offers password protection; a Norton Security Suite to protect against “viruses, spam, phishing and more;” and IDENTITY Guard to protect users “from identity theft with Lost Wallet Protection.” Comcast, *XFINITY Shop/Upgrade*, <http://www.comcast.com/internet-service.html>. Comcast also offers a mobile app and the XFINITY Toolbar on web browsers to allow users to access their “online security dashboard quickly and easily.” Comcast, *Constant Guard by XFINITY*, <http://constantguard.comcast.net/products/protection-for-iphone-ipad>; Comcast, *XFINITY Toolbar*, <http://constantguard.comcast.net/products/xfinity-toolbar>.

initiatives.¹¹³ As the Commission recently noted, ISPs play a vital role in the country’s cybersecurity goals.¹¹⁴ The Commission’s Third Communications Security, Reliability and Interoperability Council (CSRIC III) in 2012 adopted voluntary recommendations for ISPs to combat national cybersecurity threats, which included botnet attacks, domain name fraud, and Internet route hijacking.¹¹⁵ More recently, the FCC’s CSRIC has initiated working groups to identify best practices to mitigate large-scale, server-based distributed denial of service (DDoS) attacks.¹¹⁶ And various other government agencies have relied on ISPs to assist with preventing cyber-attacks. For instance, in 2012 the FBI collaborated with ISPs to take down a large botnet called DNS Changer as part of the FBI’s “Operation Ghost Click.”¹¹⁷

These security features are integral to ISPs’ broadband Internet access offerings.

Granted, consumers can purchase third-party security software that duplicates *some* of these features, but as discussed above, that does not matter under the consumer-perception test that the

¹¹³ See, e.g., Tom Wheeler, Chairman, FCC, Remarks before the American Enterprise Institute, Washington, D.C. (June 12, 2014), *available at* <http://www.fcc.gov/document/chairman-wheeler-american-enterprise-institute-washington-dc> (discussing the FCC’s new approach to cybersecurity).

¹¹⁴ Public Notice, *FCC’s Public Safety & Homeland Security Bureau Requests Comment on Implementation of CSRIC III Cybersecurity Best Practices*, DA 14-1066 (rel. July 25, 2014).

¹¹⁵ *Id.*

¹¹⁶ Status Update, *Working Group 5: Remediation of Server-Based DDoS Attacks*, CSRIC, at 12 (June 18, 2014), http://transition.fcc.gov/pshs/advisory/csrc4/CSRIC_IV_WG-5_Status_061814.pdf (recommending that the “FCC encourage ISPs to consider voluntary implementation” of “best practices and new recommendations” to address DDoS attacks.).

¹¹⁷ ISPs aided the FBI in many ways, including notifying end users who were infected with the DNS changer malware and executing mitigation techniques such as a DNS reverse proxy solution that redirected end user requests to reach the rogue DNS servers back to legitimate DNS servers. FBI, *Operation Ghost Click* (Nov. 9, 2011), http://www.fbi.gov/news/stories/2011/november/malware_110911; see *DNS Changer Remediation Study*, MAAWG 27th General Meeting (Feb. 19, 2013), https://www.m3aawg.org/sites/maawg/files/news/GeorgiaTech_DNSChanger_Study-2013-02-19.pdf (detailing the efforts taken to address DNS Changer).

Commission adopted and the Supreme Court affirmed. In any event, no consumer can use Internet access service without receiving the enhanced functionality provided by ISPs' *network-based* security features. Indeed, ISPs do not offer a service without them.

2. DNS Look-Up and Security Features Are Not “Adjunct-to-Basic” Services.

Recognizing the futility of arguing that the many information-processing components of broadband Internet access are *all* severable from the transmission component, some parties advocating reclassification argue that those elements are irrelevant to the classification decision because they are “adjunct-to-basic.”¹¹⁸ This argument fails as well.

The adjunct-to-basic doctrine was adopted long before the rise of the commercial Internet. The Commission enacted it in the 1980s when it split telephone service into “basic services” (defined as the offering of “a pure transmission capability”) and “enhanced services,” which combined basic services with computer processing.¹¹⁹ The adjunct-to-basic doctrine held that a transmission service could not be converted into an enhanced service by the addition of an information-processing functionality that merely “facilitate[d] establishment of a basic transmission path over which a telephone call may be completed, without altering the fundamental character of the telephone service.”¹²⁰ For example, the doctrine ensured that the

¹¹⁸ See, e.g., CDT Comments at 10, 13-15; EFF Comments at 14 n.43; Public Knowledge Comments at 68-69, 74-78 (DNS look-up).

¹¹⁹ See *Stevens Report*, 13 FCC Rcd at 11512-14, 11520 ¶¶ 23-28, 39 (discussing Final Decision, Amendment of Section 64.702 of the Commission's Rules and Regulations, 77 F.C.C. 2d 384 (1980) (“*Computer II*”)); see also Order, *Appropriate Framework for Broadband Access to the Internet Over Wireline Facilities*, 20 FCC Rcd 14853, 14866-68 ¶¶ 21-24 (2005) (“*Wireline Broadband Order*”) (discussing *Computer II*).

¹²⁰ First Report and Order and Further Notice of Proposed Rulemaking, *Implementation of the Non-Accounting Safeguards of Sections 271 and 272 of the Communications Act of 1934, As Amended*, 11 FCC Rcd 21905, 21958 ¶ 107 (1996) (“*Non-Accounting Safeguards Order*”); see

SS7 signaling system and similar computerized features internal to traditional telephone networks did not convert ordinary phone service into an enhanced service. The Commission has suggested that this doctrine is now embodied in the “telecommunications management exception”¹²¹ that appears in the final clause of 47 U.S.C. § 153(24). That clause defines “information service” to exclude enhanced functionalities used solely “for the management, control, or operation of a telecommunications system or the management of a telecommunications service.”

Consistent with the origins of the adjunct-to-basic doctrine, the Commission has exclusively employed it to exercise Title II jurisdiction over legacy telephone (“basic”) services, and never to Internet-based services. And for good reason. Internet access services, unlike PSTN calls, do not typically involve “the establishment of a basic transmission path over which a telephone call may be completed, without altering the fundamental character of the telephone service.”¹²² And, unlike legacy voice telephone services, they are inherently designed as information services that enable end users to make use of innumerable other information services.

also Order and Notice of Proposed Rulemaking, *AT&T Corp. Petition for Declaratory Ruling Regarding Enhanced Prepaid Calling Card Services*, 20 FCC Rcd 4826, 4831 ¶ 16 (2005) (“*Calling Card Order*”) (adjunct-to-basic services are “incidental” to the underlying communications service, do not change the “fundamental character” of the communications service, and, from the consumer’s perspective, either have only a “trivial impact” on the service or are simply “a necessary precondition to placing a telephone call”); *see also* Declaratory Ruling and Report and Order, *Regulation of Prepaid Calling Card Services*, 21 FCC Rcd 7290, 7295 ¶ 14-15 (2006) (finding that playing an advertisement had at most a trivial effect on the calling capability).

¹²¹ *See Non-Accounting Safeguards Order*, 20 FCC Rcd at 21958 ¶ 107.

¹²² *Non-Accounting Safeguards Order*, 20 FCC Rcd at 21958 ¶ 107; *see* John Naughton, A BRIEF HISTORY OF THE FUTURE 102 (2001) (noting that Internet communications are generally broken down into individual packets that are routed separately, often through different routes from source to destination).

DNS lookup functionality, for example, certainly cannot be characterized as “adjunct-to-basic” or within the “management” exception of 47 U.S.C. § 153(24). Indeed, as Comcast notes, “that argument was advanced by the dissent in *Brand X*, and it was specifically rejected by the *Brand X* majority.”¹²³ Although some parties, like Public Knowledge, ignore the Court’s holding and contend that “DNS is not an information service,”¹²⁴ they are clearly wrong. DNS involves highly complex interactions among computers dispersed throughout the Internet—it combines a “distributed database” with “an application-layer protocol”¹²⁵ and therefore exemplifies (for example) the classic “storing,” “transforming,” “processing,” “retrieving,” and “utilizing” of information described in the statutory definition of “information service.”¹²⁶

DNS lookup uses stored and constantly updated information to convert human language (such as website names) into numerical data (IP addresses). Absent that conversion, subscribers would have to discover, and then type in, a purely numerical IP address whenever they wanted to access any website on the Internet. Thus, Internet access providers use DNS functionality not merely (or even primarily) to “manage” their networks more efficiently, but to make the Internet

¹²³ Comcast Comments at 58 (citing *Brand X*, 545 U.S. at 1012-13 (Scalia, J., dissenting) (“DNS . . . is scarcely more than routing information, which is expressly excluded from the definition of ‘information service.’”), and *id.* at 999 & n.3 (majority opinion) (“[T]he definition of information service does not exclude ‘routing information.’”). The Commission urged the Court to adopt the latter position in its *Brand X* reply brief, stating that DNS “does not fall within the statutory exclusion” for telecommunications management. Reply Brief for the Federal Petitioners, *National Cable & Telecommc’ns Ass’n v. Brand X Internet Servs.*, Nos. 04-277 & 04-281, at 5-6 n.2 (U.S. Sup. Ct. filed Mar. 18, 2005).

¹²⁴ Public Knowledge Comments at 74.

¹²⁵ James F. Kurose & Keith W. Ross, *COMPUTER NETWORKING: A TOP-DOWN APPROACH* 133 (5th ed. 2010).

¹²⁶ 47 U.S.C. § 153(24).

as a whole easily accessible and convenient *for their subscribers*.¹²⁷ By itself, that feature—“useful[ness] to end users”—excludes DNS functionality from the telecommunications-management category, because the Commission has always refused to apply the adjunct-to-basic exception to the provision of “information that is *useful to end users, rather than carriers*.”¹²⁸

The DNS functionality that ISPs offer end users does not fit within the adjunct-to-basic category for the independent reason that it is associated with a variety of additional “smart” features. For example, DNS enables users to perform “reverse look-ups”: it enables a user to access stored information to convert a *numeric* IP address into a domain name (*e.g.*, the name of a website), which, among other things, facilitates a user’s ability to perform troubleshooting tasks and to obtain the identity of other users or destinations on the Internet. DNS functionality also enables other similarly “smart” features, like DNS “assist” capabilities. For example, if a user types a URL that does not properly identify an accessible webpage, the ISP’s DNS functionality may respond with a “URL redirect,” which reflects the ISP’s judgment about which webpage the user meant to reach, or may instead present the user with a full-blown menu of

¹²⁷ Thus, CDT is wrong that the “entire purpose” of DNS lookup “is to ensure the efficient operation of the telecommunications function,” and that DNS lookup is “of little direct interest to the typical consumer.” CDT Comments at 13.

¹²⁸ Memorandum Opinion and Order, *Petitions for Forbearance from the Application of Section 272 of the Communications Act of 1934, As Amended, to Certain Activities, Bell Operating Companies*, 13 FCC Rcd 2627, 2639 ¶ 18 (Com. Carr. Bur. 1998) (“1998 272 Forbearance Order”) (“Although the ‘telecommunications management exception’ encompasses adjunct services, the storage and retrieval functions associated with the BOCs’ automatic location identification databases provide information that is *useful to end users, rather than carriers*. As a consequence, those functions are not adjunct services and cannot be classified as telecommunications services on that basis[.]”) (emphasis added); *see also* Memorandum Opinion & Order, *North American Telecommunications Association Petition for Declaratory Ruling under Section 64.702 of the Commission’s Rules Regarding the Integration of Centrex, Enhanced Services, and Customer Premises Equipment*, 101 FCC 2d 349 (1985) (“NATA Centrex Order”), on recon., 3 FCC Rcd 4385, 4391 ¶¶ 45-46 (1988).

alternatives to the original query, based on educated guesses about the type of information the user seeks.¹²⁹

Both of these DNS capabilities (reverse look-up and assist) are analogous to (though far more sophisticated than) “reverse directory assistance” service in the legacy circuit-switched telephone environment, which the Commission has long held to be an information service,¹³⁰ in that they are designed to be “useful to end users, rather than carriers,”¹³¹ and they provide consumers with features and information “far beyond what the [provider] need[s] to ensure the proper transmission of the” user’s original communication.¹³² They therefore fall well outside the “adjunct-to-basic” and “telecommunications management” categories.¹³³

The same conclusion follows for the newer security features that are increasingly integral to broadband Internet access service. In key respects, these features resemble (but, again, are far more sophisticated than) E911 services, which have been deemed *not* “adjunct-to-basic” because they involve the “retriev[al] of information from the [telcos’] automatic location identification databases” and allow third parties (*i.e.*, the public safety organizations) “to store information

¹²⁹ See, e.g., Comcast, *Domain Helper National Rollout Begins*, Comcast Voices – The Official Comcast Blog (Aug. 4, 2009), <http://blog.comcast.com/2009/08/domain-helper-national-rollout-begins.html>.

¹³⁰ See, e.g., *Petition of SBC Communications Inc. for Forbearance from Structural Separation Requirements of Section 272 of the Communications Act of 1934, As Amended, and Request for Relief to Provide International Directory Assistance Services*, 19 FCC Rcd 5211, 5225 ¶ 23 (2004) (“Electronic and operator-assisted reverse directory assistance services are information services.”).

¹³¹ *1998 272 Forbearance Order*, 13 FCC Rcd at 2639 ¶ 18.

¹³² *Id.* at 2638 ¶ 17.

¹³³ AT&T’s prior comments identify a number of other DNS-related functionalities that are not adjunct-to-basic, including DNS “sinkhole,” DNSSEC, and DNS IPv6 transition aids. AT&T incorporates that discussion by reference here. See Reply Comments of AT&T Inc., *Framework for Broadband Internet Service*, GN Docket No. 10-127, at 38-41 (filed Aug. 12, 2010) (“AT&T 2010 Title II Reply Comments”).

regarding PSAP assignments and, in some instances, individual telephone subscribers in these databases.”¹³⁴ Similarly here, AT&T and other broadband ISPs provide integrated security services that involve complex storage, retrieval, and analysis of information concerning malware and website security, and they share the data with security software companies, which, in turn, incorporate this information into Internet security software updates and mechanisms that are distributed to consumers. AT&T also identifies users whose computers or software may be infected by malware, individually notifies them of that fact, and provides downloadable software to help them remedy the problem. These security features help protect consumers’ computers, their software, and their confidential data—all of which create benefits for individual end users unrelated to the transmission of any individual Internet-based communication. In that respect, too, these integrated functionalities fall outside the adjunct-to-basic (and “telecommunications management”) doctrine.¹³⁵

In sum, broadband Internet access integrates transmission with a variety of information-processing capabilities, none of which is “adjunct-to-basic.” There is thus no basis in fact or law for the Commission to reclassify broadband Internet access, or any component thereof, as a telecommunications service.

B. Even If the Commission Could Legally Reclassify Broadband Internet Access, the Policy Consequences of Doing So Would Be Disastrous.

The legal barriers to reclassification are only the beginning. Even if the Commission could identify a plausible legal rationale for regulating broadband Internet access under Title II that is supported by facts in the record—and it cannot—it could not surmount the substantial

¹³⁴ 1998 272 *Forbearance Order*, 13 FCC Rcd at 2638 ¶ 17.

¹³⁵ *See id.* at 2639 ¶ 18.

policy obstacles to reclassification. As AT&T and many other commenters have explained, the consequences for consumers and the Internet ecosystem would render arbitrary and capricious any Commission decision to reclassify broadband Internet access service.

1. Regulating ISPs Under Title II Would Inhibit Broadband Investment, Fuel Disputes and Litigation, and Slow the Pace of Innovation.

Since 1996, the private sector has invested more than \$1.2 trillion in the deployment and improvement of broadband Internet access services.¹³⁶ But continued spending at that remarkable pace is by no means guaranteed. As AT&T has explained elsewhere, analysts, investors, legislators, and many others have warned that the uncertainty spawned by Title II reclassification would slow investment and innovation.¹³⁷ Commenters in this proceeding echo that warning, documenting with empirical evidence the havoc that reclassification would wreak.¹³⁸

Comcast, for example, notes that “even opening the door to such heavy-handed regulation by the Commission—and possibly 51 different state public utility commissions as well—would impose significant costs. The sheer uncertainty surrounding such a regulatory environment would produce ‘a profoundly negative impact on capital investment.’”¹³⁹ It cites as evidence “[t]he last time the Commission considered imposing such a regime,” explaining that

¹³⁶ See USTelecom, *Broadband Investment*, <http://www.ustelecom.org/broadband-industry/broadband-industry-stats/investment>.

¹³⁷ A detailed accounting of these analyses can be found in AT&T’s prior comments. See AT&T Comments at 51-53; Comments of AT&T Inc., *Framework for Broadband Internet Service*, GN Docket No. 10-127, at 2-5, 39-44, 109-12 (filed July 15, 2010) (“AT&T 2010 Title II Comments”).

¹³⁸ See, e.g., Akamai Comments at 10-11; Comcast Comments at 45-50; NCTA Comments at 20-23; CenturyLink Comments at 7-8; ACA Comments at 62-66.

¹³⁹ Comcast Comments at 46-47 (citing numerous communications industry analysts).

“[i]n the days immediately following the Commission’s 2010 proposal to reclassify broadband Internet access service as a ‘telecommunications service’ under the so-called ‘third way,’ ‘approximately ten percent of some ISPs’ market cap’ was ‘eras[ed]’ in public trading.”¹⁴⁰ Comcast also highlights “recent empirical studies [that] reinforce these concerns.”¹⁴¹ Bright House too details how Title II regulation would inhibit investment and innovation in broadband infrastructure and services.¹⁴² And ACA analyzes the specific financial costs that reclassification would impose on providers, from increased pole-attachment rates to local fees, and it points out that these costs would make it more difficult for smaller providers to invest in broadband in unserved areas.¹⁴³

Importantly, these impacts would not be limited to broadband providers. As Akamai points out, decreased investment by broadband providers would harm many other participants in the Internet ecosystem as well.¹⁴⁴ And reclassification also would have a direct negative impact on broadband *adoption*, harming both consumers and edge providers. Specifically, if broadband Internet access were an interstate Title II telecommunications service, it would be subject to Universal Service Fund assessments, increasing its price to consumers.

¹⁴⁰ *Id.* (citing Comcast’s prior Commission filings).

¹⁴¹ *Id.* at 47.

¹⁴² Bright House Comments at 22-25 (“Academic and government studies catalog that common carrier regulation comes at a high cost of underinvestment, delayed offerings, constraints on innovation, inefficient structural separations, and high compliance costs. The Commission has recognized that common carrier rules prevented broadband providers from meeting market demands and kept them from being innovative first movers. The market valuation of ISPs plunged when the Commission just considered Title II reclassification . . .”).

¹⁴³ ACA Comments at 62-66 (“Efforts to comply with these Title II burdens will have an immediate and significant adverse economic impact on small broadband Internet providers, particularly those with no prior common carrier regulatory experience.”).

¹⁴⁴ Akamai Comments at 10.

