

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20544**

In the Matter of)	
)	
Restoring Internet Freedom)	WC Docket No. 17-108
)	
)	

REPLY COMMENTS OF VERIZON

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TABLE OF CONTENTS

I. The Open Internet Is Best Protected Through Legislation, Not Title II Reclassification	5
A. Commenters Acknowledge Market Competition.....	6
B. Congress Is Best Able to Resolve These Issues Once and For All	13
C. The Commission Should Make Clear that State and Local Regulation Is Preempted	15
D. Many Commenters Agree on Guiding Principles for Any Future Rules.....	20
II. The Commission Can and Should Correct the 2015 Open Internet Order’s Reclassification of Broadband Internet Access Service	26
A. Title II Is Unnecessary Because the FTC Can Enforce Internet Openness.....	26
B. Broadband Internet Access Service Is an “Information Service” Under 47 U.S.C. § 153.....	28
C. Mobile Broadband Internet Access Service Is a “Private Mobile Service” Under Section 332	37
III. CONCLUSION	38

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As we said in our opening comments, and as we’ve repeated multiple times, an open Internet is good for consumers and good for our business.² Most of the other substantive comments filed in this proceeding agree that consumers should be able to access the legal content of their choice when and how they want, while providers should be able to invest in networks and create new products with confidence. Where we disagree is on the best way to achieve that goal. We – along with many others – believe the give and take of this competitive marketplace is the best solution, and that national legislation is the right way to address any remaining issues. Others assert that only the antiquated strictures of Title II will adequately protect consumers. But Title II isn’t working and ultimately will handcuff innovation, stifle investment, and hurt consumers, as many commenters have noted. The Commission should reverse its Title II classification. Congress should set in place reasonable rules that protect the open Internet once and for all.

¹ The Verizon companies participating in this filing are the regulated, wholly owned subsidiaries of Verizon Communications Inc.

² See, e.g., Comments of Verizon, *Restoring Internet Freedom*, WC Docket No. 17-108 (July 17, 2017) (“Verizon Comments”); Craig Silliman, “Net Neutrality: A Path Forward,” *Verizon News* (Mar. 21, 2016), <http://www.verizon.com/about/news/net-neutrality-path-forward>.

A lot of comments have been filed in this proceeding – more than 21 million as of this filing. A huge number of them, particularly recently, are demonstrably bogus, using email addresses created by an online fake email generator.³ And another large percentage are filed from international addresses.⁴ The remaining comments appear to be split both for and against repeal of Title II classification for broadband Internet access services. And while we’ve not reviewed every single one, what’s striking is how many are focused on re-trudging old ground, as if this case is a question of first impression.

That’s the wrong approach. The *Notice*⁵ instead proposes to *restore* the Commission’s longstanding classification of broadband Internet access service that persisted for two decades across presidential administrations from both parties before the *Title II Order*.⁶ The Commission acted reasonably for those twenty years, as the Supreme Court concluded. Having now seen that Title II treatment is inconsistent with huge portions of the statutory text, based on flawed assumptions, bad for innovation and investment in the marketplace, *and* counter to new record evidence, the Commission is free to return to its prior interpretation. Nothing in the Communications Act or the Administrative Procedure Act (APA) requires the Commission to blindly hold fast to what it believes to be legally and factually erroneous determinations that also undermine its policy views about the best way to encourage an open Internet and broadband deployment.

³ See Peter Flaherty, National Legal and Policy Center, “Another 5.8 Million Fake Net Neutrality Comments Found” (Aug. 8, 2017), <http://nlpc.org/2017/08/08/another-5-8-million-fake-net-neutrality-comments-found-1-5-million-fakes-put-online-public-scrutiny/>.

⁴ *Id.*

⁵ See *Restoring Internet Freedom*, Notice of Proposed Rulemaking, 32 FCC Rcd 4434 (2017) (“*Notice*”).

⁶ *Protecting and Promoting the Open Internet*, Report and Order on Remand, Declaratory Ruling, and Order, 30 FCC Rcd 5601 (2015) (“*Title II Order*”).