At the very least, Title II reclassification would trigger years of litigation and regulatory disputes, creating tremendous uncertainty and further inhibiting investment and innovation in direct contravention of section 706. As Akamai notes, “aggressive assertions of authority can lead to litigation uncertainty and force industry into regulatory limbo.”¹⁴⁵ Similarly, Comcast warns that “[a]n order reclassifying broadband Internet access service is certain to invite legal challenges from those faced with the burdens of common-carriage regulation imposed on such a tenuous basis. . . . Even if the order survived, such litigation could drag on for years, compounding the uncertainty in the regulatory environment.”¹⁴⁶

No commenter has offered a persuasive response to these arguments. Indeed, some who support reclassification *concede* that such consequences could result. CDT, for example, acknowledges that reclassification “would surely engender a major legal battle” that “would take several years and would entail some legal risk.”¹⁴⁷

However, some interest groups—which invest no capital, deploy no networks, and serve no customers—implausibly contend that reclassification would have no effect on ISPs’ investment incentives. Free Press, for example, argues this at length, based on a series of tables purporting to show capital expenditures by various telecommunications companies over a number of years.¹⁴⁸ Free Press’s argument is flawed top to bottom.

¹⁴⁵

Id.

¹⁴⁶

Comcast Comments at 49.

¹⁴⁷

CDT Comments at 8; *see also id.* at 3 (CDT “recognizes the concerns that reclassification would spur an immediate legal battle and could expose carriers to outdated and excessively detailed regulation of their operations and business practices. These are significant complications . . .”).

¹⁴⁸

Free Press Comments at 6-7, 98-111. *See also* Cogent Comments at 3.

As an initial matter, Free Press’s historical conclusion that investment was higher in periods when Title II regulation and *Computer Inquiry* obligations applied confuses *wholesale* with *retail* broadband regulation. As AT&T explained in its opening comments (at 45-47), retail broadband Internet access service has *never* been classified as a Title II service. During the *Computer Inquiry* days, telephone companies—and only telephone companies—were required to unbundle the transmission component of their information services and offer it on a standalone basis to unaffiliated providers of information services.¹⁴⁹ But the finished Internet access services that they offered on a retail basis were always treated as Title I information services. *Id.* Thus, a decision today to classify *retail* broadband Internet access service as a Title II service and subject it to 80-year-old rules for monopoly-era telephone companies would be unprecedented. For this reason alone, Free Press’s analysis proves nothing.

But in addition to that foundational flaw, which in itself disposes of its argument, Free Press commits a number of other gross analytical errors. First, Free Press glibly assumes that the *only* factor that determines investment is the level of government regulation. But while government regulation is certainly an important factor, there can be a multitude of other factors that determine variations in capital expenditures from year to year—for example, the competitive environment, which in this case included intense out-of-the-box competition from providers of cable modem service; CLEC entry in the marketplace; the costs associated with building operational support systems (OSS) and of complying with multiple other UNE obligations in the

¹⁴⁹ Importantly, that service offering was far different from what net neutrality advocates would have the Commission regulate here. For example, that offering did *not* include the routed portion of the network over which prioritization would have any consequence; instead, ISPs provided only a discrete point-to-point transmission service between the end user and an ISP’s point of presence. Title II reclassification would reach much further, requiring common-carrier regulation of the complete broadband Internet access service.

wake of the 1996 Act; the general state of the economy; as well as the often cyclical nature of capital investment generally. Free Press’s simplistic attempt to draw a line between one variable (regulation) and a second (capital expenditures) is methodologically flawed.¹⁵⁰

Second, and relatedly, the high level of investment that Free Press attributes to Title II regulation alone occurred during the tech bubble of the late 1990s, when a large number of providers made unsustainable capital expenditures that ultimately resulted in a wave of bankruptcies in the communications industry. Indeed, one reason for reduced investment in the following years was that so much unneeded fiber was deployed during the boom years that there was no need to augment it. There is no indication that Free Press attempted to adjust its 1996 to 2001 capital expenditure index numbers for the tens of billions of dollars of this capital that was impaired or destroyed in the ensuing bankruptcies of companies whose data Free Press includes (for example, MCI, WorldCom, and Global Crossing).

Finally, Free Press appears to equate total company investment with capital expenditures for Title II services,¹⁵¹ but that is a highly flawed inference that taints the remainder of the

¹⁵⁰ A better and more contemporaneous comparison can be found by looking at investment levels in the United States versus Europe, the latter of which has adopted a top-down regulatory approach of the type that Free Press advocates. As AT&T has explained, a recent study exploring investment in the United States and Europe demonstrates convincingly the costs to innovation and investment that inevitably flow from intrusive regulatory controls. *See* AT&T Comments at 9 n.20 (citing Christopher S. Yoo, *U.S. v. European Broadband Deployment: What Do The Data Say?* (June 2014), available at <https://www.law.upenn.edu/live/files/3352-us-vs-european-broadband-deployment>). *See also* Comcast Comments at 47-48 (discussing studies linking burdensome regulations to decreased European broadband investment); Robert Litan & Hal Singer, *The Best Path Forward on Net Neutrality*, Progressive Policy Institute Policy Brief (Sept. 4, 2014), available at <http://www.progressivepolicy.org/issues/economy/best-path-forward-net-neutrality/>.

¹⁵¹ Free Press Comments at 99-102. Other than alluding (at 100) to “company SEC filings,” Free Press provides no data to back up the highly aggregated index numbers in its Figure 1, which Free Press claims represent telecommunications service revenues and investment. But

analysis. Even worse, Free Press conflates total company investment with *broadband* investment, noting, for example, that investment has declined “in the years since the FCC removed broadband from Title II.”¹⁵² But Free Press makes no effort to tie the numbers in its charts to broadband investment in particular. Nor could it—many of the companies included in these figures were not deploying broadband at all. During the period that Free Press focuses on (namely, 1996-2001),¹⁵³ there were very few broadband lines in the United States. Instead, that period coincided with massive investment dedicated to entry into local *telephone* markets, which naturally followed passage of the Telecommunications Act of 1996. Most of the remaining investment was dedicated to *mobile voice* entry, expansion, and competition. By contrast, during the later period for which Free Press bemoans the dearth of investment,¹⁵⁴ there was a dramatic growth in the number of broadband lines, reflecting a far greater percentage of overall investment in wireline and mobile broadband Internet access services. For all these reasons, Free Press’s confident claim that “Title II didn’t harm investment or jobs” finds absolutely no support in either fact or logic.¹⁵⁵

2. Reclassification of Broadband Internet Access Would Have an Unintended Negative Impact on the Entire Internet Ecosystem.

The damage of any reclassification decision could not be confined solely to ISPs, but instead would impact vast swaths of the Internet ecosystem. *By definition*, every information

SEC filings do not isolate Title II telecommunications services from all of the investments and revenues of the reporting company.

¹⁵² Free Press Comments at 102 (“Indeed, the average annual investment by telecom carriers was *55 percent higher* under the period of Title II’s application than it has been in the years since the FCC removed broadband from Title II.”).

¹⁵³ *Id.* at 100-101.

¹⁵⁴ *Id.* at 100, 102.

¹⁵⁵ *Id.* at 102.

service provider includes a “telecommunications” component as part of its offering: the statute defines an “information service” as certain enhanced capabilities provided “via telecommunications.”¹⁵⁶ And the radical surgery that would be required to identify a *severable* “telecommunications service” in retail broadband Internet access would necessarily produce the same result for a host of other service providers, including backbone providers, CDNs, providers of Internet-enabled devices, and even some edge providers.¹⁵⁷

Both the Commission and the Supreme Court have highlighted this issue in rejecting past calls to classify Internet access as a telecommunications service. In the *Stevens Report*, for example, the Commission noted the importance of a clear “distinction between information services and telecommunications services,” without which “it would be difficult to devise a sustainable rationale under which all, or essentially all, information services did not fall into the telecommunications service category.”¹⁵⁸ Similarly, in *Brand X*, the Supreme Court noted that interpreting the statute as advocates of reclassification do “would subject to mandatory common-carrier regulation all information-service providers that use telecommunications as an input to provide information service to the public.”¹⁵⁹

Several commenters echo this concern, explaining that Title II regulation of ISPs would necessarily require common-carrier regulation of a range of other information service providers. NCTA warns, for example, that “[a]ny reclassification approach also would put the Commission on a slippery slope toward the imposition of Title II regulation on a wide array of other services

¹⁵⁶ 47 U.S.C. § 153(24). See AT&T Comments at 41.

¹⁵⁷ See AT&T Comments at 55-61.

¹⁵⁸ *Stevens Report*, 13 FCC Rcd at 11529 ¶ 57.

¹⁵⁹ *Brand X*, 545 U.S. at 994.

in the Internet ecosystem.”¹⁶⁰ Similarly, Alcatel-Lucent warns that reclassification would “open[] up a Pandora’s Box of proceedings covering the legal classification of edge services that also have thrived in a largely unregulated environment.”¹⁶¹ These are not conclusory or uninformed warnings; NCTA, for example, cites an expert analysis that walks through the implications of reclassification for specific services, including new broadband services, search engines, Amazon’s Kindle, and other devices that use broadband connectivity.¹⁶²

No commenter has offered any plausible rationale for how reclassification could be limited solely to providers of broadband Internet access.¹⁶³ Instead, most simply urge the Commission to “expressly disclaim regulatory authority” over edge providers and other non-ISPs or to draw a “bright line” and hold that reclassification applies only to ISPs.¹⁶⁴ But that is not how statutory interpretation works. Any reading of the statute’s text that would enable the Commission to reclassify broadband Internet access would trigger *self-executing* legal consequences that would necessarily require Title II regulation of a range of other information services.¹⁶⁵

¹⁶⁰ NCTA Comments at 24.

¹⁶¹ Alcatel-Lucent Comments at 2. *See also* Tech Freedom Comments at 28.

¹⁶² Robert E. Litan, *Regulating Internet Access as a Public Utility: A Boomerang on Tech If It Happens*, Brookings Institute, at 3 (June 2, 2014), available at http://www.brookings.edu/~media/research/files/papers/2014/06/regulating_internet_access_public_utility_litan/regulating_internet_access_public_utility_litan.pdf

¹⁶³ Indeed, some have admitted in prior comments that it would *not* be. *See, e.g.*, Reply Comments of Public Knowledge, *Framework for Broadband Internet Service*, GN Docket No. 10-127, at 10-11 (filed Aug. 12, 2010) (“*Public Knowledge 2010 Title II Reply Comments*”) (noting that interconnected VoIP, integrated DNS services, some “backbone and middle mile” providers, and many other services would be “telecommunications services”).

¹⁶⁴ *See, e.g.*, CDT Comments at 25-27; EFF Comments at 14-17.

¹⁶⁵ *See* AT&T Comments at 55-63.

A few commenters argue that the Commission could distinguish between broadband ISPs, which own the facilities over which Internet transmissions are carried to customers, and “non-facilities-based” providers that do not own the last-mile connection to end users.¹⁶⁶ For example, the Electronic Frontier Foundation notes that “[t]he Commission should not be focused on regulating ‘the Internet,’ . . . but the wires themselves.”¹⁶⁷ But as AT&T has explained, the statutory text does not support such a distinction.¹⁶⁸ And under longstanding Commission precedent, the classification of any provider as a Title II “common carrier” has never depended on whether that provider owns transmission facilities, let alone last-mile facilities.¹⁶⁹ That is why standalone long-distance telephone companies, such as the legacy AT&T Corp., MCI, and Sprint, were always treated as Title II carriers even though they depended on local exchange carriers for their last-mile connectivity, and why even long-distance *resellers* are treated as Title II carriers even though they often own no facilities at all.¹⁷⁰ In short, an attempt to limit reclassification to facilities-based carriers would have no basis in the statute, precedent, facts, or logic, and it could not survive judicial review.

In any event, such a facilities-based limitation would still sweep within Title II many of the largest participants in the Internet ecosystem. A number of edge providers own transmission

¹⁶⁶ To the extent these parties seek to distinguish among providers based on the customers they serve (*i.e.*, edge provider vs. end user), such a distinction is unworkable because many customers are both end users and edge providers at the same time.

¹⁶⁷ EFF Comments at 14-15. *See also* Free Press Comments at 58-63, 74.

¹⁶⁸ *See* AT&T Comments at 61-63.

¹⁶⁹ *See, e.g.*, 47 U.S.C. § 153(53) (telecommunications service is “the offering of telecommunications for a fee directly to the public, or to such classes of users as to be effectively available directly to the public, *regardless of the facilities used*”) (emphasis added); *Brand X*, 545 U.S. at 997 (finding that “the relevant [statutory] definitions do not distinguish facilities-based and non-facilities-based carriers.”).

¹⁷⁰ *See AT&T 2010 Title II Comments* at 99-100 (citing Commission orders).

facilities and use them to transmit data on behalf of their customers. For example, Google owns the multi-billion-dollar content delivery network that it uses to transmit (among other things) paid advertisements from its many business customers to end users around the world. And although commenters like Free Press refer to traditional dial-up ISPs such as AOL and Earthlink as “non-facilities-based,”¹⁷¹ many of them own network facilities indispensable to Internet access, including fiber-optic links connecting their local access equipment to cache servers and Internet backbone networks.¹⁷² Today, such edge providers and dial-up ISPs are considered “information service” providers rather than “telecommunications service” providers. But that is *not* because they own no last-mile facilities; instead, it is because they provide classic information-service functionalities with their services. If the Commission reversed course and deemed those functionalities insufficient to protect “facilities-based” ISPs from Title II regulation, the same conclusion would apply to a range of other “facilities-based” providers that assume responsibility for transporting data throughout the Internet, ranging from Akamai to Amazon to Level 3 to Netflix to Google.¹⁷³

In past proceedings, commenters have argued that non-ISPs do not fall within the definition of “telecommunications carrier” because they do not “offer[] . . . telecommunications for a fee directly to the public, or to such classes of users as to be effectively available directly to the public.”¹⁷⁴ For example, Public Knowledge’s Harold Feld noted that, although Akamai is “moving information from one place to another” and is “offering telecom” when it provides

¹⁷¹ See Free Press Comments at 5, 70, 74.

¹⁷² See *Stevens Report*, 13 FCC Rcd at 11534, 11536 ¶¶ 69, 73 & n.138.

¹⁷³ AT&T Comments at 58-59.

¹⁷⁴ 47 U.S.C. § 153(53).

CDN services, it nonetheless could avoid Title II regulation on the ground that it only enters into one-off business negotiations and does not hold itself out as a common carrier.¹⁷⁵ But Akamai has conceded in FCC filings and its public statements that it offers its services on a standardized basis to many thousands of end-user business customers.¹⁷⁶ That is more than sufficient to qualify it as a common carrier if the Commission determines, for example, that the information-processing services that both Akamai and ISPs provide are “adjunct-to-basic” and thus do not prevent an Internet-based transmission provider from falling within the scope of Title II.¹⁷⁷ It is perhaps unsurprising that Akamai opposes Title II reclassification here.¹⁷⁸

¹⁷⁵ Harold Feld, *Want to Play FCC Fantasy Baseball? Follow the Title II Debate*, Wetmachine.com (May 16, 2010), <http://tales-of-the-sausage-factory.wetmachine.com/content/want-to-play-fcc-fantasy-baseball-follow-the-title-ii-debate> (“Akamai is moving information from one place to another. That’s plainly ‘telecommunications.’ But . . . Akamai does not offer its service to ‘the general public’ or even a distinct class of the general public. Any entity that wants to use Akamai’s CDN negotiates its own special deal with Akamai. So while Akamai offers telecom, they do not offer a ‘telecommunications service[.]’”).

¹⁷⁶ See, e.g., Akamai, *Akamai Services*, <http://www.akamai.com/service>; Akamai, *Standard Services*, http://www.akamai.com/html/solutions/standard_services.html; see also *AT&T 2010 Title II Comments* at 57-58 (detailing similar Akamai statements and FCC filings).

¹⁷⁷ See Memorandum Opinion and Order, *Salsgiver Telecom, Inc., Complainant, v. North Pittsburgh Telephone Company, Respondent*, 22 FCC Rcd 9285, 9291-92 ¶ 14 (Enforc. Bur. 2007) (explaining that “the Commission has long regulated as common carrier services the provision of ‘private line’ [business-customer-only] services, which the Commission defines as ‘facilities or network transmission capacity dedicated to the use of an individual customer’”) (citations and internal quotations omitted) (citing Memorandum Opinion and Order, *Investigation of Special Access Tariffs of Local Exchange Carriers*, 8 FCC Rcd 4712, 4712 ¶ 2 (1993)); Third Report and Order, *MTS and WATS Market Structure, Phase I*, 93 FCC 2d 241, 249-50 ¶¶ 20-23 (1983); Notice of Inquiry and Proposed Rulemaking, *American Telephone & Telegraph Company; Private Line Rate Structure and Volume Discount Practices*, 74 FCC 2d 226 (1979) (investigating whether the pricing of AT&T’s competitive private line services was consistent with 47 U.S.C § 202, which prohibits unjust discrimination by common carriers).

¹⁷⁸ See Akamai Comments at 1-2, 10 (expressing concern that “an unnecessarily regulatory framework [*i.e.*, Title II] could discourage continued investment in broadband infrastructure. . . . Without new investment in networks, the existing incentives to further innovate on those networks will diminish.”).

In a variation on this argument, Public Knowledge claimed in its 2010 reply comments that CDNs do not provide a telecommunications service because “[c]aching is physically storing some data in a closer location; this is not offering the capability for a user to transmit information between points of his choosing.”¹⁷⁹ But even if that were an accurate description of caching services (and it is not), virtually all CDNs today also have extensive transport networks and thus unquestionably provide “the capability for [their customers] to transmit information between points of [their] choosing.”¹⁸⁰ In fact, that is a core part of what customers use them for.

Thus, interpreting the statute as reclassification advocates propose would sweep within Title II many providers that today offer “information services,” including the backbone providers and CDNs that supply the “guts” of the Internet. Title II also would necessarily extend to *all* providers of broadband Internet access service, including Google and “non-facilities-based” ISPs, as well as companies like Amazon, Barnes & Noble, and others that, through the Internet-enabled devices they offer (*e.g.*, the Kindle and the Nook), resell the transmission services provided by others. And deciding whether other providers fall on one side of the line or the other would be no simple exercise. Reclassification inevitably would lead to regulatory disputes and multi-year litigation about which entities should be regulated under Title II, and new disputes would arise any time an innovative service offering was unveiled. This would create tremendous uncertainty for all participants in the Internet ecosystem and inhibit investment and innovation in direct contravention of section 706. Indeed, it is harder to imagine a surer prescription for regulatory uncertainty and litigation.

¹⁷⁹ *Public Knowledge 2010 Title II Reply Comments* at 10-11.

¹⁸⁰ *Id.*

Recognizing this danger, many edge providers and other non-ISPs either do not call for reclassification, or even caution against it. For example, the Information Technology Industry Council, which represents a broad cross-section of edge providers,¹⁸¹ warns: “It should be noted that reclassification of broadband Internet services as a Title II service may raise difficult definitional questions regarding the demarcation between information and telecommunications services, [and] create investment disincentives from regulatory delay or uncertainty . . .”¹⁸² Similarly, commenters as diverse as TechAmerica, the Consumer Electronics Association, Cisco, and Alcatel-Lucent counsel restraint.¹⁸³ These commenters surely know whether reclassification would help or harm their businesses far better than the advocates who purport to speak on their behalf. The Commission should recognize, as these parties have, that Title II regulation of ISPs would unleash a cascade of ill effects on the entire Internet.

3. Forbearance Would Not Be an Effective Tool for Addressing Many of the Adverse Consequences of Title II Reclassification.

Some advocates of reclassification concede that common-carrier regulation of ISPs would generate severe negative consequences, and they therefore call for sweeping forbearance. CDT, for example, acknowledges that “to avoid saddling broadband providers with excessive and outdated regulation, reclassification would need to be paired with substantial forbearance.”¹⁸⁴ Similarly, New America Foundation and the Benton Foundation note that

¹⁸¹ A list of member companies is available at <http://www.itic.org/about/member-companies.dot>.

¹⁸² ITIC Comments at 3.

¹⁸³ *See, e.g.*, TechAmerica Comments at 2-3; Consumer Electronics Association Comments at 12; Cisco Comments at 22-28; Alcatel-Lucent Comments at 7-16; CenturyLink Comments at 36; Ericsson Comments at 10-13.

¹⁸⁴ *See, e.g.*, CDT Comments at 3, 8, 15-16.

“[f]orbearance from many provisions would be a *necessary next step* following reclassification of broadband access as a Title II service.”¹⁸⁵ Many other commenters make similar concessions.¹⁸⁶ But forbearance is hardly a panacea.

As an initial matter, forbearance would almost certainly be more contentious and difficult to effect than these commenters recognize. The Commission’s recent orders have made forbearance more challenging to obtain both substantively and procedurally.¹⁸⁷ And as the record in this proceeding demonstrates, some net neutrality advocates appear ready to fight tooth and nail against *any* forbearance from burdensome common-carrier regulation. Public Knowledge, for example, urges the Commission not to forbear from almost any provision in Title II. It would have the Commission enforce sections 201, 202, 203, 204, 205, 206, 207, 208, 209, 211, 212, 213, 214(c) & (e), 215, 216, 217, 218, 219, 220, 222, 225, 251(a), 254, 255, 256, 257, and 258 against broadband providers—and any other members of the Internet ecosystem that reclassification sweeps into Title II.¹⁸⁸ Similarly, the i2i coalition proposes that the

¹⁸⁵ Open Internet Institute at the New America Foundation and the Benton Foundation Comments at 26 (emphasis added).

¹⁸⁶ See, e.g., AARP Comments at 41-42 (advocating forbearance from all but Sections 201, 202, and 208); EFF Comments at 16-17 (“[R]ules regarding such things as ‘tariff filing, price regulation, and other features of monopoly telephone regulation could be taken off the table from the start’”); Ad Hoc Comments at 3; ACA Comments at 44.

¹⁸⁷ See AT&T Comments at 67 (discussing *Qwest Phoenix Forbearance Order*); Comcast Comments at 48-49; Alcatel-Lucent Comments at 13 (“It could take years for the Commission to sort through which Title II requirements should apply to broadband, and the inevitable legal appeals would only prolong a state of regulatory instability.”).

¹⁸⁸ Public Knowledge Comments at 88-97. Indeed, it appears that Public Knowledge supports application even of section 203’s tariff requirement. It notes: “Many other Title II provisions, including the Section 203 requirements of carriers to report rates, provide consumers with the transparency necessary to protect their interests, whether through legal action or their exercise of buying power. Even in the presence of a competitive market, this transparency is necessary for consumers to take advantage of that competitive market.” *Id.* at 85.

Commission apply many of these provisions as well.¹⁸⁹ Even if *this* Commission were to reject such calls for comprehensive regulation of broadband Internet access, there would be no assurance that future Commissions would exercise such restraint. And, of course, disputes would arise not just with advocacy groups, but among industry participants themselves. Providers with disparate interests would inevitably litigate the appropriate scope and application of forbearance decisions, creating a morass of regulatory and court proceedings.

In any event, virtually all of the parties supporting reclassification urge the Commission not to forbear from sections 201, 202, and 208.¹⁹⁰ But those provisions alone would expose ISPs to liability for any business practice they undertake today that some future Commission finds “unjust,” “unreasonable,” or “unreasonably discriminatory,” despite general assurances from this Commission about what the section 201/202 standards mean. Providers could face potential liability under those provisions whenever they engage in new network-management techniques or commercial arrangements with particular application and content providers. Providers would be forced to think twice before investing in and offering any new service feature, including services yielding clear benefits to both customers and edge providers. The response of net neutrality advocates to such innovations as AT&T’s Sponsored Data program (discussed below at pages 77-78) and T-Mobile’s Music Freedom Program demonstrate that even pro-consumer innovations will be second-guessed by net neutrality advocates whose analysis begins and ends

¹⁸⁹ i2i Comments at 40 (stating that “references to §§ 201, 202, 203, 204, 205, 206, 208, 209, 211, 215, 218, 219, 220, 251 and 252 should be added” to the Commission’s proposed rules).

¹⁹⁰ See, e.g., AARP Comments at 41-42 (advocating forbearance from all but Sections 201, 202, and 208); COMPTTEL Comments at 21-22.

with speculation about nebulous theoretical future harms.¹⁹¹ Providers who face the threat of a section 208 complaint when they deploy a new offering obviously will be less inclined to do so.

Even if *the Commission* were to forbear from applying certain provisions, states might step in and attempt to impose common-carrier regulation on ISPs.¹⁹² Similarly, reclassification could prompt other countries to regulate broadband Internet access service, and to impose far more burdensome obligations than those adopted by the Commission.¹⁹³ No commenter has provided any rejoinder to these serious policy consequences of Title regulation. Indeed, some parties *welcome* the potential expansion of state jurisdiction.¹⁹⁴

III. PROPOSALS TO REGULATE MOBILE BROADBAND INTERNET ACCESS SERVICE IN THE SAME WAY AS WIRELINE SERVICE SHOULD BE REJECTED.

A number of commenters call on the Commission to reverse course with respect to mobile services and to regulate them in the same way as wireline services.¹⁹⁵ The Commission should firmly reject these calls to abandon its measured approach to mobile broadband—an approach that has yielded tremendous benefits to consumers and the broader Internet ecosystem.

Recognizing the important differences between wireline and mobile services, the Commission in 2010 found that “mobile broadband presents special considerations that suggest

¹⁹¹ See, e.g., Public Knowledge Comments at 21, 53-55 (discussing the organization’s opposition to these programs and citing advocacy); COMPTTEL Comments at 12-14; Consumers Union Comments at 12-13.

¹⁹² See AT&T Comments at 68; Comcast Comments at 46. See also *Stevens Report*, 13 FCC Rcd 11501 at ¶ 48.

¹⁹³ See AT&T Comments at 69-72. See also Akamai Comments at 10-11; Comcast Comments at 49-50.

¹⁹⁴ See Pennsylvania PUC Comments at 2; NARUC Comments at 11-13.

¹⁹⁵ E.g., CDT Comments at 27; Public Knowledge Comments at 23-31; Internet Association Comments at 20-21; Century Link Comments at 23-24; i2 Coalition Comments at 36-37; Mozilla Comments at 22-25; Vonage Comments at 30-33; EFF Comments at 22-25; eBay Comments at 6; Microsoft Comments at 19-26.

differences in how and when open Internet protections should apply.”¹⁹⁶ In doing so, the Commission considered a number of distinctions between wireline and mobile broadband, including the robust competition, investment, and innovation present in the mobile broadband marketplace, as well as mobile providers’ unique “operational constraints that fixed broadband networks do not typically encounter”—constraints that put “greater pressure on the concept of ‘reasonable network management’” and that create “additional challenges in applying a broader set of rules to mobile.”¹⁹⁷ On the basis of those factual findings, the Commission adopted a less aggressive approach to its regulation of mobile broadband services.¹⁹⁸

The state of the mobile broadband marketplace today confirms the wisdom of the Commission’s decision in 2010. Competition, investment, and innovation have continued to flourish—and breathtakingly so. Those features of the marketplace, moreover, help ensure that the mobile Internet *is* and *will remain* open. Providers know that if they hinder their customers’ ability to use the applications, services, or content of their choice, they will lose those customers to another provider. Given that competitive reality, it is unsurprising that neutrality advocates have been unable to cite any credible evidence of a threat to Internet openness in the mobile ecosystem. At the same time, despite constant efforts to improve efficiency, mobile broadband providers continue to face daunting technical challenges and constraints that are not faced by wireline broadband networks. The imposition of one-size-fits-all open Internet regulation would seriously compromise the ability of mobile providers to manage their networks, with consumers

¹⁹⁶ *Open Internet Order*, 25 FCC Rcd at 17959 ¶ 94.

¹⁹⁷ *Id.* at 17959 ¶¶ 94-95.

¹⁹⁸ *Id.* at 17960 ¶ 96.

ultimately suffering the consequences. For all of these reasons, the Commission should retain the distinction between mobile and wireline services that it drew in the *Open Internet Order*.

A. The Record Conclusively Establishes That the Mobile Ecosystem Has Flourished Under the 2010 Rules.

As AT&T explained in its opening comments, the mobile broadband ecosystem—driven by intense competition, high levels of investment, and continual innovation—is thriving.¹⁹⁹ Commenters asking the Commission to change its regulatory approach to mobile broadband all but ignore these market realities.

1. Mobile Broadband Providers.

Robust competition among mobile providers was a key factor in the Commission’s decision to adopt a more measured approach to its open Internet rules for mobile broadband.²⁰⁰ Competition remains fierce in today’s marketplace and, indeed, the lengths to which mobile providers are going to win customers from their rivals are unprecedented. Hardly a day goes by without the announcement of new, better service plan options, lower prices, and special promotions, while providers are pouring resources into their networks as they race to improve data speeds and network capacity. In the face of these realities, there can be no denying that the market is intensely competitive and even more competitive than it was in 2010.

First, all of the major providers have introduced innovative service plans that are shaking up the industry. A prime example is AT&T’s shared data plans, called “Mobile Share.”²⁰¹ As

¹⁹⁹ See AT&T Comments at 19-22.

²⁰⁰ *Open Internet Order*, 25 FCC Rcd at 17959 ¶ 95.

²⁰¹ See Sixteenth Report, *Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993, Annual Report and Analysis of Competitive Market Conditions With Respect to Mobile Wireless, Including Commercial Mobile Services*, 28 FCC Rcd 3700, 3801-02 ¶ 144 (2013) (“*Sixteenth Mobile Competition Report*”).

the Commission has recognized, these types of plans enable “heavy data users with many devices . . . to realize savings as a result of declines in the price per unit of data.”²⁰² Equally important, however, many of these innovative plans provide the option of eliminating early termination fees (ETFs). AT&T’s “Mobile Share” plans, for example, are available with “no annual service contract.”²⁰³ And T-Mobile has been especially aggressive in this respect. In December 2012, it announced that it was eliminating device subsidies and allowing customers to bring a compatible device to T-Mobile or pay for a new device upfront.²⁰⁴ T-Mobile has been heavily touting these “UnCarrier” offerings, which emphasize unlimited data, voice, and text, with no overage charges and no annual service contracts.²⁰⁵ Verizon now has its own similar contract-free plans,²⁰⁶ as does Sprint. This recent shift in the industry away from ETFs has significantly reduced the cost of switching providers and enabled customers to act immediately when a competitor introduces a more attractive service offering.

And mobile providers are not merely offering innovative service plans; they are slashing the prices of those plans as well. Indeed, all of the major providers are embroiled in a heated price war across multiple fronts. To be sure, prices for mobile broadband services have been

²⁰² *Id.* at 3802 ¶ 145.

²⁰³ Press Release, “AT&T Launches Best-Ever Prices for Families on its Best-in-Class Network,” AT&T (Feb. 1, 2014), <http://www.att.com/gen/press-room?pid=25237&cdvn=news&newsarticleid=37411>.

²⁰⁴ *Sixteenth Mobile Competition Report*, 28 FCC Rcd at 3806 ¶ 152.

²⁰⁵ T-Mobile, *Switch Carriers without Early Termination Fees*, <http://www.t-mobile.com/offer/switch-carriers-no-early-termination-fee.html>.

²⁰⁶ Roger Cheng, *Verizon confirms “More Everything,” brings price cuts, more data, global texting*, Cnet (Feb. 13, 2014), <http://www.cnet.com/news/verizon-confirms-more-everything-brings-price-cuts-more-data-global-texting/> (Verizon announcing that under its “More Everything” plan, participants with Edge—a monthly payment installment plan that allows customers to upgrade to a new phone early—would receive \$10 off of their monthly charges if they chose a plan with up to 8GB of data).

declining rapidly for years; as the Commission documented in its *Sixteenth Mobile Competition Report*, data prices per megabyte have decreased “from about \$0.11 in 2009 to \$0.06 in 2010, and to \$0.03 in 2011.”²⁰⁷ But this decline has accelerated dramatically in recent months. For example, AT&T set off a new round of price cuts by slashing the cost of its Mobile Share plans in early 2014: it offered a 10GB family plan with unlimited voice and text for a family of four for only \$160, while also allowing families to add smartphones for as little as \$15 and tablets for as little as \$10.²⁰⁸ When this plan was first introduced, a typical family of four could save about \$100 compared to the plans being offered by others.²⁰⁹ AT&T subsequently announced in March 2014 that it was dropping the price of its 2GB Mobile Share Value plan by \$15, from \$55 to \$40 per month.²¹⁰

Earlier this year, Verizon increased the amount of data available for some plans,²¹¹ and it further reduced the price of its More Everything plans to enable four devices to share 10GB of data for \$160 a month.²¹² Sprint, losing market share, hired a new CEO with a mandate for

²⁰⁷ *Sixteenth Mobile Competition Report*, 28 FCC Rcd at 3880-81 ¶ 271.

²⁰⁸ Press Release, “AT&T Launches Best-Ever Prices for Families on its Best-in-Class Network,” AT&T (Feb. 1, 2014), <http://www.att.com/gen/press-room?pid=25237&cdvn=news&newsarticleid=37411>; see also AT&T, *Pricing, Mobile Share Value plans*, <http://www.att.com/shop/wireless/data-plans.html>.

²⁰⁹ AT&T, *Shop Wireless, Get the latest smartphones for \$0 down with AT&T Next*, <http://www.att.com/shop/wireless/next.html>.

²¹⁰ Dante D’Orazio, *AT&T cuts its 2GB Mobile Share Value plan by \$15 to stay competitive*, The Verge (March 8, 2014), <http://www.theverge.com/2014/3/8/5484606/att-lowers-price-of-2gb-mobile-share-value-plan>.

²¹¹ *Id.*

²¹² Mike Dano, *Verizon cuts prices to match AT&T: 4 lines with 10 GB now costs \$160*, Fierce Wireless (April 2, 2014), <http://www.fiercewireless.com/story/verizon-cuts-prices-match-att-4-lines-10-gb-now-costs-160/2014-04-02>.

“very disruptive” new pricing plans,²¹³ and it has since announced a plan under which a family that switches from another carrier with up to 10 phone lines pays \$100 a month for 20GB of mobile, high-speed data.²¹⁴ Sprint also introduced a new plan for individuals that offers unlimited voice, text messaging, and data for \$60 a month.²¹⁵ T-Mobile reacted to all of these announcements by launching a new individual data plan that offers customers 2GB of data for \$45 a month, quadrupling the amount of data available at that price.²¹⁶ The recent announcement of the new iPhone 6 has already led Verizon, Sprint, and T-Mobile to announce special deals for iPhone customers.²¹⁷ These repeated price reductions in the face of competition are, as Verizon points out, an unmistakable “hallmark[] of a highly competitive marketplace.”²¹⁸

²¹³ Marguerite Reardon, *Sprint to slash pricing starting next week, report says*, Cnet (Aug. 14, 2014), <http://www.cnet.com/news/sprint-to-reportedly-slash-pricing-on-service/>.

²¹⁴ Aaron Pressman, *Consumers winning as Sprint wages price cutting war*, Yahoo! Finance (Aug. 20, 2014), <http://finance.yahoo.com/news/sprint-jumps-on-wireless-market-s-price-slashing-trend-190428805.html>. Consumers with these plans can receive 2 extra gigabytes per line free of charge, meaning that a family of five would pay \$100 for 30GB of data per month.

²¹⁵ Marguerite Reardon, *Sprint attacks T-Mobile with \$60 unlimited data plan*, Cnet (Aug. 21, 2014), <http://www.cnet.com/news/sprint-attacks-t-mobile-with-60-unlimited-data-plan/>.

²¹⁶ Marguerite Reardon, *T-Mobile quadruples data in response to new Sprint pricing*, Cnet (Aug. 25, 2014), <http://www.cnet.com/news/t-mobile-quadruples-data-in-response-to-new-sprint-pricing/>.

²¹⁷ Thomas Gyrta and Ryan Knutson, *Verizon, Sprint Quick to Offer iPhone Deals*, Wall Street J. (Sept. 9, 2014), http://online.wsj.com/articles/verizon-sprint-quick-to-offer-iphone-6-deals-1410306780?mod=yahoo_hs (“Big U.S. telecom companies are already cutting deals on Apple Inc.’s newest iPhones, as the spread of no-contract plans and offers to cover early termination costs raise the risk that subscribers will take their business elsewhere”; “Verizon Wireless said Tuesday it would give customers a free 16 gigabyte iPhone 6 if they traded in an eligible working, older iPhone model and signed a two-year contract. Sprint said it would let customers trade in up to three phones per line, give consumers up to \$300 per device and match any rival’s trade in offer. T-Mobile said it would beat any rival’s trade-in offer and throw in an extra \$50”); *see also* Sascha Segan, *Price Warriors: Sprint Debuts New \$50 Unlimited iPhone Plan*, PC Magazine (Sept. 10, 2014), <http://www.pcmag.com/article2/0,2817,2468251,00.asp>.

²¹⁸ Verizon Comments at 42; *see also* Mobile Future Comments at 5-6 (collecting evidence of substantial price cuts by mobile broadband providers).

But providers are not just reducing prices. Many have begun to offer large incentives, including rebates of up to several hundred dollars, to customers who switch from other providers. T-Mobile, for example, will pay an entire family's early termination fees, up to \$650, to prompt customers to leave competitors.²¹⁹ Sprint offers a similar program.²²⁰ These rebates significantly reduce or even eliminate entirely any switching costs. Similarly, providers have been attracting new customers by offering higher prices for device trade-ins.²²¹ These deals are even being offered to induce new customers to trade up to the new iPhone 6.²²²

All of these innovative promotions, price reductions, and new service plans are inducing consumers to switch providers more often and far more quickly than ever before. T-Mobile's UnCarrier campaign, for example, has led to record growth in recent quarters and has made T-Mobile the fastest-growing provider in the industry.²²³ Indeed, T-Mobile had its strongest month

²¹⁹ T-Mobile, *Switch Carriers without Early Termination Fees*, <http://www.t-mobile.com/offer/switch-carriers-no-early-termination-fee.html>.

²²⁰ Press Release, "For a Limited Time, Customers Who Switch a Number to Sprint on a Family Plan Can Save up to \$650," Sprint (April 4, 2014), <http://newsroom.sprint.com/news-releases/for-a-limited-time-customers-who-switch-a-number-to-sprint-on-a-framilysm-plan-can-save-up-to-650.htm>.