Instead, the Commission should return these services to the longstanding, light-touch, and bipartisan approach that successfully governed the Internet for most of its history. The market for these services has been and continues to be competitive in many areas – and the competition for wireless broadband is ubiquitous – as multiple commenters and economists note. A competitive marketplace creates incentives for providers to implement business models and practices that benefit consumers, while reducing both the incentives and ability to engage in practices that harm consumers or competition.⁷ Thus, as we noted previously, and as others confirm here, market forces already generally compel broadband providers to abide by open Internet principles. Further, multiple commenters have set forth evidence showing that public utility-style regulation will decrease investments and adversely affect innovation going forward, without offsetting incremental benefits.⁸ Given this atmosphere, there are significant potential harms from utility-style regulation – harms that are not outweighed by potential benefits.⁹ Such regulation fails a cost-benefit analysis, and therefore is unjustified and will make consumers of broadband Internet access services worse off.¹⁰

We thus agree with the Commission’s proposal to reclassify broadband Internet access services away from Title II. After taking that important step, policymakers should adopt a reasonable backstop of enforceable rules to protect consumers and competition. Such rules

⁷ See, e.g., Declaration of Andres V. Lerner and Janusz A. Ordovery, *An Economic Analysis of Title II Regulation of Broadband Internet Access Providers* (July 17, 2017), Verizon Comments at Exhibit A, ¶¶ 11, 35, 37, 58-64, 72, 74, 83-89 (“Lerner & Ordovery Decl.”); Reply Declaration of Andres V. Lerner and Janusz A. Ordovery, *Title II Regulation of Broadband Internet Access Providers* (Aug 30, 2017), attached at Exh. A, ¶¶ 4-11, 34 (“Lerner & Ordovery Reply Decl.”).

⁸ Lerner & Ordovery Reply Decl., ¶¶ 1, 11-17, 60-77.

⁹ See Lerner & Ordovery Decl., ¶¶ 3-6, 26-27 (noting that various empirical studies of telecommunications industries find that increased regulation deters investment and innovation); Lerner & Ordovery Reply Decl. ¶¶ 11-18, 60-69.

¹⁰ Lerner & Ordovery Reply Decl. ¶¶ 1, 17, 74-77.

would protect smaller providers or consumers, who may not have time to wait for enforcement processes to work. For that, we believe, and many others agree with us or are open to the possibility, that action from Congress is necessary. A national legislative solution will resolve these issues once and for all, giving certainty to providers and consumers alike. New legislation could enact rules that reflect the existing competition and dynamism evident in today's broadband marketplace, rather than trying to shoehorn part of today's diverse Internet ecosystem into last century's utility framework. And new legislation could recognize that, far from consisting just of Internet Service Providers (ISPs), there are multiple different providers, networks, and applications that make up the Internet and affect the consumer experience online. Even while Congress is reviewing the issue, once common-carriage regulation is removed, the Federal Trade Commission (FTC) would again have jurisdiction to protect consumers and competition, as it already does in nearly every other part of the economy. Further, should the Commission choose to adopt rules of its own, courts have held that it has at least some authority under Section 706 to adopt rules for the open Internet.

Because the Internet is inherently interstate, any framework or rules adopted by Congress or the Commission must be national. Rules that stop at the state line – including rules for important concerns such as privacy – don't work in today's interconnected world where providers may be in one state, users in another, and the Internet content a user wants coming from a third, fourth, or fifth, and possibly traveling across the Internet backbone in multiple states. With providers and users hopscotched across states – and around the world – state-by-state rules would be impossible to comply with. For that reason, the Commission should exercise its authority in this proceeding to preempt state and local regulation of broadband Internet access service.

In this national framework, the record shows that there are at least some large areas of commonality on what the rules should cover, even if parties disagree with us on the right source of authority. Parties largely appear to agree that – regardless of the source – appropriate rules should address the issues of transparency, blocking, and throttling of content based on its source for broadband Internet access services. Parties also concede that providers should be able to manage their networks reasonably. A number of parties agree that providers should not be able to charge content suppliers a fee to deliver their Internet traffic faster than the Internet traffic of others where the result is harm to competition or consumers. Further, there does not seem to be much dispute that such rules should apply to broadband Internet access only, not to the specialized services that will continue to emerge as the Internet of Things and smart networks evolve.