²²¹ Mike Dano, *T-Mobile launches phone trade-in guarantee, promises to beat any offer by \$50*, Fiercewireless (Sept. 8, 2014), <http://www.fiercewireless.com/story/t-mobile-launches-phone-trade-guarantee-promises-beat-any-offer-50/2014-09-08>; Phil Goldstein, *Sprint hits back at T-Mobile with its own phone trade-in guarantee*, Fiercewireless (Sept. 9, 2014), <http://www.fiercewireless.com/story/sprint-hits-back-t-mobile-its-own-phone-trade-guarantee/2014-09-09>.

²²² Thomas Gyrta and Ryan Knutson, *Verizon, Sprint Quick to Offer iPhone Deals*, The Wall Street J., (Sept. 9, 2014), http://online.wsj.com/articles/verizon-sprint-quick-to-offer-iphone-6-deals-1410306780?mod=yahoo_hs.

²²³ T-Mobile gained 2.4 million customers on net in the first quarter of 2014 and 1.5 million in the second quarter, and it has experienced more than one million net additions in each of the last five quarters. See Press Release, "T-Mobile US Reports First Quarter 2014 Results and Best Ever Quarterly Performance in Branded Postpaid Net Customer Additions" T-Mobile (May 1, 2014), <http://newsroom.t-mobile.com/news/t-mobile-us-reports-first-quarter-2014-results-and->

ever in August 2014, adding 2.75 million new customers in that month alone.²²⁴ These successes recently prompted T-Mobile's CEO to taunt Sprint that T-Mobile would overtake it as the third-largest carrier in the United States by the end of 2014.²²⁵

These same competitive pressures can be found in the marketplace for *prepaid* mobile broadband services. Consumers on a tight budget have more and better prepaid options today than in 2010. The recent acquisitions of Leap (by AT&T) and MetroPCS (by T-Mobile) have resulted in a new level of service, quality, and competition for prepaid customers. Earlier this year, AT&T launched Cricket Wireless nationwide on AT&T's LTE network,²²⁶ and MetroPCS now operates on T-Mobile's nationwide LTE network.²²⁷ AT&T/Cricket just announced a \$100 bill credit offer for customers that switch from T-Mobile/MetroPCS,²²⁸ and T-Mobile/MetroPCS

best-ever-quarterly-performance-in-branded-postpaid-net-customer-additions.htm; Press Release, "T-Mobile US Reports Second Quarter 2014 Results, Fastest Growth, Fastest Network, and Best Customer Service in the Industry" T-Mobile (July 31, 2014), <http://newsroom.t-mobile.com/news/t-mobile-us-reports-second-quarter-2014-results.htm>.

²²⁴ Marguerite Reardon, *T-Mobile Touts Record Number of Subscribers in August*, Cnet (Sept. 10, 2014), <http://www.cnet.com/news/t-mobile-touts-record-number-of-subscribers-in-august/>.

²²⁵ Twitter, Jon Legre (Aug. 7, 2014), <https://twitter.com/JohnLegere/status/497397682986446848> ("I said by EOY. When do YOU think @TMobile will beat @Sprint in customer numbers? Gimmie your best guess. Date. Time. Use #OvertakeSprint!").

²²⁶ Alan F., *New phones, unlimited data plans and nationwide LTE are offered by AT&T's new Cricket*, PhoneArena (May 18, 2014), http://www.phonearena.com/news/New-phones-unlimited-data-plans-and-nationwide-LTE-are-offered-by-AT-Ts-new-Cricket_id56233.

²²⁷ MetroPCS, *Nationwide 4G LTE Network*, <https://www.metropcs.com/why/nationwide-coverage.html>.

²²⁸ See Press Release, "Top 5 Reasons T-Mobile and Metro PCS Customers Should Switch Now to Cricket Wireless," AT&T (Aug. 22, 2014), <http://cricketwireless.mediaroom.com/2014-08-22-Top-5-Reasons-T-Mobile-and-Metro-PCS-Customers-Should-Switch-Now-to-Cricket-Wireless> ("The new Cricket Wireless experience offers customers: More 4G LTE coverage than T-Mobile and Metro PCS, period; Taxes and fees included – no surprises, the price you see is the

responded with a year-long unlimited LTE offer (\$120 value) to its customers who throw a “lifeline” to Sprint, Verizon, and AT&T customers.²²⁹ These changes, too, are shaking up the industry: T-Mobile recently overtook Sprint and now has the most prepaid customers in the industry.²³⁰

This increased competition is being fueled by yet another indicator of a robust marketplace: the massive investments that mobile broadband providers have been making, and continue to make, in their networks.²³¹ In 2013 alone, mobile providers invested \$33 billion in their networks,²³² up 11.7% from the prior year and over 30% from the year before.²³³ And this trend of accelerating investment shows no sign of abating. Indeed, industry estimates indicate that wireless providers will spend \$159.3 billion upgrading wireless infrastructure between 2014 and 2017, which represents a 40 percent increase over the investments made in the previous four years.²³⁴ CTIA explains that there has been an astonishing \$90 billion in network investment alone since 2010.²³⁵

price you pay; A free smartphone every year with Cricket Rewards; Plans starting at \$35 a month after \$5 credit for using auto pay; No annual contracts”).

²²⁹ Press Release, “T-Mobile Urges Its Customers to Rescue Beleaguered Sprint Customers,” T-Mobile (Aug. 21, 2014), <http://newsroom.t-mobile.com/news/rescue-sprint-customers.htm>.

²³⁰ Press Release, “T-Mobile Surpasses Sprint, Takes No. 1 Spot in Prepaid Wireless,” T-Mobile (Aug. 6, 2014), <http://newsroom.t-mobile.com/news/t-mobile-surpasses-sprint.htm>.

²³¹ See AT&T Comments at 19-20.

²³² See CTIA, *Annual Wireless Industry Survey, Year-End U.S. Figures from CTIA’s Annual Survey Report* (June 2014), <http://www.ctia.org/your-wireless-life/how-wireless-works/annual-wireless-industry-survey>.

²³³ *Id.*

²³⁴ See Telecommunications Industry of America, *TIA’s 2014-2017 ICT Market Review & Forecast*, at 5-18 (2014).

²³⁵ See CTIA Comments at 3.

Indeed, all four of the national providers have been investing heavily since 2010 to upgrade their networks.²³⁶ As part of its Project Velocity IP (VIP) three-year investment plan, AT&T has substantially completed a nationwide deployment of its LTE network, which now covers 300 million people;²³⁷ Verizon's LTE network likewise covers about 300 million.²³⁸ Although T-Mobile and Sprint were initially slow to embrace LTE, both have made substantial investments over the last two years in an attempt to catch up and to make themselves more formidable competitors. T-Mobile set an ambitious schedule for LTE deployment and recently "confirmed it met its mid-year goal of covering 230 million POPs with its LTE network" and "plans to cover 250 million POPs with LTE by the end of 2014."²³⁹ Softbank's investment in Sprint has given it a deep source of capital, and Sprint expects an \$8 billion outlay in capital expenditures this year.²⁴⁰ Sprint recently met its goal of reaching 250 million people with its LTE network by mid-2014,²⁴¹ and even as it expands its LTE footprint, Sprint has been using its

²³⁶ See, e.g., *NPRM* ¶ 30 ("USTelecom reports that broadband capital expenditures have risen steadily, from \$64 billion in 2009 to \$68 billion in 2012.").

²³⁷ Press Release, "AT&T 4G LTE Network Reaches More Than 300 Million People," AT&T (Sept. 4, 2014), http://about.att.com/story/att_4g_lte_network_expands_reach_to_more_than_300_million_americans.html.

²³⁸ See Verizon, *LTE Information Center*, <http://www.verizonwireless.com/news/LTE/Overview.html>.

²³⁹ Phil Goldstein, *T-Mobile passes Sprint with 230M LTE POPs, while Verizon dominates with 306M LTE POPs*, *Fierce Wireless* (July 2, 2014), <http://www.fiercewireless.com/story/t-mobile-passes-sprint-230m-lte-pops-while-verizon-dominates-306m-lte-pops/2014-07-01>.

²⁴⁰ Press Release, *Sprint Reports Results for the Quarter Ended March 31, 2014*, Sprint (April 29, 2014), <http://newsroom.sprint.com/news-releases/sprint-reports-results-for-the-quarter-ended-march-31-2014.htm>.

²⁴¹ Press Release, "Sprint Accelerates Progress on America's Newest Network, Delivering Faster 4G LTE Speeds to 225 Million People and 41 New Cities," Sprint (April 29, 2014), <http://newsroom.sprint.com/news-releases/sprint-accelerates-progress-on-americas-newest-network-delivering-faster-4g-lte-speeds-to-225-million-people-and-41-new-cities.htm>; Sprint,

vast swaths of spectrum to deploy a next-generation “Sprint Spark” service, which Sprint expects to cover 100 million customers by year-end and which promises speeds of 50-60 Mbps.²⁴²

Due to these infrastructure deployments, service speeds are increasing rapidly. By one estimate, “the share of Americans with access to potential wireless broadband download speeds of greater than 10 Mbps increased to over 95 percent” by mid-2013.²⁴³ And as discussed below, the expansion of LTE coverage also has unleashed a dramatic increase in usage of mobile broadband service, to the benefit of consumers and edge providers alike.²⁴⁴ This evidence fully supports Commissioner Pai’s assessment that investment has helped to make the United States the world’s “undisputed” “mobile broadband leader.”²⁴⁵ As a leading third-party manufacturer of mobile devices notes, massive provider investments have “led to the U.S. becoming the envy of the world when it comes to mobile data.”²⁴⁶

In an effort to capitalize on their investments and keep one step ahead of competitors, mobile providers are spending heavily on marketing their services. In 2011, the last year for

Boost Mobile Introduces ‘Data Boost Plans’ that Offer Big Data at a Small Price, Sprint (Sept. 3, 2014), <http://newsroom.sprint.com/news-releases/boost-mobile-introduces-data-boost-plans-that-offer-big-data-at-a-small-price.htm>.

²⁴² See Press Release, “Sprint Demonstrates 1 Gigabit Over-the-Air Speed at Silicon Valley Lab,” Sprint (Oct. 30, 2013), <http://newsroom.sprint.com/news-releases/sprint-demonstrates-1-gigabit-over-the-air-speed-at-silicon-valley-lab.htm>; see also Press Release, “Sprint Poised for 2014 Breakthrough Following Year of Network Advances,” Sprint (Dec. 16, 2013), <http://newsroom.sprint.com/news-releases/sprint-poised-for-2014-breakthrough-following-year-of-network-advances.htm>.

²⁴³ Verizon Comments at 39.

²⁴⁴ See pages 73-74, 86-88, *infra*.

²⁴⁵ Ajit Pai, Commissioner, FCC, Remarks before the Free State Foundation, “Reforming Communications Policy in the Digital Age: A View from the FCC,” Washington, D.C., at 3 (June 25, 2014) available at <http://www.fcc.gov/document/comm-pai-remarks-reforming-communications-policy-digital-age>; see AT&T Comments at 20.

²⁴⁶ Ericsson Comments at 2.

which the Commission has provided figures, advertising expenditures for mobile services topped \$5 billion.²⁴⁷ Indeed, mobile providers are among the country's top spenders when it comes to advertising: the Commission's figures reveal that Verizon was the country's third-largest advertiser in 2011, followed by AT&T, which was fifth.²⁴⁸

In short, these real-world facts concerning competition and investment in the mobile broadband marketplace—facts which almost no party even attempts to dispute²⁴⁹—powerfully demonstrate that the mobile marketplace remains robustly competitive, even more so than in 2010. This competition was a key basis on which the Commission concluded in 2010 that it should take a lighter touch with respect to open Internet regulations for mobile broadband services. There is no cause for retreating from that approach now. To the contrary, a shift in course at this juncture would be a departure from decades of bipartisan consensus that intrusive economic regulation of competitive markets is unnecessary.

²⁴⁷ *Sixteenth Mobile Competition Report*, 28 FCC Rcd at 3849 ¶ 232.

²⁴⁸ *Id.*

²⁴⁹ Vonage points to increased market concentration changes resulting from mergers between AT&T and Leap and T-Mobile and MetroPCS, *see* Vonage Comments at 32 n.126, but it ignores the substantial choice that consumers have in the marketplace. Indeed, the Commission made clear in approving these mergers that they provided significant benefits to competition and were otherwise in the public interest. *See, e.g.*, Memorandum Opinion and Order, *In re Application of Cricket License Company*, 29 FCC Rcd 2735 ¶¶ 49, 189 (2014) (noting that “[s]ervice providers compete not only on the basis of price but also on other variables such as plan features, call quality, geographic coverage, and customer service” and concluding that the merger would result in “public interest benefits”); Declaratory Ruling, *In re Applications of Deutsche Telekom AG, T-Mobile USA, Inc. and MetroPCS Communications, Inc.*, 28 FCC Rcd 2322, 2324 ¶ 2 (2013) (noting “public interest benefits likely to result from the proposed [merger],” including “the development of a more robust, national network, improved quality of service, and the strengthening of the fourth largest nationwide service provider’s ability to compete in the mobile broadband services market”). In short, Vonage’s concerns are unfounded. It is impossible to square the empirical evidence of what is actually happening in the marketplace (as detailed in the text above) and the Commission’s findings in these merger proceedings with claims that competition is diminishing in the marketplace.

2. The Broader Mobile Ecosystem.

In adopting a measured regulatory approach to mobile broadband in 2010, the Commission also pointed to the “very rapid innovation and change” occurring in the “mobile ecosystem,” including with respect to devices and applications.²⁵⁰ As AT&T and others have explained, explosive innovation and technological change, fueled by intense competition, continues unabated in the mobile ecosystem today.²⁵¹

Indeed, the mobile wireless ecosystem is the poster-child of the “virtuous circle” of innovation and investment that this proceeding is intended to preserve. The billions upon billions in investment in faster and more robust wireless networks has sparked explosive growth in applications and content for those networks, which, in turn, has led to more investment and innovation, and so on. And the results are nothing short of staggering. The Commission noted in the *Open Internet Order* that 300,000 “apps” were available at that time,²⁵² but that number has since been dwarfed. Today, Apple’s App store has more than 1.2 million apps,²⁵³ the Android App Store has more than 1.3 million apps,²⁵⁴ and Microsoft, Amazon, Samsung, Motorola, HTC, and myriad others offer millions of apps as well.²⁵⁵ And customers are

²⁵⁰ *Open Internet Order*, 25 FCC Rcd at 17956-57 ¶ 94.

²⁵¹ *See, e.g.*, AT&T Comments at 23-24; Verizon Comments at 39-40; CTIA Comments at 8-9; T-Mobile Comments at 4-5.

²⁵² *See Open Internet Order*, 25 FCC Rcd at 17956-57 ¶ 94 n.291.

²⁵³ Sarah Perez, *iTunes App Store Now Has 1.2 Million Apps, Has Seen 75 Billion Downloads To Date*, TechCrunch (June 2, 2014), <http://techcrunch.com/2014/06/02/itunes-app-store-now-has-1-2-million-apps-has-seen-75-billion-downloads-to-date/>.

²⁵⁴ Android Statistics, *Number of Android applications*, AppBrain Stats (Aug. 24, 2014), <http://www.appbrain.com/stats/number-of-android-apps>.

²⁵⁵ *See, e.g.*, Aman Jain, *Microsoft Corporation (MSFT) Crosses 300,000 Apps Milestone*, OppTrends (Aug. 8, 2014), <http://www.opptrends.com/2014/08/microsoft-corporation-crosses-300000-apps-milestone/>.

downloading these applications like never before. Mobile Future notes in its comments that, all told, “[m]obile application stores had annual downloads of 102.07 billion in 2013, up from 63.98 billion in 2012.”²⁵⁶ This growth in the mobile application market will continue; indeed, the number of annual downloads is expected to more than double again by 2017.²⁵⁷

In addition to applications, digital music services like Beats, Spotify, Rhapsody, Pandora, Deezer, iHeartRadio, and others have rapidly increased their foothold in the U.S. music industry. Roughly 70 million people in the United States listen to music on their mobile devices every month, and that number is expected to increase by 54 percent by the end of 2017.²⁵⁸ And mobile broadband subscribers today also watch far more video over their mobile devices. As the Commission notes, analysts estimate that real-time entertainment, such as streaming audio and video, is now “the largest traffic category on virtually every network.”²⁵⁹ In addition, mapping

²⁵⁶ Mobile Future Comments at 4.

²⁵⁷ See CTIA, *App to Reach 268 Billion Downloads by 2017* (Jan. 22, 2014), <http://www.ctia.org/resource-library/facts-and-infographics/archive/mobile-appdownloads-grow-2017>.

²⁵⁸ See *Music Goes Mobile as More Smartphone Users Stream Songs: Over 99% of mobile music listeners tune in on smartphones*, eMarketer (Aug. 13, 2013), <http://www.emarketer.com/Article/Music-Goes-Mobile-More-Smartphone-Users-Stream-Songs/1010126>.

²⁵⁹ Notice of Inquiry, *Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, and Possible Steps to Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996, as Amended by the Broadband Data Improvement Act*, GN No. 14-126, 2014 WL 3844837, at *3 ¶ 6 (2014) (citing Sandvine Intelligent Broadband Networks, *Global Internet Phenomena Report 2*, 5-6 (2014), <https://www.sandvine.com/downloads/general/global-internet-phenomena/2014/1h-2014-global-internetphenomena-report.pdf>).

and navigation tools,²⁶⁰ remote medicine and education,²⁶¹ and translation tools²⁶² are just a few examples of how innovation has enabled mobile broadband to improve our daily lives.

Innovation is not limited to mobile services and applications. The market for broadband *devices* also is thriving. The record establishes that “[t]here are over 790 different handsets and devices on sale in the U.S. built by more than 50 different manufacturers.”²⁶³ And these devices are increasingly accessible. Consumers may purchase them from mobile providers, manufacturers, or third-party retail stores.²⁶⁴ Indeed, AT&T itself sells over 130 cell phones and mobile devices for use on its network—reflecting the products of more than ten third-party manufacturers, including Amazon, Motorola, Nokia, Apple, and Samsung.²⁶⁵

There is a far greater variety of smartphones available today, with a broader range of capabilities, than in 2010. Manufacturers have moved beyond competing only through high-end flagship smartphones to a “cereal box” approach, filling every niche a smartphone buyer could

²⁶⁰ See Nathan Fortin, *Google changed our life in 10 Years: The top 10 Projects after IPO*, Wall Street OTC (Aug. 19, 2014), <http://www.wallstreetotc.com/google-changed-our-life-in-10-years-the-top-10-projects-after-ipo/27568/>.

²⁶¹ See generally Carlos Solórzano-Cuadra, *Guest commentary: Heavy Internet regulation would hurt minority communities*, Contra Costa Times (Aug. 23, 2014), http://www.contracostatimes.com/endorsements/ci_26380216/guest-commentary-heavy-internet-regulation-would-hurt-minority.

²⁶² See, e.g., Kim Komando, *10 awesome Google features you should be using*, Livingston Daily (Aug. 22, 2014), <http://www.livingstondaily.com/article/20140822/NEWS01/308220004/>.

²⁶³ CTIA Comments at 9.

²⁶⁴ See CTIA, *The Wireless Industry: Leading the World in Investment, Value, Innovation, and Competition*, at 15-16 (2013) (“*Leading the World*”), attached to Ex Parte Letter from Scott K. Bergmann, CTIA, to Honorable Thomas E. Wheeler, Chairman, FCC, GN Docket No. 09-51, WT Docket No. 13-135 (Nov. 13, 2013), <http://apps.fcc.gov/ecfs/document/view?id=7520957610>)).

²⁶⁵ See AT&T, *Phones & Devices*, <https://www.wireless.att.com/businesscenter/phones-devices/all-phones/index.jsp?wtLinkName=ViewAllPhonesNav&WT.svl=99&listView=true>.

possibly want. Samsung alone offers more than 170 different phones with seemingly any screen size, processor speed, and feature set.²⁶⁶ Apple too expanded its product line last year,²⁶⁷ and it just unveiled another iteration of the iPhone with a 5.5 inch screen offering 1080p resolution, as well as its long-anticipated smartwatch, which transplants the features of an iPhone to a smaller screen and can function as a walkie-talkie, drawing pad, pulse monitor, calorie counter, activity tracker, and much more.²⁶⁸ Similarly, tablets like the iPad were a brand-new category in 2010, but as the Commission points out in the *NPRM*, “the number of tablet users in the United States has increased from 9.7 million in 2010 to almost 70 million by the end of 2012, and is projected to grow to more than 160 million (approximately 50 percent of the U.S. population) by 2016.”²⁶⁹ Indeed, tablet ownership actually reached 44 percent of U.S. consumers at the end of 2013,²⁷⁰ suggesting that the marketplace will beat that prediction by a wide margin.

These service and device innovations are driving ever-increasing amounts of mobile broadband usage. Indeed, as AT&T has explained and no party disputes, since the *Open Internet Order*, there have been astonishing increases in the consumption of mobile broadband—a clear

²⁶⁶ See Samsung, *Cell Phones*, <http://www.samsung.com/us/mobile/cell-phones>.

²⁶⁷ See generally Apple, *iPhone 5c*, <https://www.apple.com/iphone-5c/>.

²⁶⁸ Darrell Etherington, *What to Expect from Apple’s iPhone Event on September 9*, TechCrunch (Sept. 6, 2014), <http://techcrunch.com/2014/09/06/apple-iphone-6-event-predictions/>; Michael Liedtke and Anick Jesdanun, *Apple Unveils Smartwatch, Bets on Wearable Devices*, MSN news (Sept. 9, 2014), <http://news.msn.com/science-technology/apple-unveils-smartwatch-bets-on-wearable-devices?ocid=ansnews11>; Gordon Kelly, *Apple Watch: Everything You Need to Know*, Forbes (Sept. 10, 2014), <http://www.forbes.com/sites/gordonkelly/2014/09/10/apple-watch-everything-you-need-to-know/>.

²⁶⁹ *NPRM* ¶ 31.

²⁷⁰ Consumer Electronics Association, *Tablet Ownership Rate Reaches New High of 44 Percent, According to CEA’s Tablet Report* (Jan. 27, 2014), <http://www.ce.org/News/News-Releases/Press-Releases/2013-Press-Releases/Tablet-Ownership-Rate-Reaches-New-High-of-44-Perce.aspx>.

sign the marketplace is working to bring considerable benefits to consumers.²⁷¹ On AT&T's network alone, data usage increased *50,000 percent* between 2007 and 2013, and is doubling every year.²⁷² Given all of this, it is unsurprising, but especially noteworthy as the Commission considers proposals to intrude in the wireless marketplace, that 91% of U.S. consumers are “highly satisfied” with their mobile service.²⁷³ By any conceivable metric, the mobile broadband marketplace exhibits the hallmarks of a healthy, competitive, and innovative marketplace.

B. The Robust State of the Mobile Broadband Ecosystem Demonstrates the Wisdom of the Commission's Measured Approach.

These salient characteristics of the mobile broadband marketplace—competition, investment, and innovation—obviate any need for more rigorous net neutrality requirements than those put in place in 2010. Indeed, straightjacketing carriers with unnecessary regulatory burdens would risk impeding these trends.

The robust health of the mobile broadband marketplace eliminates any realistic possibility that a provider would act in ways that undermine Internet openness. If any mobile provider attempted to restrict its customers' ability to access the content, services, or applications of their choice, competitors would immediately call attention to those practices, and customers could and would readily switch to another provider.²⁷⁴ This ability of consumers to vote with their feet serves as a powerful deterrent to any effort to limit Internet openness in the mobile ecosystem. And the combination of this robust competition with the phenomenal investment and

²⁷¹ See AT&T Comments at 24.

²⁷² See note 14, *supra*.

²⁷³ See *Leading the World* at 13.

²⁷⁴ See, e.g., T-Mobile Comments at 4.

innovation in mobile broadband that have occurred under the 2010 rules provides an irrefutable argument against more restrictive open Internet regulations.

In a speech last week, Chairman Wheeler questioned whether robust competition in the wireless industry justifies a lighter regulatory touch for mobile broadband Internet access services when it comes to open Internet protections.²⁷⁵ Chairman Wheeler observed that, despite such competition, “I remember when [the wireless] industry was united around the walled garden where the only apps that reached the consumer were those which the carrier approved, usually in return for a payment.”²⁷⁶ He acknowledged that the industry had “leap[ed] the garden wall,” but asserted that “it is instructive that the walled garden existed despite multi-carrier competition. At least in the short run, this suggests that competition does not assure [Internet] openness.”²⁷⁷

This analysis is misconceived. The reason wireless providers initially offered subscribers “walled garden” access to the Internet was not because they “leverag[ed] control over the last mile,”²⁷⁸ as Chairman Wheeler suggests, but rather because wireless networks and devices could not support an Internet ecosystem. When wireless providers first offered mobile data services and access to the Internet, they did so as a way to attract and retain customers in the face of fierce competition for mobile voice services. During those early years, wireless providers still operated 2G networks and transmitted wireless data using the General Packet Radio Service (GPRS) standard, which transferred data at speeds at or below those of dial-up wireline data

²⁷⁵ Tom Wheeler, Chairman, FCC, Prepared Remarks at the 2014 CTIA Show, Las Vegas, NV, at 3 (Sept. 9, 2014), *available at* <http://www.fcc.gov/document/chairman-wheeler-remarks-2014-ctia-show-super-mobility-week>.

²⁷⁶ *Id.*

²⁷⁷ *Id.*

²⁷⁸ *Id.*

services. The only phones capable of web-browsing were devices with tiny, monochromatic screens and limited processing power and storage capacity, which forced providers to utilize a web browser—the Wireless Access Protocol (WAP)—that translated and truncated web-based information for display on those devices. In addition, every device manufacturer utilized its own, proprietary operating system, which meant that applications had to be designed to work with specific devices on each carrier’s network. And, because wireless operators were unsure how mobile data services would affect the network, providers required applications to undergo rigorous testing and approval processes to ensure that they would function properly and protect network security. Thus, it was technological restraints, not control over subscribers’ last-mile connections, that led wireless carriers to provide Internet access through walled gardens.

Over the next several years, burgeoning *competition* in the wireless market drove the innovation and investment in mobile handsets and network upgrades that broke down those walls and created the open, robustly competitive mobile broadband Internet ecosystem that we have today. That competition led AT&T (then Cingular) to collaborate with Apple to develop and introduce the iPhone in 2007. The iPhone was the first mobile device with the processing power and memory capacity to support a full HTML web browser and unmediated access to the Internet. Its introduction spurred investment by other consumer electronics manufacturers to develop competing devices using common interfaces (such as Google’s android and Microsoft’s mobile operating system), and by other wireless providers to upgrade their networks to support those devices, which, in turn, drove consumer demand for even faster networks and devices and a vast array of competing applications. With the introduction of the 3G iPhone, consumer demand for data exploded, forcing wireless providers to invest billions upon billions of dollars to expand network capacity to keep pace with market demand. Thus, wireless competition itself

created the virtuous circle of innovation and investment in wireless networks, handsets, operating systems, and applications that created the “abundance of an open [Internet] ecosystem.”²⁷⁹ In other words, the path to today’s dynamically open mobile broadband ecosystem is quintessentially a competition success story; nothing about that path suggests the need for more regulation.

This conclusion is confirmed by the record in this proceeding, which demonstrates convincingly that Internet openness has flourished in the mobile ecosystem under the Commission’s measured rules.²⁸⁰ Although some parties call for more regulation, they fail to cite any evidence of any real threat to Internet openness that could possibly justify more intrusive rules than those adopted in 2010. And that is because there is no such evidence.²⁸¹

In the absence of evidence of any real threat to Internet openness, a few commenters purport to raise concerns about AT&T’s Sponsored Data plan.²⁸² But they are merely grasping at straws. By any measure, Sponsored Data benefits content providers and consumers, in the same way that toll-free calling and free shipping do. And contrary to knee-jerk claims that it somehow undermines an open Internet, Sponsored Data *promotes* Internet openness by encouraging consumers to explore mobile online applications and content that they might otherwise not use, benefiting upstart edge providers that can use Sponsored Data to promote new offerings, including those that compete with incumbent content providers.²⁸³ In fact, far from erecting a

²⁷⁹ *Id.*

²⁸⁰ *See, e.g.*, T-Mobile Comments at 4-5; CTIA Comments at 11-13.

²⁸¹ *See* AT&T Comments at 24-25.

²⁸² *See, e.g.*, Public Knowledge Comments at 53-54.

²⁸³ *See* Sara Kaufman, *Ovum’s innovative service of the month: AT&T’s sponsored data*, Ovum (March 19, 2014), <http://www.att.com/att/sponsoreddata/docs/Ovum-ATT-Sponsored->

barrier to entry—or serving as an “internet gatekeeper”²⁸⁴—for new edge providers, the Sponsored Data program offers upstart providers a scalable and flexible tool that they can use to drive interest and engagement with their content.²⁸⁵ Large edge providers already have the market penetration, branding, and advertising resources to succeed in the marketplace. But for less established competitors, sponsoring content is a cost-effective way to expand their customer base, because *by definition* those providers’ costs grow only in direct proportion to their business. AT&T’s experience with the program has borne this out: through pilots and trials conducted over the course of this year, small mobile start-ups have taken the lead in developing novel uses for AT&T’s Sponsored Data platform, and they have begun to build new businesses around the offering.²⁸⁶ For all these reasons, Ericsson is clearly correct when it recognizes that Sponsored Data is precisely the type of “innovative service offering” that the Commission should *welcome* in a competitive, innovative marketplace.²⁸⁷

Because the 2010 rules are more than sufficient to protect against any threat to an open mobile broadband Internet, Public Knowledge’s concerns about the impact of a second-tier Internet on minority communities that rely disproportionately on mobile services for broadband Internet access are misplaced.²⁸⁸ In fact, that assertion is nothing less than willfully blind to the

Data.pdf.

²⁸⁴ Public Knowledge Comments at 54.

²⁸⁵ See Mike Dano, *AT&T’s Sponsored Data service isn’t a threat, it’s an innovation*, FierceWireless (Jan. 7, 2014), <http://www.fiercewireless.com/story/atts-sponsored-data-service-isnt-threat-its-innovation/2014-01-07>.

²⁸⁶ For a list of current active Sponsored Data providers, see AT&T, *Sponsored Data*, <http://www.att.com/sponsoredata>.

²⁸⁷ Ericsson Comments at 5.

²⁸⁸ Public Knowledge Comments at 27.

current state of the mobile marketplace—in which prices are dropping, speeds are increasing, usage is exploding, and mobile services, devices, and applications continue to proliferate.

Indeed, the one thing that *would* harm mobile broadband consumers would be needless and burdensome regulation that deters investment, slows innovation, or raises prices for mobile broadband services.²⁸⁹ That is why many of the organizations that actually represent minority communities do *not* advocate for more onerous regulation of mobile broadband. The NAACP, for example, urges the Commission to restore the balance of the *Open Internet Order*, and it acknowledges that the 2010 rules for mobile broadband have functioned well.²⁹⁰ Similarly, the National Hispanic, National Gay and Lesbian, U.S. Hispanic, and U.S. Pan Asian Chambers of Commerce submitted joint comments asking the Commission to abstain from imposing additional regulations that would stifle the innovation that has led to rapid deployment of broadband networks in minority communities.²⁹¹ These and other commenters demonstrate how additional regulation in the mobile sphere would harm, not help, underserved communities.

²⁸⁹ See, e.g., *Policy & Initiatives: Broadband*, CTIA (Nov. 2013), <http://www.ctia.org/policy-initiatives/policy-topics/broadband> (“[I]n order to remain the world’s best wireless industry, wireless companies need flexibility so they may be nimble and continue to offer Americans the most innovative products and services. Consumers will continue to benefit as long as policymakers maintain the light regulatory touch that started during the Clinton Administration when the wireless industry was only in its infancy, and provide access to spectrum so the ‘virtuous cycle’ remains fueled.”); Mobile Future Comments at 7-8 (noting the costs of regulation); Verizon Comments at 43-44 (similar).

²⁹⁰ See, e.g., Communications Workers of America and NAACP Comments at 3-4 (“Recognizing the technical and capacity limitations of mobile broadband, the Commission limited the no blocking rule to those applications that compete with a mobile broadband provider’s voice or video telephony services. . . . The 2010 Open Internet rules are working.”).

²⁹¹ National Hispanic, National Gay and Lesbian, U.S. Hispanic, and U.S. Pan Asian Chambers of Commerce Comments at 2-3; see also Asian Americans Advancing Justice Comments at 3 (suggesting that it is most appropriate to follow the no-blocking rule laid out in the 2010 Order for broadband providers, while allowing for further deliberation of whether additional regulations of the mobile marketplace is necessary).

C. Additional Prescriptive Regulation Is Inappropriate Given the Unique Operational Constraints Facing Mobile Broadband Providers.

The Commission also cited unique “operational constraints” facing mobile broadband providers as a justification for applying different rules in 2010.²⁹² That same justification applies with full force today.²⁹³ Indeed, the record establishes that, in many respects, network challenges have become more pronounced. Although mobile broadband providers work tirelessly to acquire new spectrum and make more effective and efficient use of spectrum, providers still need—and, indeed, increasingly rely on—flexibility to proactively manage their networks in order to provide high-quality service to all of their customers. Regulation could undermine their incentive and ability to do so, resulting in poorer service quality for all consumers.

As a threshold matter, there can be no legitimate debate that mobile providers face special operational constraints. They must confront and manage dynamic radio environments, limitations on spectrum, shared use of network resources, customer mobility, rapidly evolving network architectures, and exponentially increasing traffic volumes.²⁹⁴ Indeed, the record documents in detail examples of the complex and dynamic management of spectrum that mobile

²⁹² *Open Internet Order*, 25 FCC Rcd at 17957 ¶ 95. In 2010, AT&T described in great technical detail the nature of the unique challenges facing mobile broadband providers. See Comments of AT&T Inc., *Preserving the Open Internet; Broadband Industry Practices*, GN Docket No. 09-191 & WC Docket No. 07-52, at 156-166 (filed Jan. 14, 2010) (“*AT&T 2010 Net Neutrality Comments*”); *AT&T 2010 Net Neutrality Reply Comments* at 76-97. Many of those same challenges persist today.

²⁹³ See AT&T Comments at 23-24.

²⁹⁴ See Jeffrey H. Reed & Nishith D. Tripathi, *The Application of Network Neutrality Regulations to Wireless Systems: A Mission Infeasible*, 25-27 (2010) (“*Reed & Tripathi*”) (attached to *AT&T 2010 Net Neutrality Comments*) (“The same wideband radio channel must be shared among many user sessions that may each involve many different types of data streams and protocols. . . . Mobile network management requires use of a variety of algorithms, including admission-control, load-balancing, handover or handoff, scheduling, power-control, and limitations on applications causing network management issues.”); see also Ericsson Comments at 9.

providers must undertake because of constantly shifting, unpredictable use of individual cell sites.²⁹⁵ These complexities are compounded by the scarce spectrum resources available to each mobile provider and the limitations that scarcity places on the ability to increase network capacity to meet subscriber needs and quality-of-service expectations.²⁹⁶ And all of these challenges are even more substantial in the face of skyrocketing consumption of mobile broadband services, applications, and content, as explained further below.²⁹⁷

To be sure, fixed broadband providers face network management challenges too.²⁹⁸ But such challenges are an order of magnitude more complex for mobile providers. For example, although wireline congestion is usually relatively predictable and consistent because of the fixed nature of wireline networks, mobile network congestion is variable and transitory. This is

²⁹⁵ See, e.g., Verizon Comments at 44 (describing the queuing and scheduling algorithms that adjust the number of packets a consumer receives, depending on the “signal-to-noise” ratio); CTIA Comments at 17-20; T-Mobile Comments at 6-7; Alcatel-Lucent Comments at 25 (“Wireless broadband services are constrained by limited and dynamically changing radio resources shared among multiple users, and service providers need to be free to manage their networks in order to meet the current and expected consumer demand and service quality obligations. Although the Commission has unlocked new spectrum bands for auction since 2010 and carriers continue to find ways to wring every last drop of efficiency from their limited spectrum resources, wireless service demand is far outpacing these advances. The basic physics of wireless networks continue to limit the available bandwidth when compared to higher capacity wireline networks, and the comparatively greater need of wireless operators to manage network capacity must continue to be recognized.”).

²⁹⁶ See Rysavy Research, *Net Neutrality Regulatory Proposals: Operational and Engineering Implications for Wireless Networks and the Consumers They Serve*, at 10 (“Rysavy Research”) (attached to Mobile Future Comments, GN Docket No. 09-191, WC Docket No. 07-52 (Jan. 14, 2010)).

²⁹⁷ See pages 86-88, *infra*.

²⁹⁸ Cf. CenturyLink Comments at 24 (pointing out that wireline broadband providers face capacity and congestion issues).

attributable partly to the fact that, by definition, mobile customers move.²⁹⁹ As AT&T has explained, a customer in motion may actually consume spectrum from several different cell sites at once, putting a sudden strain on the network, particularly if the customer is using a bandwidth-intensive and performance-sensitive application like streaming video.³⁰⁰ Mobile customers also congregate in areas that can be difficult to predict, making it far more challenging for a mobile provider to anticipate the maximum load of users in a given area. For example, parades, concerts, traffic accidents, a surge of holiday shoppers, and other similar planned and unplanned events can place demands on bandwidth that could overwhelm a specific cell site if the network is not properly managed.³⁰¹ The same is true when usage spikes in a particular area, or even a wide region, in the wake of an emergency. The performance of mobile networks also is influenced by the radio environment—which changes based on the number of users, the level of signal interference experienced at a given moment, and what types of data and voice traffic are being carried over a mobile network at any given time.³⁰² The unique challenges presented by mobile users and the unpredictable demands placed on mobile networks due to the inherent mobility of their users require a robust set of tools that can be used to mitigate the impact of potential congestion on consumers’ experience with a network.³⁰³

²⁹⁹ See T-Mobile Comments at 7 (“The inherent mobility of wireless broadband only intensifies the technological and logistical complexities involved in managing the network, which do not exist in a fixed broadband environment.”).