In short, despite the heated and voluminous rhetoric that has marked this and prior open Internet discussions, there’s a lot of things on which we can agree. The most important is that consumers should continue to be able to access the lawful Internet content they choose using broadband Internet access services. At the same time, providers should have the certainty that they can make the heavy investments required for modern broadband networks, develop new products and offers, manage their networks reasonably and effectively, and continue to be able to offer differentiated or specialized services that may appeal to those who are looking for a different offering. With these principles in place, all of us can continue to work toward building and deploying the next generation of broadband.

I. The Open Internet Is Best Protected Through Legislation, Not Title II Reclassification

There is substantial evidence in the record confirming that mass market broadband Internet access services are competitive in many areas and that wireless competition is

ubiquitous. Multiple commenters agree that in light of the “fierce” competition¹¹ present in many parts of the broadband marketplace, the current Title II rules are neither appropriate nor justified, and that an appropriate framework to protect customers and competition is best derived by federal legislation.

A. Commenters Acknowledge Market Competition

Commenters agree with our position¹² that mass market broadband access service is competitive in many areas. CenturyLink explains that regulated wireline telephone companies “compete vigorously with cable providers, wireless companies and other types of Internet Service Providers (ISPs).”¹³ Frontier notes that “with telco, cable, fixed wireless, mobile wireless, and satellite providers, the United States broadband market is far from a monopoly and has never been more competitive.”¹⁴ USTelecom observes that “broadband services – both wired and wireless – have been competitive from the outset.”¹⁵ Providers note that broadband providers are “competing vigorously, differentiating their services based on attributes such as data speed and price.”¹⁶ Comcast argues that even where there might be a limited number of providers in some markets, the potential competition of large nationwide providers disciplines prices.¹⁷

¹¹ T-Mobile Comments, at 3. Unless otherwise noted, all references to “Comments” here were filed by the named party in FCC WC Docket No. 17-108 on or around July 17, 2017.

¹² Verizon Comments, at 1-2, 9-10.

¹³ CenturyLink Comments, at 1

¹⁴ Frontier Comments, at 11.

¹⁵ USTelecom Comments, at 2.

¹⁶ *See, e.g.*, CenturyLink Comments at 5.

¹⁷ Comcast Comments, Appendix. C, at 9.

Commenters particularly underscore the level of competition in mobile broadband services. For example, AT&T explains that “competition is strong in all broadband market segments and particularly fierce in mobile.”¹⁸ T-Mobile agrees, concluding that the “data points to a single conclusion: There can be no doubt that the mobile broadband marketplace is fiercely competitive, and becoming increasingly competitive as fixed broadband providers, such as Comcast and Charter, are now offering mobile broadband services.”¹⁹ CTIA observes that “the broadband marketplace – and the mobile broadband marketplace in particular – are (and were in 2015) extremely competitive.”²⁰ And Mobile Future notes that “[t]he market for mobile broadband is even more competitive now than when the *2015 Title II Order* or the *2010 Open Internet Order* were adopted.”²¹

It’s not just providers who tout the competition in much of the broadband access market: other companies whose businesses depend on the Internet agree.²² Qualcomm describes the market as “ferociously competitive.”²³ Ericsson notes specifically the increase in wireless

¹⁸ AT&T Comments, at 22.

¹⁹ T-Mobile Comments at 3.

²⁰ CTIA Comments, at 22-23 (stating that “the broadband marketplace – and the mobile broadband marketplace in particular – are (and were in 2015) extremely competitive”)

²¹ Mobile Future Comments, at 5.

²² These firms “have the incentive to make a completely unbiased judgment on the matter” because they “stand to gain an expanding market” as consumers’ usage and satisfaction with Internet access services grows. *United States v. W. Elec. Co.*, 993 F.2d 1572, 1582 (D.C. Cir. 1993). Their comments accordingly warrant particularly careful consideration.