³⁰⁰ See *AT&T 2010 Net Neutrality Comments* at 159 (citing *Reed & Tripathi* at § 3.4).

³⁰¹ See *id.* at 160 (citing *Reed & Tripathi* at § 4.3).

³⁰² See CTIA Comments at 19-20.

³⁰³ See, e.g., Ericsson Comments at 10 (describing tools used to manage network traffic). Recognizing this need, the engineers responsible for designing the standards used by mobile networks have built robust quality-of-service capabilities into each successive version of those mobile standards over the last fifteen years or more. Examples include the releases of the 3GPP

In short, the record establishes that mobile broadband providers continue to face unique operational challenges that warrant different regulatory treatment.

D. Contrary Arguments Made by Parties Seeking Enhanced Regulation of Mobile Broadband Services Are Unpersuasive.

In light of the powerful empirical evidence that the Commission’s 2010 rules struck the right balance with respect to mobile broadband, it would be an enormous mistake for the Commission to upset that balance. Nonetheless, some parties seek more regulation, resting their arguments on four grounds: first, that the mobile broadband industry is now more mature and stable, making additional regulation appropriate; second, that soaring use of mobile broadband Internet access service necessitates more regulatory protections; third, that capacity concerns have now been solved; and fourth, that the differences between wireline and mobile networks can be accounted for by a “reasonable network management” carve-out. None of these arguments has merit. Indeed, they start from the assumption that more net neutrality regulation is good in itself, and that there must be some compelling affirmative reason not to regulate in order to justify re-establishment of the 2010 lighter-touch approach. But these advocates have it exactly backwards. As AT&T has explained, and the Commission has repeatedly recognized, regulation brings with it very real costs.³⁰⁴ It should never be imposed unless it is needed to protect the public interest. And especially here, where the mobile broadband ecosystem is

technical standards for UMTS and LTE services. *See, e.g.* ETSI, Technical Report 122 925 V3.1.1 / 3G TR 22.295 version 3.1.1 Release 1999, *Universal Mobile Telecommunications System (UMTS); Service aspects; Quality of Service and Network Performance*. There is no justification for second-guessing these engineers’ well-grounded technical judgment that the unique challenges of the mobile environment necessitate such flexibility.

³⁰⁴ *See, e.g.*, AT&T Comments at 14-15 (citing authorities); Comments of AT&T Inc., *Preserving the Open Internet; Broadband Industry Practices*, GN Docket No. 14-28, at 30-31 (March 21, 2014) (“AT&T March 2014 Net Neutrality Comments”) (same).

thriving and there is no evidence of any market failure or threat to Internet openness, there is no basis for imposing additional rules. Such rules risk derailing the incredible dynamism of the mobile broadband ecosystem, thereby hurting consumers, participants in that ecosystem, and the economy at large.³⁰⁵

First, the contention that the mobile broadband marketplace is now stable and mature—and thus a more appropriate candidate for added regulation—is simply contrary to fact.³⁰⁶ Indeed, parties advancing this argument appear to conflate explosive growth in use with stability.³⁰⁷ That is error; rapid growth should not be mistaken for maturity, and the fact that mobile use is increasing does not mean that mobile and wireline broadband providers should be treated the same or that the differences the Commission identified in 2010 have gone away. To the contrary, exploding consumer demand for mobile broadband content, applications, and services has led to a period of dizzying innovation and technical advances, as explained above—foreclosing any suggestion that the mobile broadband marketplace is now at a point of rest.³⁰⁸

In fact, mobile networks—and the technology that powers them—continue to evolve rapidly. In 2010, when the Commission issued the *Open Internet Order*, the first large-scale LTE network had only just become operational.³⁰⁹ Although mobile carriers have successfully

³⁰⁵ The imposition of burdensome rules could, for example, dampen mobile providers' interest in participating in the upcoming incentive auction.

³⁰⁶ See, e.g., CDT Comments at 27 (stating that “[m]obile Internet access is not the emerging and rapidly evolving market the Commission cited in 2010”); Internet Association Comments at 20-21 (asserting that the mobile marketplace has “matured” since 2010).

³⁰⁷ See, e.g., Public Knowledge Comments at 25 (arguing that mobile broadband is “more established” based on evidence showing growth in mobile broadband speeds); CDT Comments at 27-28; Microsoft Comments at 19.

³⁰⁸ See Verizon Comments at 40-41.

³⁰⁹ See Press Release, “Verizon Wireless Launches the World’s Largest 4G LTE Wireless

created 4G/LTE networks that cover a rapidly expanding portion of the U.S. population, the deployment of those networks remains an ongoing project. LTE will not represent the majority of cellular subscriptions until 2015 and will not account for 85 percent of subscriptions until 2019.³¹⁰ The continuing rollout of LTE will present a host of new technical challenges as mobile broadband providers integrate new services over these upgraded networks. Indeed, even though the coverage area for LTE has rapidly expanded, providers are only now beginning to transition from legacy circuit-switched voice services to next-generation packet-switched voice. AT&T, for example, announced in May that it is introducing High Definition Voice on an all-IP, Voice Over LTE network in select markets—a service that will allow “HD Voice customers [to] simultaneously talk while surfing the Web at 4G LTE speeds.”³¹¹ Verizon has just recently committed to launch VoLTE service in the United States by the end of the year.³¹² And T-Mobile recently launched the service in Seattle.³¹³ The rollout of LTE and the integration of new

Network on Dec. 5,” Verizon (Nov. 30, 2010), <http://www.verizonwireless.com/news/article/2010/12/pr2010-11-30a.html>.

³¹⁰ See Ericsson, *Ericsson Mobility Report*, at 9 (June 2014), <http://www.ericsson.com/res/docs/2014/ericsson-mobility-report-june-2014.pdf>.

³¹¹ *AT&T Introduces High-Definition Voice in Initial Markets*, PR Newswire (May 15, 2014), <http://www.prnewswire.com/news-releases/att-introduces-high-definition-voice-in-initial-markets-259365531.html>; see also Signal Research Group, *Behind the VoLTE Curtain, Part 1: Quantifying the Performance of a Commercial VoLTE Deployment* (Aug. 8, 2014), http://www.spirent.com/~media/Reports/VoLTE_Benchmark_Study_Part_One_REPORT_PREVIEW.PDF (detailing the significant benefits provided by AT&T’s VoLTE service over earlier technologies).

³¹² See Trefis Team, *Verizon to Launch VoLTE Service By December, Delays Launch of LTE-Only Phones*, Forbes (Aug. 20, 2014), <http://www.forbes.com/sites/greatspeculations/2014/08/20/verizon-to-launch-volte-service-by-december-delays-launch-of-lte-only-phones/>; see also CTIA Comments at 25-26.

³¹³ See Stephen Lawson, *T-Mobile rolls out voice over LTC, HD voice in Seattle*, PCWorld (May 22, 2014), <http://www.pcworld.com/article/2158640/tmobile-goes-circuitless-in-seattle-with-voice-over-lte-hd-voice.html>.

services over those networks will demand that providers have flexibility to manage their networks to address anticipated and unanticipated network issues—challenges that will only be compounded by rapid growth in mobile broadband usage generally.³¹⁴

Additional top-down regulation would be profoundly detrimental in these circumstances. All regulation comes with costs,³¹⁵ but regulation in a dynamic, fast-changing marketplace raises special concerns. Imposing prescriptive regulations—such as a more expansive no-blocking rule or nondiscrimination requirements—would risk stifling the flexibility needed to respond to fast-changing market and technological developments. None of the parties that proposes additional regulations acknowledges, much less addresses, these concerns about slowing or halting the technological change and network evolution that needs to occur in order to meet consumer demand for mobile broadband and the content and services that it enables.

Second, the fact that more consumers use mobile broadband Internet access services than ever before is not a ground, in and of itself, for regulation. To the contrary, the exploding usage of broadband Internet access service demonstrates that the market is bringing consumers what they want and need. If anything, it demonstrates that regulatory intervention is not necessary.

Third, the proposition that new technologies, more spectrum, or increased efficiency will eliminate capacity concerns is misplaced.³¹⁶ To be sure, mobile networks' capacities have continued to grow, but demand for mobile services has also exploded, at times pushing beyond any gains made to network efficiency.³¹⁷ Mobile capacity has barely managed to outstrip

³¹⁴ See T-Mobile Comments at 6 (citing estimates from Cisco).

³¹⁵ See AT&T Comments at 41-42.

³¹⁶ *E.g.*, Public Knowledge Comments at 25 (“[W]ireless networks are now sufficiently robust that providers are no longer concerned about their own network capacity.”).

³¹⁷ *E.g.*, AT&T Comments at 24 (noting that mobile data traffic on AT&T’s network

demand, and there is every reason to believe that demand will continue to skyrocket. Last year alone, for example, U.S. consumers used 3.2 *trillion* megabytes of data, compared to just 1.5 trillion in 2012.³¹⁸

As the sheer number of mobile devices in circulation continues to grow, and as those devices become better platforms for watching streaming video and video chatting because of increases in screen size and resolution, consumers will stream more and more bandwidth-clogging video content. Video is already a huge component of the recent increase in mobile traffic—data from networking giant Cisco show that consumers now average more than 500 MBs per line, per month for video traffic.³¹⁹ And Major League Baseball has recently announced that, for the first time, the majority of MLB’s monthly live streams will be to mobile devices.³²⁰ This increase in video consumption will only continue. For example, this month Apple unveiled its new iPhone 6 models, featuring larger screens with better resolution than prior models, making video use even more likely.³²¹ Increased streaming will place new demands on mobile networks and network management capabilities, particularly given carriers’

increased 30,000% from 2007 to 2012); Verizon Comments at 39.

³¹⁸ CTIA, *Annual Wireless Industry Survey* (June 2014), <http://www.ctia.org/your-wireless-life/how-wireless-works/annual-wireless-industry-survey>.

³¹⁹ See Martyn Williams, *Wireless data traffic more than doubled in US in 2013*, PC World (June 17, 2014), <http://www.pcworld.com/article/2364780/wireless-data-traffic-more-than-doubled-in-us-in-2013.html>.

³²⁰ See Mark Newman, *On 12th Anniversary, Get MLB.TV for \$12 today*, MLB.com (Aug. 26, 2014), http://mlb.mlb.com/news/article/mlb/mlbtv-turns-12-get-it-today-for-12-only?ymd=20140826&content_id=91378900&vkey=news_mlb.

³²¹ See Jessica Dolcourt and Scott Stein, *iPhone 6 hands-on*, Cnet (Sept. 9, 2014), <http://www.cnet.com/products/apple-iphone-6/>.

inability to predict when and where their customers will use video streaming.³²² The bottom line is that, regardless of the ever-increasing capabilities and uses for mobile broadband, providers face many more technical challenges than wireline broadband providers. These challenges cannot just be swept aside as inconvenient facts in crafting rules; rather, they support restoration of the careful balance achieved in the 2010 rules.

Fourth, some advocates of additional regulation rightly acknowledge that mobile broadband providers face unique “technological or structural considerations,”³²³ but they argue that those challenges can be dealt with by applying a more flexible “reasonable network management” standard to mobile providers.³²⁴ This same option was before the Commission in 2010, and the Commission properly rejected it. It should do so again.³²⁵

To secure high levels of efficiency, mobile broadband providers must perform sophisticated traffic management, often in real-time in response to constant, dynamic changes.³²⁶

³²² As the “Internet of Things” becomes a reality and more and more devices and infrastructure become connected to the Internet, such machine-to-machine communications will be a constant source of pressure on mobile networks. Indeed, some estimates suggest that more than 26 billion devices will be connected to the Internet of Things by 2020. *See* Press Release, “Gartner Says a Thirty-Fold Increase in Internet-Connected Physical Devices by 2020 Will Significantly Alter How the Supply Chain Operates,” Gartner (Dec. 12, 2013), <http://www.gartner.com/newsroom/id/26360731>; *see also* CTIA Comments at 23-24 (“Across all industries, the ‘Internet of Things’ is rapidly becoming as important as the Internet of people – and mobile broadband networks are a significant part of this evolution.”); Verizon Comments at 40 (“The growth of the ‘Internet of Things’ is contributing to the rapidly growing demand for mobile data, and will continue to do so, likely spurring additional network enhancements.”).

³²³ CDT Comments at 28; *see also* Microsoft Comments at 19 (acknowledging that “[o]f course, there are important differences in the technical architecture and capabilities of fixed and mobile broadband networks”).

³²⁴ CDT Comments at 27; *see also* Public Knowledge Comments at 29-31 (making a similar argument); Internet Association Comments at 21.

³²⁵ *See AT&T 2010 Net Neutrality Comments* at 166-73.

³²⁶ *See* CTIA Comments at 17-20; *see generally* Christopher S. Yoo, *Wireless Networks:*

A decision by the Commission to subject mobile providers to a nondiscrimination rule (or to impose a stricter no-blocking rule) would have far-reaching negative consequences for the mobile industry and for the networks that providers manage. The Commission would need to second-guess fast-paced and highly fact-specific network engineering decisions. Given that most review would occur after the fact, network engineers would face intolerable uncertainty about whether certain responses to congestion problems would result in a violation of the Commission's rules. The mere threat of *post hoc* regulatory review of a particular network management measure to determine whether it was "reasonable" would disrupt and could chill optimal network management practices. It also could stall investment and innovation in automated network features that facilitate such management, leaving providers with fewer weapons to combat congestion and other threats to high-quality broadband service. Ultimately, consumers would suffer, as network performance and service quality degrade.

Beyond that, placing great weight on a "reasonable network management" standard would require enormous regulatory supervision of the mobile industry—and there is little reason to expect that this supervision could be accomplished effectively. Given the dynamic characteristics of the mobile industry as well as problems of imperfect information, there is considerable risk that the Commission would not adopt the "right" standard for reasonable network management practices. What is a "reasonable" and effective network management practice for new and evolving technologies is something that can be learned only through

Technological Challenges and Policy Implications, Faculty Scholarship, Paper 497, at 17 (2013) ("bandwidth limitation dictate that wireless networks typically engage in extensive network management"), available at http://scholarship.law.upenn.edu/faculty_scholarship/497?utm_source=scholarship.law.upenn.edu%2Ffaculty_scholarship%2F497&utm_medium=PDF&utm_campaign=PDFCoverPages.

providers' experience in managing their networks, and the answer may vary from network to network, place to place, time to time, and service offering to service offering.³²⁷

The costs of imposing the “wrong” regulatory standard, of course, would be substantial: mobile providers would be seriously hampered in their ability to manage their broadband networks in the most optimal and efficient manner to ensure that they provide the highest-quality service to customers. And even if the Commission did adopt the “right” standard, it would be rendered anachronistic quickly given the dynamic nature of the mobile broadband marketplace. Particularly given the absence of any problem with the 2010 approach that could possibly justify additional regulation, the Commission should not take the unnecessary risk of applying more burdensome open Internet regulations to mobile broadband providers in the hope that it will be able to ameliorate the consequences of stepped-up regulatory intervention through a flexible “reasonable network management” principle.

In sum, the Commission made precisely the right—indeed, the only defensible—decision in 2010 to adopt a measured approach to the regulation of mobile broadband Internet access service. The clearest evidence of this is that the mobile ecosystem has flourished since 2010, with no evidence of any problem that would warrant additional regulation. And the same distinctions between mobile and wireline broadband services that led the Commission to take a more measured approach to the former continue to apply with equal force today. The Commission’s tentative conclusion in the *NPRM* to continue its successful approach to the regulation of mobile broadband services remains the only reasonable path forward today.

³²⁷ See *AT&T 2010 Net Neutrality Comments* at 172.

IV. THE COMMISSION SHOULD REJECT OTHER HARMFUL REGULATORY PROPOSALS PUT FORWARD IN THE COMMENTS.

Some commenters urge the Commission to impose additional regulatory obligations with respect to IP interconnection, transparency, and specialized services. But in all of these cases, advocates of regulation have failed to identify any actual problem that needs to be remedied. Indeed, the purported “solutions” that these commenters offer would be far more harmful than any issue they purport to solve. The Commission should instead maintain its existing approaches to IP interconnection, transparency, and specialized services—approaches that were fundamental to the careful balance struck in 2010.

A. The Commission Should Refuse Calls to Regulate the Exchange of Traffic Between IP Networks.

The vast majority of commenters—including most of those who advocate for Title II reclassification—do *not* ask the Commission to regulate the exchange of traffic between IP networks. And for good reason. The existing regime of peering and transit has functioned very efficiently for more than two decades, and there is no basis for changing course now. Nonetheless, a handful of net neutrality advocates urge the Commission to intervene in the “interconnection” of IP networks as part of their push for all-encompassing regulation of Internet service providers.³²⁸ These advocates are joined by Netflix and its business partners, who stand to reap a substantial financial windfall if the Commission adopts such rules.³²⁹ But peering and interconnection issues are *not* “net neutrality” issues, and they therefore have no place in this

³²⁸ See, e.g., Free Press Comments at 144-148; Public Knowledge Comments at 112-114; Open Technology Institute at the New America Foundation and Benton Foundation Comments at 13-17.

³²⁹ See Netflix Comments at 10-20; Cogent Comments at 1-9, 19-23; Level 3 Comments at 1-16.

proceeding. In any event, regulation is not only unnecessary; it would be affirmatively harmful to the efficient exchange of Internet traffic.

1. The Exchange of Traffic Between IP Networks Is Not a “Net Neutrality” Issue.

Those who advocate regulation of IP interconnection characterize it as a net neutrality issue.³³⁰ But the two topics are clearly distinct. As the Commission recognized in the *Open Internet Order*, net neutrality concerns how ISPs manage traffic *within the last mile of their own networks*, not how they exchange traffic with other IP networks. Accordingly, the Commission drew a bright line in its 2010 rules, applying them to “a broadband provider’s use of its own network,” while disclaiming any intent to regulate “the exchange of traffic between networks, whether peering, paid peering, content delivery network (CDN) connection, or any other form of inter-network transmission of data, as well as provider-owned facilities that are dedicated solely to such interconnection.”³³¹ This distinction between intra- and inter-network transmission was, and remains, well-grounded. The Commission therefore should adopt its tentative conclusion in the *NPRM* to “maintain this approach.”³³²

As Comcast explains, “[t]raffic-exchange arrangements have nothing to do with the ability of end users to access particular content or to use particular applications or services, and

³³⁰ See, e.g., Netflix Comments at 10-20; Free Press Comments at 144-148; COMPTTEL Comments at 23-24, 27-30; Public Knowledge Comments at 112-114; Cogent Comments at 6-9; Level 3 Comments at 14-15.

³³¹ *NPRM* ¶ 59 (discussing *Open Internet Order*, 25 FCC Rcd at 17933, 17994 ¶ 47 n.150, ¶ 67 n.209).

³³² *Id.*

nothing to do with the priority with which content might be delivered to end users over a broadband Internet access service.”³³³ Instead, such agreements:

concern the economics of transporting Internet traffic across Internet backbones to broadband providers’ networks and exchange of that traffic with those networks. They do not involve how that traffic is delivered to the end-user once it arrives. And they are negotiated based on a variety of factors concerning the exchange of traffic between networks, including the amount of traffic one network delivers to another, but not on the type, source, or content of that traffic.³³⁴

Given these fundamental differences, the Chairman has appropriately recognized that IP traffic exchange and net neutrality are distinct, noting, “A lot of people seem to think the whole peering and interconnection topic is the same as net neutrality. It’s not, it’s a different issue — it’s a cousin, maybe a sibling, but it is not the same issue.”³³⁵

What is more, it is essentially a one-company issue, driven by Netflix, which is the largest user of Internet transmission resources in the world.³³⁶ Netflix and its allies conflate these distinct issues to coopt the momentum for net neutrality into support for their own pro-regulatory efforts, which are nothing more than attempts to shift their costs to ISPs and, ultimately, broadband customers who do not subscribe to Netflix. And while they claim to seek

³³³ Comcast Comments at 33-34; *see also* NCTA Comments at 79 (“[P]eering and transit arrangements present fundamentally different considerations than the proposed open Internet rules”); Verizon Comments at 70 & n.197.

³³⁴ NCTA Comments at 79.

³³⁵ Stacey Higginbotham, *The Netflix-Comcast agreement isn’t a network neutrality violation, but it is a problem*, GigaOm (Jan. 28, 2014), <http://gigaom.com/2014/02/23/the-netflix-comcast-agreement-isnt-a-network-neutrality-violation-but-it-is-a-problem/>.

³³⁶ Some have reported that Netflix’s traffic at peak times accounts for more than a third of all Internet traffic. *See* Drew Fitzgerald, *Netflix’s Share of Internet Traffic Grows*, *The Wall Street J.* (May 14, 2014), <http://online.wsj.com/news/articles/SB10001424052702304908304579561802483718502>.

regulation only of “points of interconnection to terminating ISPs’ networks”³³⁷ or “mass-market retail ISPs’ interconnection facilities”³³⁸ and not of “peering” or “transit” relationships *in general*,³³⁹ this purported distinction is meaningless. In reality, many ISPs have extensive backbone networks, and thus their exchange of traffic with edge providers and other IP networks often takes place very far upstream from the last-mile networks that they use to deliver traffic to their end-user customers.³⁴⁰ Thus, although these commenters frame their request as a modest one, they are effectively asking the Commission to intervene in the worldwide marketplace for peering and transit. Not only would that be a massive change to the underpinnings of the successful Internet ecosystem, it also would be an extraordinarily bad idea for the reasons discussed below.³⁴¹

³³⁷ Netflix Comments at 11.

³³⁸ Level 3 Comments at 11.

³³⁹ See, e.g., Level3 Comments at 14 (“To be clear, Level 3 is not advocating supplanting negotiated peering agreement with some kind of tariffed regime, and is not arguing that paid peering is inappropriate in all cases.”); Cogent Comments at 7 & n.16 (“There are various elements of Internet traffic exchange that can and, indeed, should be left to industry participants to work out among themselves.”). Unsurprisingly, the elements of IP interconnection that these commenters would leave to the marketplace rather than Commission regulation are the same elements that they themselves profit from.

³⁴⁰ Michael Kende, Analysys Mason, *Overview of recent changes in the IP interconnection ecosystem* (Jan. 23, 2011) (“*Kende Analysys Paper*”) (emphasis added) (discussing hot-potato routing); *id.* at 13 (discussing requirement of networks peering with AT&T to “interconnect in two mutual non-US peering locations *on distinct continents*” and “at a minimum of three mutually agreeable geographically diverse points in the US, . . . includ[ing] at least one city on the East Coast, one in the central region, and one on the West Coast”).

³⁴¹ Because the facts and policy dynamics of IP traffic exchange differ greatly from those underlying the net neutrality debate, the former set of issues should be evaluated (if at all) only in a separate proceeding after development of a full record. Indeed, a number of net neutrality advocates concede that additional factfinding would be required before the Commission could intervene in this area. See, e.g., CDT Comments at 32-33.

2. Regulation of IP Interconnection Would Throw an Efficient Marketplace for Peering and Transit into Chaos.

The marketplace for Internet traffic exchange is an unmitigated success story. Edge providers and other IP networks, regardless of their network size or scope, have choices to peer with other providers of similar size and scope, or to purchase transit or on-net-only connectivity from a variety of other providers. In fact, this market is more dynamic and competitive than ever before. There is no need for the Commission to intervene, and indeed such intervention would inflict considerable harm.

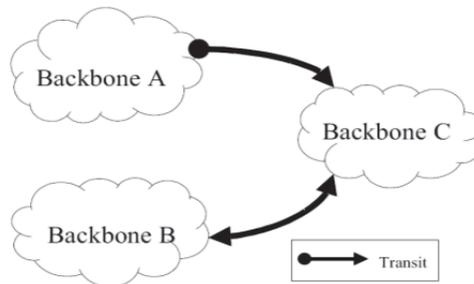
What is commonly referred to as “the Internet” is actually a loose confederation of thousands upon thousands of IP networks. These networks exchange IP packets with each other on the basis of unregulated private agreements. For more than two decades, such interconnection has taken the form of “transit” and “peering” agreements, and in recent years, “on-net-only” agreements have arisen in response to growing demands for video and other forms of media-rich content. Under a *transit* agreement, Network X becomes a customer of Network Y and pays it to arrange delivery of Network X’s packets *to any destination on the Internet* and to accept delivery of packets destined for Network X’s customers *from any location on the Internet*.³⁴² By contrast, under a *peering* agreement, two networks sharing similar characteristics (that is, “peers”)³⁴³

³⁴² Michael Kende, *The Digital Handshake: Connecting Internet Backbones*, FCC Office of Plans and Policy, OPP Working Paper No. 32, at 7 (Sept. 2000), available at http://www.fcc.gov/Bureaus/OPP/working_papers/oppwp32.pdf (“Kende FCC Paper”) (“[U]nlike in a peering relationship, with transit, the backbone selling the transit services will route traffic from the transit customer to its peering partners”); *Kende Analysis Paper* at 15.

³⁴³ As discussed below, peering is equivalent to a mutually-agreed-upon barter transaction. Although some mischaracterize peering as “free” interconnection, in reality the two networks agree to exchange traffic without an associated financial transaction because the resources they use on each other’s networks are roughly equal. See page 97, *infra*.

interconnect for the purpose of exchanging packets sent from customers served by one peer to customers served by the other peer.³⁴⁴ An FCC white paper summarizes these models:

In [the figure below], backbone A is a transit customer of backbone C; thus, the customers of backbone A have access both to the customers of backbone C as well as to the customers of all peering partners of backbone C, such as backbone B. If backbone A and backbone C were peering partners, ... backbone C would not accept traffic from backbone A that was destined for backbone B.³⁴⁵



On-net-only arrangements represent a third category that some parties refer to as “paid peering.” Under these arrangements, one network pays the other. But unlike in a transit arrangement, the networks interconnect to exchange traffic *only among their respective customers*; they do not exchange traffic destined for other points on the Internet. *On-net-only* arrangements arose as a way for CDNs and large content providers with asymmetric traffic flows to deliver their traffic to end users without paying for transit services.

In the 1990s, most Internet service providers exchanged traffic by purchasing transit services from what have traditionally been called “Tier 1” backbone networks; those large backbone networks interconnected directly with one another and thereby connected their respective ISP customers indirectly. Today, however, the Internet is less hierarchical in the

³⁴⁴ In this context, “customer served by a peer” means that the ultimate end user recipient of given IP packets subscribes either to the peer’s network itself or to another network that buys transit services from the peer’s network. *See Kende Analytysis Paper* at 10-11.

³⁴⁵ *Kende FCC Paper* at 7.

sense that, while most ISPs still purchase transit services from Tier 1 backbones, many ISPs enter into a range of arrangements (peering, transit, and on-net-only) in their own right—with one another, with smaller regional backbones, and with so-called “content-delivery networks,” which store content in cache servers close to interconnection points with individual ISPs.³⁴⁶

Importantly, since the inception of the commercial Internet, peering arrangements generally have been premised on the assumption that, among other things, the traffic exchanged between the two networks will be roughly balanced, such that each network will incur roughly the same costs in handling the traffic originated by the other network.³⁴⁷ To avoid administrative overhead, parties to these bilateral peering agreements typically forgo the mutual exchange of compensation and peer on a *settlement-free* basis.³⁴⁸ But in some cases, where the traffic volumes exchanged have become unequal, or where one network no longer meets each element of the other’s relevant peering criteria, there is no longer a basis for this type of barter transaction. In these circumstances, the parties may enter into an arrangement where one party pays the other to compensate for the imbalance of network infrastructure usage.³⁴⁹

These private commercial agreements have always been unregulated, yet the marketplace for peering and transit services has functioned with extraordinary efficiency. Because larger IP networks compete vigorously for the transit business of smaller ones, and because there are

³⁴⁶ See *Kende Analyysis Paper* at 10-11; Peyman Faratin, David Clark *et al.*, *The Growing Complexity of Internet Interconnection*, 72 *Communications & Strategies* 51, 55 (4Q 2008) (“*Faratin & Clark*”); Christopher S. Yoo, *Innovations in the Internet’s Architecture that Challenge the Status Quo*, 8 *J. Telecomm. & High Tech. Law* 79 (2010); Stanley M. Besen, *et al.*, *Evaluating the Competitive Effects of Mergers of Internet Backbone Providers*, 2 *ACM Transactions on Internet Technology* 187, 189-90 (2002).

³⁴⁷ *Kende Analyysis Paper* at 10-13.

³⁴⁸ *Id.*

³⁴⁹ *Id.* at 14.

many alternatives to transit, prices for transit service have plummeted dramatically over the past decade and a half—from approximately \$1200/Mbps in 1998, to approximately \$5/Mbps in 2010, to less than \$1/Mbps today.³⁵⁰ Competition in the transit market is fueled by massive continuing investments in fiber and IP platforms by ISPs and others, as well as the wide availability of peering. Contrary to popular misconceptions, peering is an option for *all* networks that share similar characteristics. While larger networks peer only with similarly large networks, smaller networks can and do peer with other small networks, resulting in a multitude of interconnection options available for any provider.³⁵¹

Indeed, some net neutrality proponents, while advocating caution, nonetheless acknowledge that this system has worked well thus far.³⁵² The Commission, too, has repeatedly found that the Internet transit and peering marketplace is competitive and efficient, and that any given IP network has little incentive or ability to engage in anticompetitive conduct.³⁵³ There is no plausible basis for—and certainly no record evidence to support—the concern that traffic

³⁵⁰ DrPeering International, *Internet Transit Prices (1998-2014) U.S. Internet Region* (last updated Aug. 2010), <http://drpeering.net/white-papers/Internet-Transit-Pricing-Historical-And-Projected.php>. See also Letter from Robert C. Barber, AT&T, to Marlene Dortch, Secretary, FCC, GN Docket No. 14-28 *et al.*, Attachment at 12 (filed July 30, 2014) (documenting trend).

³⁵¹ *Kende AnalySys Paper* at 14-15.

³⁵² See, e.g., CDT Comments at 32 (“Internet interconnection has traditionally been unregulated. CDT believes that the resulting system of voluntarily negotiated arrangements has generally worked well, to the benefit of the Internet and Internet users.”).

³⁵³ See, e.g., Memorandum Opinion and Order and Declaratory Ruling, *Applications filed by Global Crossing Ltd and Level 3 Communications, Inc. for Consent to Transfer Control*, 26 FCC Rcd 14056, 14067-69 ¶¶ 25-29 (WCB & IB 2011); Memorandum Opinion and Order, *AT&T Inc. and BellSouth Corp. Application for Transfer of Control*, 22 FCC Rcd 5662, 5736-38 ¶¶ 144-49 (2007); Memorandum Opinion and Order, *SBC Communications Inc. and AT&T Corp. Applications for Approval of Transfer of Control*, 20 FCC Rcd 18290, 18354-66 ¶¶ 116-39 (2005).

exchanges between IP networks will be any less efficient in the future, or remotely in need of prescriptive regulation.

But regulation of IP interconnection is not merely unnecessary; it also would be affirmatively harmful. It would subject IP traffic exchanges to the hornet's nest of regulatory controversies that have long beset interconnection on the PSTN, producing endless technical and regulatory disputes and miring the industry in years of litigation. Intervention also would distort the natural development of the Internet and require the Commission, rather than the marketplace, to select winners and losers.³⁵⁴ Moreover, as U.S. officials have warned, any Commission regulation of IP interconnection would encourage *foreign* authorities to begin regulating Internet peering and transit in ways that would undermine U.S. interests.³⁵⁵

3. ISPs Do Not Have a “Terminating Access Monopoly.”

Some commenters nonetheless argue that the Commission should intervene in this well-functioning marketplace to regulate the peering, transit, and interconnection agreements of *Internet service providers* alone. They contend that such regulation is necessary to ensure that

³⁵⁴ See, e.g., NCTA Comments at 81-82 (“And without perfect knowledge, regulators are likely to create opportunities for gamesmanship, diminish incentives to efficiently share and minimize costs, and (consequently) increase the price of Internet access to end users, rather than improving on the arrangements a free market produces.”); Verizon Comments at 73 (describing the harm that regulation would have on innovation).

³⁵⁵ See, e.g., Lawrence E. Strickling, Assistant Secretary, Brookings Inst., Remarks at the Brookings Institution’s Center for Technology Innovation, *Principles for Internet Governance: An Agenda for Economic Growth and Innovation* (Jan. 11, 2012), available at <http://www.ntia.doc.gov/speechtestimony/2012/remarks-assistant-secretary-strickling-brookings-institutions-center-technology> (“Many governments have called for the ITU to play a greater role in regulating peering and termination charges in order to compensate for lost telecommunication fees These governments fail to acknowledge how fundamentally different the Internet is to the forms of communication which preceded it.”); see also AT&T Comments at 69-72 (discussing concerns that additional U.S. regulations will prompt foreign regulators will impose even more burdensome obligations on ISPs and others).

ISPs do not abuse their “terminating access monopoly.”³⁵⁶ This contention ignores fundamental differences between the Internet and the conventional public-switched telephone network.

As AT&T has explained, the terminating access monopoly is a creature unique to the legacy telephone network, where network inefficiencies and regulatory distortions *do* give some carriers power to demand exorbitant fees for terminating other carriers’ traffic.³⁵⁷ But Internet traffic exchanges suffer from neither of these infirmities. As described above, the web of relationships among IP networks and the robust market for transmission alternatives ensures that there are many efficient paths through which Internet traffic can reach an ISP’s customers. Indeed, for the larger ISPs—which, ironically, advocates claim supposedly have the greatest

³⁵⁶ See, e.g., Free Press Comments at 144-147; AARP Comments at 46-49; Netflix Comments at 12.

³⁵⁷ The PSTN examples that the pro-regulation advocates cite as evidence of a “terminating access monopoly” involved failures not of the *market*, but of *regulation* itself, and they never would have arisen in the absence of government-mandated interconnection and intercarrier compensation obligations. For example, before the Commission intervened in 2001, a CLEC could charge any long-distance carrier radically inflated rates for terminating access traffic. It had that power not because of any market failure, but because the Commission had enacted rules that: (1) compelled interexchange carriers (“IXCs”) to interconnect with any CLEC and hand off all terminating traffic bound for that CLEC’s customers; (2) entitled the CLEC to tariff its termination rates unilaterally; and (3) required those IXCs to pay the tariffed termination rates in the process, no matter how objectionably high they might be. In addition, section 254(g) of the Communications Act precluded these IXCs not only from sending the bill to the called parties (*i.e.*, to the CLEC’s end users), but also from passing the inflated termination charges through to the specific calling parties who placed these particular calls. The net result of these Title II regulations was to make the CLECs’ subscribers completely indifferent to the level of these termination charges, and thus to preclude any market response to them. But the Commission has *never* found any “terminating access monopoly” in the *absence* of Title II interconnection and compensation obligations. And no such “monopoly” can be found anywhere on the Internet today, which has prospered entirely without interconnection obligations. See Comments of AT&T, *In the Matter of Connect America Fund*, WC Docket No. 10-90 *et al.*, at 27-32 (Feb. 24, 2012) (explaining in detail why differences in the PSTN and the Internet ecosystem give rise to a terminating access monopoly in the former but not the latter).

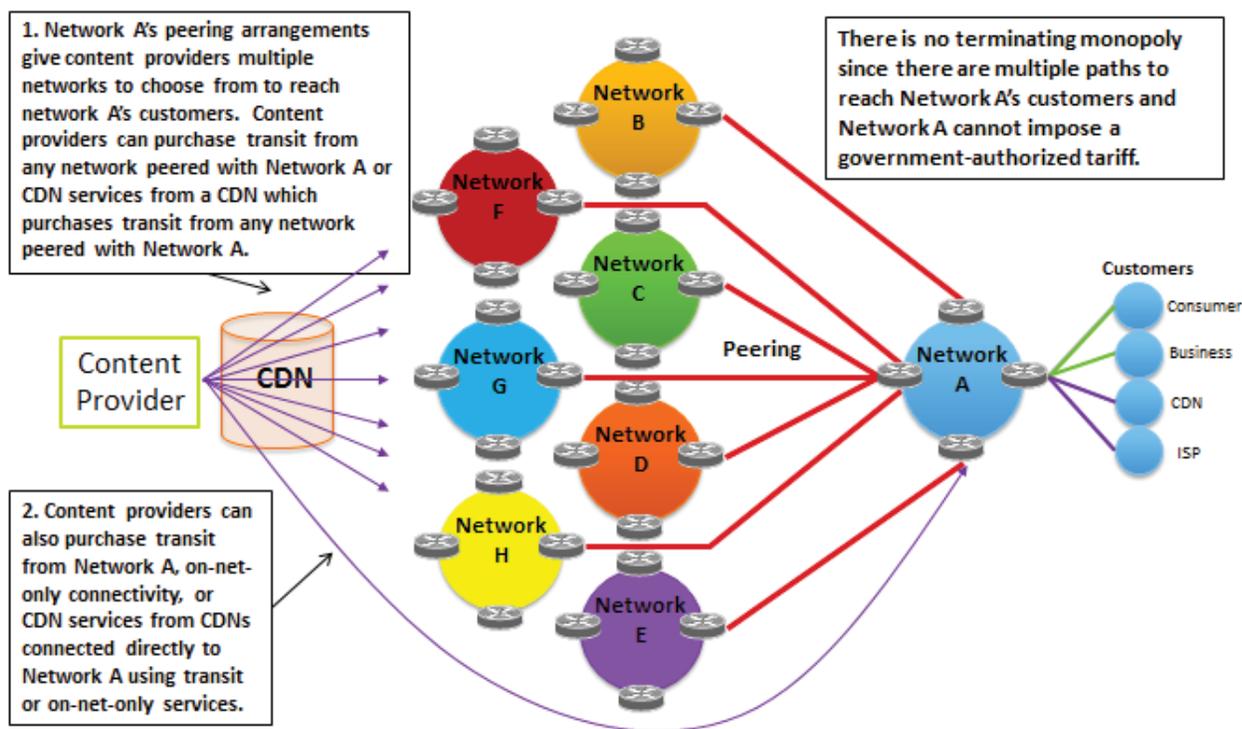
ability to “extract oligopolistic rents”³⁵⁸—there are often dozens of different ways to deliver traffic onto the ISP’s network. AT&T, for example, peers with more than 20 different networks and provides transit and on-net-only services to many more, providing a plethora of options for parties sending traffic to AT&T’s customers.³⁵⁹ Once traffic is delivered to AT&T via these connections, AT&T, just like any other ISP, delivers that traffic to its intended destination.