²³ Qualcomm Comments, at 4.

competition.²⁴ Cisco surveys the benefits of historic light-touch regulation and concludes that “[c]ompetition among broadband providers ... flourished under Title I.”²⁵

Economists likewise agree. As Drs. Lerner and Ordover conclude, commenters do not generally allege that there is insufficient competition between wireless broadband providers.²⁶ Further, they note that even those commenters who argue there is a lack of competition in the wireline market do not dispute that companies like Verizon face significant competition from next-generation, high-speed cable services in essentially all the areas in which they offer consumer wireline broadband access; these parties also ignore the degree to which wireless broadband access services are increasingly becoming a viable competitive alternative.²⁷ Dr. Israel found that “the broadband Internet access marketplace is effectively competitive today and is becoming even more competitive, including due to wireless and wireline convergence.”²⁸ Dr. Hahn notes the many indicia of healthy competition, including “numerous providers, rising levels of output, and declines in per-unit pricing”²⁹ Dr. Dippon concludes that even where there are markets with a smaller number of broadband providers, the environment remains “workably competitive.”³⁰

²⁴ Ericsson Comments, at 10-11 (“Given this increase in [wireless] competition, the case against net neutrality regulation and Title II reclassification is even stronger now than it was at the time of the 2015 *Title II Order*.”)

²⁵ Cisco Comments at 4.

²⁶ Lerner & Ordover Reply Decl. ¶¶ 4, 20-25.

²⁷ *Id.* ¶¶ 6-7.

²⁸ AT&T Comments, at Attachment, Declaration of Mark Israel, Allan Shampine & Thomas Stemwedel, ¶ 14 (“Israel Decl.”).

²⁹ CTIA Comments, at Exhibit. B, Declaration of Robert Hahn, ¶ 12 (“Hahn Decl.”).

³⁰ Economic Analysis by Christian M. Dippon, PhD, *Public Interest Repercussions in Repealing Utility-Style Title II Regulation and Reapplying Light-Touch Regulation to Internet Services* (July 17, 2017), Comcast Comments, Appendix C at 9.

Commenters agree that in this robust field, Internet service providers do not act as gatekeepers.³¹ Thus not only do providers not have incentives to harm customers, they are discouraged from doing so. As Free State Foundation explained, the “robust competition discourages broadband ISPs from harming consumers because 99% of consumers have the ability to switch between multiple providers.”³² ADTRAN concludes that “ISPs are unlikely to engage in anticompetitive conduct” and notes that even as of today, “there has not been anticompetitive misconduct, nor is it likely to occur.”³³

On the other hand, there is substantial evidence that, given the absence of market power, Title II regulation is harming consumers and competition. A group of small manufacturers explain that “Title II regulation hurts *all* companies making hardware and software used in providing broadband Internet access service,” and that risk is “especially severe” for small and mid-size manufacturers.³⁴ The National Association of Manufacturers agrees, explaining that they are “greatly concerned the Internet regulatory regime put in place during the previous Administration will derail future investment in our nation’s broadband infrastructure.”³⁵ The Telecommunications Industry Association shares this view, arguing that after ISPs drove more than \$800 billion into the nation’s broadband infrastructure from 2002-14, the “Title II Order has placed their investments at risk and undermined the value of their deployments without any

³¹ See, e.g., American Consumer Institute Comments, at 6 (concluding that “profits of network access providers do not reflect market power and do not provide the basis of market failure”); Israel Decl., ¶¶ 65-70. See also Lerner & Ordoover Decl. ¶¶ 83-91; Lerner & Ordoover Reply Decl. ¶¶ 7-10, 35-50.

³² Free State Foundation Comments, at 25

³³ ADTRAN Comments, at 22.

³⁴ Coalition of 17 Small and Mid-Size Manufacturers of Products for Broadband Networks Comments, at 3.

³⁵ National Association of Manufacturers Comments, at 2 (“NAM Comments”).

commensurate benefit to consumers.”³⁶ Cisco asserts that “imposing common carriage mandates has been detrimental to the investment and innovation which led to the Internet’s success in the first place – and it is consumers who will bear the brunt of this regulatory diminution.”³⁷ Nokia concludes that Title II classification has discouraged spending on infrastructure and increases costs to consumers.³⁸ Comcast, relying on Dr. Dippon’s economic analysis, finds that Title II causes more harm than good, citing lost investment in the tens of billions per year and harms to innovation.³⁹

Some parties try to argue against the broad evidence that Title II is harmful to investment – but these claims are belied by the facts. For example, Microsoft repeats claims that “no ISP said in a securities filing this year that the 2015 FCC order had caused them to spend less on infrastructure.”⁴⁰ Yet as USTelecom recently catalogued, almost every major publicly traded ISP *has* noted the risks from Title II regulation in their public SEC filings on multiple occasions.⁴¹ For example, Verizon has repeatedly disclosed the risks from Title II regulation of broadband access, noting that the 2015 *Title II Order* “created a risk that such regulation would limit the ways that broadband Internet access service providers structure their business

³⁶ Telecommunications Industry Association Comments, at 4-5. *See also id.*, at 6-7.

³⁷ Cisco Comments, at 1-2.

³⁸ Nokia Comments, at 5.

³⁹ Comcast Comments at 27-34, 34-40.

⁴⁰ Microsoft Comments, at 3.

⁴¹ *See* Jonathan Spalter, “Two Cities, One Message: Title II Creates Uncertainty,” USTelecom (Aug. 4, 2017), <https://www.ustelecom.org/blog/two-cities-one-message-title-ii-creates-uncertainty>.

arrangements and manage their networks and could spur additional restrictions, including rate regulation, that could adversely affect broadband investment and innovation.”⁴²

Other commenters, unable to dispute the strong evidence of competition, resort to trying to tar Internet service providers with claims that they intend to or have already tried to harm consumers and competition.⁴³ These attacks are baseless for at least two reasons. First, much of the claimed misbehaviors are – at best – conjecture and imagination. For example, parties claim that ISPs have indicated that they might explore paid prioritization, absent Title II rules.⁴⁴ But they ignore the competitive market drivers that will discipline offerings to the extent that they might harm consumers or competition.⁴⁵ Others make stale claims that do not even relate to broadband Internet access, such as allegations concerning congestion at interconnection points (which regardless have been disproven or shown to have been caused by edge providers themselves);⁴⁶ assertions that Verizon discriminated in failing to provide a text-messaging “short

⁴² Verizon Communications Inc., Form 10-K (Annual Report), at 14 (Feb. 21, 2017), http://verizon.api.edgar-online.com/EFX_dll/EdgarPro.dll?FetchFilingHTML1?SessionID=fwN_qmn_u09FI_R&ID=11871260.

⁴³ *See, e.g.*, AARP Comments, at 11-12 (asserting that Verizon has indicated that but for regulatory constraints, it would be pursuing alternative pricing models, including charging edge providers for the delivery of traffic and asserting that Verizon and others allowed congestion at interconnection points), Consumers Union Comments, at 3, and Electronic Privacy Information Center Comments, at 13 (same); Free Press Comments, at 66-67 (claiming that ISPs blocked Google Wallet), Public Knowledge and Consumers Union Comments, at 106 (“Public Knowledge Comments”) (same); American Civil Liberties Union Comments, at 15 (alleging that ISPs blocked pro-choice text messages), and Greenlining Institute Comments, at 17 (same); National Association of State Utility Consumer Advocates Comments, at 10 (asserting ISPs have incentives to favor affiliated content), and Electronic Frontier Foundation Comments, at 8 (same) (“EFF Comments”).

⁴⁴ *See, e.g.* AARP Comments at 11-12.

⁴⁵ *See, e.g.*, Lerner & Ordober Decl. ¶¶ 5, 11, 13-14; Lerner & Ordober Reply Decl. ¶¶ 35-43.

⁴⁶ Nick Statt, “Netflix Admits to Throttling Video for AT&T and Verizon Customers,” *The Verge* (Mar. 24, 2016), <https://www.theverge.com/2016/3/24/11302446/netflix-admits-throttling-video-att-verizon-customers>; Ryan Knutson and Shalini Ramachandran, “Netflix

code” (which is in any case inaccurate);⁴⁷ and claims relating to when ISPs permitted installation of Google Wallet (which originally had technical restrictions based on how devices managed embedded security, and which regardless is not broadband access). None of these allegations is relevant here.