As a result, IP networks that prefer not to interconnect directly with an ISP have numerous indirect options to choose from, including transit arrangements with the ISP’s peering partners and CDNs that purchase transit from the ISP’s peering partners or that are directly connected to the ISP using on-net-only arrangements. For example, in the diagram above, if network A does not wish to pay network B’s price for direct interconnection, it can buy transit services from network C (among many other transit alternatives available from other networks that peer with network B), and C will then deliver A’s traffic to B (in this example the ISP) as part of C’s own peering arrangement with B.³⁶⁰ These options are outlined in greater detail in the following diagram:

³⁵⁸ Level 3 Comments at 2.

³⁵⁹ *See also* Verizon Comments at 72 (“Verizon has hundreds of agreements involving the exchange of U.S. Internet traffic with Verizon’s last-mile and backbone networks.”).

³⁶⁰ *See* page 96, *supra*.



In short, the multiplicity of alternative routes into a given ISP's network, combined with the web of Internet interconnection arrangements among CDNs and other networks, deprives any ISP of the ability to coerce inefficiently high payments from any other IP network.

4. Netflix's Proposal for Free Peering with All ISPs Regardless of Circumstances Attempts to Redefine Peering and Would Harm Both Consumers and the Internet Ecosystem.

Netflix and its business partners (Cogent and Level 3) take this flawed "terminating monopoly" argument a step further. Not only do they argue that the Commission should regulate ISPs' peering and transit agreements, they claim that ISPs should be barred from charging *anything* when they interconnect with other IP networks, regardless of whether that exchange of traffic is equal.³⁶¹ There is absolutely no legitimate policy rationale for such a fundamental change to the way that IP traffic exchange has always been handled. To the contrary, permitting

³⁶¹ See Netflix Comments at 10-19; Level 3 Comments at 15; Cogent Comments at 20-21.

Netflix to shift its transit costs to ISPs and their broadband customers would be bad for consumers and would inflict serious harm throughout the Internet ecosystem.

Content providers like Netflix have *always* paid other IP networks to handle the delivery of their content. Because they generate far more traffic than they receive, they have entered into transit arrangements with backbone providers and arrangements with content-delivery networks that interconnect with ISPs. And Netflix is an extreme case. As discussed, by some estimates streaming video from Netflix accounts for *more than a third* of the download traffic on the Internet during peak times.³⁶² Traditionally, Netflix did not interconnect directly with ISPs; instead, it paid CDNs and transit providers such as Cogent and Level 3 to transport traffic on its behalf. But in recent months, Netflix has sought interconnection agreements directly with larger ISPs.³⁶³ And despite complaining that it should not be required to pay *anything* for such interconnection, it now pays less under these direct arrangements than it would for comparable service on the open market for transit and CDN services.³⁶⁴

Netflix's current business partners, in turn, have bilateral agreements with ISPs. And in many cases, they traditionally have peered with ISPs on a settlement-free basis.³⁶⁵ However,

³⁶² See Drew Fitzgerald, *Netflix's Share of Internet Traffic Grows*, The Wall Street J. (May 14, 2014), <http://online.wsj.com/news/articles/SB10001424052702304908304579561802483718502>.

³⁶³ See, e.g., Drew Fitzgerald, *Netflix Reaches Interconnection Deal with Verizon*, The Wall Street J. (April 28, 2014), <http://online.wsj.com/news/articles/SB10001424052702304163604579530321917846620>.

³⁶⁴ See Dan Rayburn, *Here's how the Comcast & Netflix Deal is Structured, With Data & Numbers*, Streaming Media (Feb. 27, 2014), <http://blog.streamingmedia.com/2014/02/heres-comcast-netflix-deal-structured-numbers.html>; Letter from Christopher Libertelli, Vice President, Global Public Policy, Netflix, Inc. to the Honorable Al Franken at 2 (April 23, 2014), available at <http://www.franken.senate.gov/files/letter/140424NetflixResponse.pdf>.

³⁶⁵ See, e.g., Cogent Comments at 6 (noting that Cogent peers with Verizon and other ISPs on a settlement-free basis).

under the marketplace norms that have prevailed for more than two decades, such “free” peering is in fact a barter transaction predicated on both IP networks having comparable infrastructure and exchanging traffic on a roughly equal basis.³⁶⁶ And the tsunami of traffic flowing from Netflix over its few selected transit providers has created substantial congestion at the interconnection points with ISPs, because these transit providers have flooded their peering links to levels well beyond those anticipated by their peering arrangements with ISPs.³⁶⁷ Netflix has refused to adjust its traffic-routing practices to make use of other transit providers and content-delivery networks whose facilities could bear the load.³⁶⁸ And both Netflix and its transit providers have balked at entering into the type of on-net-only relationships with ISPs that that marketplace has always offered in such circumstances.³⁶⁹ Instead, Netflix and its business

³⁶⁶ See page 97, *supra*.

³⁶⁷ See Marguerite Reardon, *Comcast vs Netflix: Is this really about Net Neutrality?*, Cnet (May 15, 2014), <http://www.cnet.com/news/comcast-vs-netflix-is-this-really-about-net-neutrality/> (“Netflix is attaching a fire hose to the Comcast network, which is only equipped to handle connections the size of garden hoses. The gushing fire hose of content can’t possibly be funneled into the few garden hose ports that are available.”).

³⁶⁸ See Dan Rayburn, *Netflix & Level 3 Only Telling Half the Story, Won’t Detail What Changes They Want To Net Neutrality*, Streaming Media (March 21, 2014), <http://blog.streamingmedia.com/2014/03/netflix-level-3-telling-half-story-wont-detail-changes-want-net-neutrality.html> (“Saturating a peering point can easily be prevented if you buy transit from multiple providers, which Netflix does. But the reason Cogent is the one transit provider we always seem to hear about is because Netflix continued to push their traffic through Cogent even though they knew it was already congested. Even though Netflix was buying transit from multiple providers, it wasn’t routing around capacity issues, like all the other CDNs do.”).

³⁶⁹ See Marguerite Reardon, *Comcast vs Netflix: Is this really about Net Neutrality?*, Cnet (May 15, 2014), <http://www.cnet.com/news/comcast-vs-netflix-is-this-really-about-net-neutrality/> (“Netflix could fix this problem in one of two ways. It could pay for a fire hose connection instead of taking the garden hose connection that it can get through a standard peering relationship with Comcast. The large connection would accommodate the Netflix traffic. The other option is to distribute its traffic more evenly among other CDNs that are delivering traffic to Comcast. In this case, the video traffic could get onto the Comcast network via the many garden hoses already connected to the Comcast network. Of course, in either instance this would cost Netflix more money. The company would either have to pay Comcast for more

partners have adopted the novel approach of blaming the congestion on ISPs and demanding that those ISPs interconnect with them for free, in direct contravention to the barter basis for peering. In short, Netflix hopes to upend decades of standard industry practice by forcing ISPs, through wholly unnecessary and harmful regulations, to bear the full costs of such lopsided traffic.³⁷⁰

Accepting Netflix's demand would be bad for consumers and bad for the Internet ecosystem. If ISPs are forced to bear alone the very real costs imposed by Netflix's traffic, they will pass those costs down to their customers, at least 60 percent of whom are not Netflix customers.³⁷¹ Effectively, *all* broadband Internet access customers would be forced to subsidize Netflix's service, even though nearly two thirds of them do not subscribe to it. There is no conceivable policy justification for forcing countless low-volume Internet users to pay more for

capacity or the company would have to pay CDNs more money to deliver its traffic. In either instance, the additional costs that Netflix would incur under either of these scenarios are not new. The company has always had to pay for the transit and delivery of its content.”); Verizon Comments at 75 (“[C]ongested Netflix traffic was caused by Netflix’s decision to route its traffic over a handful of transit providers who had not made arrangements for connections that could handle Netflix’s traffic volumes, while the other peering and transit providers and content providers interconnecting with Verizon’s network in the customer’s area were not experiencing congestion. Thus, the solution to Netflix’s congestion problems is for Netflix to negotiate for direct interconnection paths capable of handling its unprecedented traffic volumes (as it has recently done with Comcast and Verizon) or to use other network providers or CDN providers that have done so.”).

³⁷⁰ Although Netflix casts this as an industry-wide issue, other video providers (and their business partners) do not raise similar concerns. *See, e.g., Akamai Comments at 9-12.*

³⁷¹ *See, e.g., Netflix, 2014 Quarterly Earnings Q2 14 Letter to Shareholders at 1* (July 21, 2014), http://files.shareholder.com/downloads/NFLX/3457584414x0x769748/9b21df7f-743c-4f0f-94da-9f13e384a3d2/July2014EarningsLetter_7.21.14_final.pdf (stating that the company has 35.09 million domestic subscribers); Press Release, “Nearly 1.2 Million Add Broadband in the First quarter of 2014,” Leichtman Research Group (May 20, 2014), <http://www.leichtmanresearch.com/press/052014release.html> (stating that there are 85,546,906 broadband subscribers in the United States). This figure almost certainly understates the actual percentage of broadband subscribers who do not use Netflix. It includes mobile customers in the numerator (Netflix subscribers) but not the denominator (wireline broadband subscribers), and it also includes within the numerator many Netflix “subscribers” who do not actually use the service but, for example, merely signed up for free trials.

their broadband service so that Netflix can avoid paying its fair share of the substantial costs that it imposes on the IP networks that transport its traffic.

Finally, fundamentally altering how ISPs exchange traffic with other IP networks would upend the well-functioning marketplace for peering and transit. The Commission would be forced to draw arbitrary lines concerning who is entitled to free interconnection and who must pay for it, and under what circumstances. And to do so, the Commission would need to craft rules that balanced a multitude of factors that could be relevant to such a line-drawing exercise, including: the locations where traffic may be exchanged between networks free of charge, the type of ISP terminating the traffic (e.g., mobile, wireline, fixed wireless), the type of interconnecting provider (e.g., content provider, CDN, backbone provider), the type of end user (e.g., consumer, small business, enterprise), and many other variables. But the marketplace is already accounting for such factors with extraordinary efficiency today without prescriptive rules. In short, the Commission should not introduce chaos into a system that has for decades facilitated the incredible growth and dynamism of the Internet merely to further the business interests of a single edge provider that is trying to game the system.

B. The Record Demonstrates That There Is No Need for Additional Transparency Obligations.

As detailed in AT&T's opening comments, there is no reason for the Commission to impose additional transparency obligations on broadband Internet access providers, and, indeed, such obligations would do more harm than good.³⁷² The record established in this proceeding only reinforces the wisdom of retaining the existing transparency rules.

³⁷² AT&T Comments at 79-91.

The comments demonstrate beyond any doubt that both wireline and mobile broadband providers already disclose extensive information regarding their offerings. Commenters detailed a plethora of disclosures and tools that provide more than sufficient information to consumers³⁷³ and edge providers.³⁷⁴

Some advocates nonetheless urge the Commission to impose additional transparency obligations.³⁷⁵ But none of those commenters identifies any actual shortcomings in broadband providers' current disclosures, much less any problem that could not be resolved through enforcement of the *existing* transparency rules. Importantly, "there is no indication that there has been a material influx of complaints at the Commission regarding the accuracy or adequacy of compliance with the transparency rule."³⁷⁶ As the American Cable Association notes, while the

³⁷³ Bright House, for example, showcased the clear disclosures that it provides to consumers, which include easy-to-understand graphics, clear explanations of download and upload speeds, unambiguous pricing information about its unbundled and bundled services, and detailed information about how it will provide notice of changes that might affect price, speed, and network management. Bright House Comments at 9-10. Charter described a consumer-friendly application that allows its customers to test a variety of metrics related to Internet performance, including download and upload speeds, latency, and jitter. Charter Comments at 22-23 & nn.53-56. Numerous other providers described detailed disclosures and customer measurement tools, including usage-management tools. *See, e.g.*, Comcast Comments at 15 & n. 41; T-Mobile Comments at 8-9 & nn.18-19; Time Warner Comments at 31-32 & nn.87-88; ACA Comments at 26-37; CenturyLink Comments at 25-26 & n.75 (providing a comprehensive list of websites where FAQs and other disclosures can be found for ISPs).

³⁷⁴ *See, e.g.*, AT&T Comments at 85-86. As of August 14, 2014, the AT&T Developer Program had 51,706 registered members. In the first half of 2014 alone, that program held 16 Hackathons hosting 2,609 attendees; six DevLab "classroom style" training sessions hosting 297 participants; and held its 8th annual AT&T Developer Summit, with more than 3,700 registrants overall and more than 900 developers registered for the two-day Hackathon held prior to the Summit event. AT&T has documented several customer Success Stories using AT&T APIs at <http://developer.att.com/success-stories/>.

³⁷⁵ *See, e.g.*, Public Knowledge Comments at 115-116; EFF Comments at 29-34; Consumers Union Comments at 14-16; Internet Freedom Supporters Comments at 19-20.

³⁷⁶ ACA Comments at 30-31.

NPRM states that the Commission has “received hundreds of complaints from consumers,” “given that there are well over 80,000,000 broadband subscribers in the United States served by major providers alone, several hundred consumer complaints over a two-and-one-half-year period is an extremely small number.”³⁷⁷ Moreover, there is no evidence that these complaints concern inadequate disclosures, as opposed to merely dissatisfaction with some other aspect of the service provided.³⁷⁸

Some advocates of greater regulation speculate about *potential harms* that they believe could be averted through new rules.³⁷⁹ But as many other commenters warn, additional transparency requirements would have real costs *now* that far outweigh those speculative future harms. For example, ISP disclosures containing additional complicated technical information would confuse the vast majority of consumers and would drown out other information that is far more useful to end users.³⁸⁰ As Frontier notes, this would compound an issue that the Commission has acknowledged, namely, that consumers already have trouble understanding “commonly used terms associated with the provision of broadband services.”³⁸¹ Furthermore, several commenters caution that collecting and disclosing additional types of data would be

³⁷⁷ *Id.*

³⁷⁸ As the Commission noted in the *NPRM* when describing the mere “hundreds” of complaints that it had received from a customer base of eighty million: “Our analysis of consumer complaints received since the transparency rule took effect shows a significant number of consumer complaints about provider speeds, charges, and other commercial practices that the rule was designed to disclose. . . . In some cases, however, it is difficult to discern whether the consumer’s frustration is with slow speeds or high prices generally, or instead with how the service as actually provided differs from what the provider has advertised.” *NPRM* ¶ 69 n.163.

³⁷⁹ See Internet Freedom Supporters Comments at 19-20; Public Knowledge Comments at 116; EFF Comments at 30.

³⁸⁰ See CenturyLink Comments at 30; Bright House Comments at 11; ADTRAN Comments at 41-43; Verizon Comments at 23.

³⁸¹ Frontier Comments at 6 (quoting *NPRM* ¶ 68).

technically difficult and expensive to implement.³⁸² These additional burdens would have an especially pronounced impact on smaller providers.³⁸³

Requiring disclosure of additional information also could create security vulnerabilities that harm ISPs' networks and, ultimately, the customers those providers serve. As Cisco and other commenters have warned, mandating detailed disclosures about network management practices could enable hackers to exploit ISP networks and empower unscrupulous edge providers to evade reasonable congestion-management practices that are necessary to ensure high-quality service for all customers.³⁸⁴ In short, absent any problem to be solved, the adoption of more burdensome transparency rules would harm consumers rather than help them.

In any event, new disclosure requirements would also be unworkable in many cases because uniform measurement standards do not exist.³⁸⁵ Metrics such as "corruption" or "jitter" are measured differently by different providers, and vary depending on the type of traffic at issue.³⁸⁶ Indeed, some commenters favoring increased regulation acknowledge that standards for certain service characteristics would need to be developed.³⁸⁷ Such standardization efforts

³⁸² See Charter Comments at 26; CTIA Comments at 36 (describing the specific challenges that collecting the type of granular information mentioned in the NPRM would pose for mobile broadband providers); ADTRAN Comments at 41-43.

³⁸³ See WTA – Advocates for Rural Broadband Comments at 8-9; Competitive Carriers Association Comments at 8-9.

³⁸⁴ See Cisco Comments at 19; CenturyLink Comments at 30-31; Cox Comments at 21.

³⁸⁵ See CenturyLink Comments at 30; Charter Comments at 27.

³⁸⁶ See AT&T Comments at 89.

³⁸⁷ See Consumers Union Comments at 15; Microsoft Comments at 30-31.

already are underway, and the Commission should not short-circuit those efforts by adopting additional transparency rules now.³⁸⁸

C. The Record Confirms the Wisdom of the Commission’s 2010 Approach to Specialized Services.

A wide range of commenters support the Commission’s current approach to specialized services.³⁸⁹ Indeed, the record confirms that nothing has changed to warrant a departure from the Commission’s 2010 rules.

In the *Open Internet Order*, the Commission rightly adopted a measured approach to “‘specialized services,’ such as some broadband providers’ existing facilities-based VoIP and Internet Protocol-video offerings.”³⁹⁰ The Commission explained that such services could “drive additional private investment in broadband networks and provide end users valued services, supplementing the benefits of the open Internet.”³⁹¹ The Commission also found, however, that the use of specialized services could raise some concerns.³⁹² The Commission thus committed to “monitor and proceed[] incrementally with respect to specialized services, rather than adopting policies specific to such services at this time.”³⁹³

The Commission should follow that same approach now. The decision in the *Open Internet Order* to observe the specialized services marketplace and intervene only if a problem emerged was an important part of the balance struck in 2010, and nothing has changed that

³⁸⁸ See AT&T Comments at 89-90.

³⁸⁹ See, e.g., Cisco Comments at 12-16; Comcast Comments at 3, 27-31; Bright House Comments at 17-19; Consumer Electronic Association Comments at 9-11.

³⁹⁰ *Open Internet Order*, 25 FCC Rcd at 117965 ¶ 112.

³⁹¹ *Id.*

³⁹² *Id.*

³⁹³ *Id.* at 117965-66 ¶ 113.

would require a different approach now. No commenter has identified any problem that has arisen since 2010 with respect to specialized services. And a wide variety of commenters advocate maintaining the status quo. Indeed, even many net neutrality proponents acknowledge that the Commission should merely continue to monitor developments with respect to specialized services.³⁹⁴

³⁹⁴ See, e.g., CDT Comments at 5-7, 23, 27-28 (“The Commission should continue to monitor carefully broadband access providers’ practices relating to specialized services Such monitoring will allow the Commission to respond to any concerns that arise in connection with specific practices without unduly hampering providers’ ability to innovate in the provision of specialized services generally.”).

CONCLUSION

The Commission should embrace the opportunity presented by the D.C. Circuit's remand in *Verizon* by adopting the policies outlined above.

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September 15, 2014