In short, there is substantial evidence in the record from which the Commission can conclude that any benefits from Title II regulation under today’s market conditions do not outweigh the harms caused by its application here. As Drs. Lerner and Ordovery point out, “to benefit consumers, the costs and harms associated with Title II regulation must be outweighed by the incremental benefits of imposing such public-utility regulation compared to targeted rules aimed at ensuring consumer access to online content and services (and on top of existing antitrust and consumer protection laws).”⁴⁸ They correctly conclude that under the evidence in the record here, “[i]t is unambiguous that Title II regulation creates significant harms, without any offsetting incremental benefits” and, thus, continued Title II regulation “will diminish innovation and investment, distort competition, and, consequently, harm consumer welfare.”⁴⁹

Throttles Its Videos on AT&T, Verizon Networks,” Wall Street Journal (Mar. 24, 2016), https://www.wsj.com/article_email/netflix-throttles-its-videos-on-at-t-verizon-phones-1458857424-1MyQjAxMTE2OTIyNDMyNDQxWj.

⁴⁷ See Letter from Dee May, Verizon, to Marlene Dortch, FCC, *Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion*, GN Docket No. 07-45, (Feb. 25, 2008) (enclosing statement by Verizon Executive Vice President Tom Tauke, that says in relevant part: “Last fall, NARAL sought a short code from Verizon Wireless. That request was initially declined, based on a misapplication of our content policy. As soon as Verizon Wireless management learned that NARAL was denied a short code, that decision was reversed.”)

⁴⁸ Lerner & Ordovery Reply Decl. ¶ 76.

⁴⁹ *Id.*

B. Congress Is Best Able to Resolve These Issues Once and For All

As we said in our opening comments, although in our experience market forces already compel broadband providers to abide by open Internet principles, we support a backstop of enforceable rules that guard against acts that would harm consumers or competition. Such rules could protect smaller providers or consumers that do not have the ability or funds to wait for *ex post* enforcement processes to work.

We think – and many other commenters agree – that those rules should come from Congress. Like Verizon, many commenters urge Congress to act to resolve these issues. These include manufacturers,⁵⁰ ISPs,⁵¹ and civil rights and consumer groups.⁵² For example, Ericsson

⁵⁰ See, e.g., NAM Comments, at 2 (“the NAM firmly believes it is necessary for Congress to act in this matter to make the internet permanently open.”); see also Oracle Comments, at 6.

⁵¹ See, e.g., AT&T Comments at 7 (“Optimally, Congress would put any remaining legal issues to rest by enacting new legislation”); CenturyLink Comments at vi (“only Congressional action further codifying the appropriate light touch treatment of BIA service can eliminate the potential for an endless game of regulatory ping pong whereby the regulatory treatment of these important services is redefined every time a new party gains control of the White House.”); Comcast Comments at 51 (“Congressional action is the best and, in the end, perhaps the only way to put an end to the decade of regulatory ping pong, which has created so much uncertainty for providers and consumers alike.”); NCTA Comments, at 6 (“The most durable and effective way to establish enforceable open Internet requirements would be for Congress to enact new legislation.”); T-Mobile Comments at ii (“Ultimately, however, Congress must act to eliminate regulatory uncertainty. Absent such action, ambiguities regarding the Commission’s legal authority in this arena will lead to repeated disputes and shifting regulatory seesaws.”); USTelecom Comments at ii (observing that a “lasting congressional solution is needed.”).

⁵² See, e.g., Asian Pacific Islander American Public Affairs Comments, at 1 (“To ensure access and fairness, Congress needs to step up and pass legislation that protects net neutrality in a permanent way”); Filipina Women’s Network Comments, at 2 (“We also implore Congress to find a bipartisan, permanent solution to the net neutrality debate.”); League of United Latin American Citizens Comments, at 2 (“LULAC supports a statutory solution from Congress”); LGBT Technology Partnership Comments, at 4 (“A comprehensive broadband bipartisan Congressional solution is essential to codifying and providing a stable environment where investment and innovation can thrive while safeguarding the open Internet policies needed to protect consumers.”); Mobile Future Comments, at 15 (“A legislative solution is necessary to enshrine net neutrality protections into law and ensure carriers have the freedom to experiment with new services, including free data, without the

urges that “the back-and-forth of net neutrality policy resulting from court decisions and changes in Commission leadership underscores the importance of Congress taking action to set reasonable net neutrality policy.”⁵³ Oracle explains that “[t]o achieve a lasting solution to the issues at hand, and to prevent additional shifts in the regulatory framework that quell innovation and investment, Congress should enact legislation that establishes once and for all that broadband internet access is an integrated information service.”⁵⁴ CTIA argues that “to put to rest the uncertainties that have enveloped Internet openness in the last few years, Congress should now step in to confirm that broadband Internet access is an integrated information service and legislate specific, common sense net neutrality rules that advance consumer welfare *and* promote investment and innovation.”⁵⁵ And the Black Women’s Roundtable explains that “to provide certainty for consumers, broadband providers and digital innovators, comprehensive Congressional legislation is needed to ensure an open and accessible Internet.”⁵⁶

Even those parties who urge that Title II classification and the current rules should remain do not dispute that federal legislative action would provide more long term certainty to consumers and providers alike. The Internet Association acknowledges that legislative action could provide a “firm legal basis that can withstand the test of time.”⁵⁷ INCOMPAS states that it is “prepared to work with Congress to consider and adopt a law that preserves and protects an

uncertainty that comes with Title II.”); National Taxpayers Union Comments, at 1 (stating that “a permanent legislative solution to the net neutrality debate is needed”).

⁵³ Ericsson Comments, at 14.

⁵⁴ Oracle Comments at 6.

⁵⁵ CTIA Comments at 2.

⁵⁶ Black Women’s Roundtable Comments, at 7.

⁵⁷ Internet Association Comments, at 17.

open Internet,”⁵⁸ and Level 3 observes it could support protections created by new Congressional action.⁵⁹

Alternatively, as we explained in our initial comments,⁶⁰ even in the absence of new legislation there are existing tools short of imposing unnecessary common-carrier regulation that could allow the federal government to enforce reasonable rules to safeguard the open Internet for consumers. As we discuss below, the FTC has authority to protect consumers and competition, and whether by rule or enforcement, the FTC could enforce the policies underlying the *Title II Order*, to the extent those policies are justified by actual market conditions. Further, if the Commission were to decide to adopt new rules, as Cox noted, the “D.C. Circuit has held that Section 706 provides the Commission with authority to address open Internet issues, including by establishing bright-line rules that directly advance the broadband deployment goals embodied in the statute.”⁶¹

C. The Commission Should Make Clear that State and Local Regulation Is Preempted

Critically, almost no parties argue for a mish-mash, state-by-state approach to these issues or to regulation of broadband more generally. And that’s because the efficient and fair regulation of broadband service, an inherently interstate service, cannot occur at the state level.

⁵⁸ INCOMPAS Comments, at 1.

⁵⁹ Level 3 Comments, at 14.

⁶⁰ Verizon Comments at 15-18.

⁶¹ Cox Comments, at 25; *accord* Verizon Comments at 18; Communications Workers of America, NAACP Comments, at 12 (“CWA/NCAA Comments”) (“The 2014 D.C. Circuit Court *Verizon* decision provides a road map to ground these rules in Section 706 of the Telecommunications Act to establish a firm legal basis that will withstand judicial scrutiny.”).

The Commission should reiterate in this proceeding that Congress and the Commission have preempted state and local regulation of broadband Internet access service.

The *Title II Order* took the wrong approach to classification, but it was correct to announce a “firm intention to exercise our preemption authority to preclude states from imposing obligations on broadband service that are inconsistent with the carefully tailored regulatory scheme we adopt.”⁶² The *Title II Order* properly recognized that the Internet is necessarily an interstate (and transnational) enterprise that is wholly unfit for anything other than federal regulation.⁶³ The current proceeding will similarly settle on a uniform federal framework to govern this interstate service – and the need for preemption is just as great. Otherwise, the substantial burdens of piecemeal regulation by states would frustrate the federal policy to promote broadband development through light-touch, federal regulation.⁶⁴

Congress has given the Commission a policy directive to reduce regulation of broadband Internet access service. Thus, state and local regulation would not only intrude into a field that Congress has committed exclusively to federal regulation; it would also obstruct Congress’s

⁶² *Title II Order*, ¶ 433.

⁶³ See *id.* ¶ 431; see also *Crockett Tel. Co. v. FCC*, 963 F.2d 1564, 1566 (D.C. Cir. 1992) (“The FCC has exclusive jurisdiction to regulate interstate common carrier services”); *National Ass’n of Regulatory Util. Comm’rs v. FCC*, 746 F.2d 1492, 1498 (D.C. Cir. 1984) (interstate communications are “totally entrusted to the FCC”); *Ivy Broad. Co. v. American Tel. & Tel. Co.*, 391 F.2d 486, 491 (2d Cir. 1968) (interstate communications are “governed solely by federal law and [] the states are precluded from acting in this area”).

⁶⁴ See *Ark. Elec. Co-op. Corp. v. Arkansas Pub. Serv. Comm’n*, 461 U.S. 375, 384 (1983) (a federal determination that the area is best left “unregulated” carries “as much pre-emptive force as a decision to regulate”); *Geier v. Am. Honda Motor Co.*, 529 U.S. 861, 883-84 (2000) (state cause of action preempted where the federal decision to adopt a more permissive approach constituted a substantive determination that federal statutory objectives, including promoting innovation, were best achieved by less, not more, regulation); *Northwest, Inc. v. Ginsberg*, 134 S. Ct. 1422, 1428 (2014) (the doctrine of preemption may prevent states from “undo[ing] federal deregulation with regulation of their own”).

deregulatory objectives.⁶⁵ The Commission accordingly should expressly preempt state and local laws that directly or indirectly regulate the provision of broadband Internet access service, and should clarify that the preemptive scope of the resulting rule extends to all such laws, regardless whether states or localities characterize those laws as inconsistent with federal policy, consistent with it, supplemental to it, or even supportive of it.⁶⁶ The Commission should also make clear that both the Telecommunications Act *and* the Commission’s regulations are independent sources of federal preemption.

It is essential to achieve clarity on the preemptive effect of this proceeding. Corrective action at the federal level in the form of withdrawing Title II classification and the Internet conduct standard could prompt States and localities to adopt a patchwork of inconsistent state and local regulation. The concern is not hypothetical: The City of Portland, for example, notes that it has adopted such “policies” affecting the delivery of broadband.⁶⁷ And the New York State Attorney General claims that “the role of the states in protecting consumers and competition on the Internet remains critical and necessary.”⁶⁸ If state and local laws are used to regulate broadband Internet access service, the inevitable result will be disparate service around the country based on state and local officials’ differing conceptions of what Internet regulation should look like in their jurisdiction. Service offerings available in one State or county would be prohibited in a neighboring one, and regulatory burdens for service providers would multiply dramatically. No one would benefit from this lack of uniformity.

⁶⁵ See 47 U.S.C. §§ 230(b)(2), (f)(2); 1302(a).

⁶⁶ See, e.g., Comcast Comments at 79-80; CTIA Comments at 54-58.

⁶⁷ See Portland City Council Resolution No. 37303, ¶ 3 (July 12, 2017), *attached to* City of Portland Comments.

⁶⁸ New York State Office of the Attorney General Comments, at 13-14.

As Comcast has explained, the Commission may preempt state laws regarding the provision of broadband Internet access service without preempting generally applicable consumer-protection laws that target fraud and other problematic business practices across different industries.⁶⁹ The Commission should be clear, however, that States and localities may not upset the particular regulatory balance for broadband access services ultimately struck in this proceeding by imposing their own broadband-specific regulation.

For similar reasons, the Commission should make clear that the FTC exclusively will oversee privacy in connection with broadband Internet access service.⁷⁰ Privacy protections, like other rules of the road for the Internet, must be administered on a national basis to be effective. And “it makes little sense to exclude only [broadband Internet access] providers from the FTC’s privacy and data security jurisdiction, which covers virtually all other entities in the Internet ecosystem, including some of the largest and most powerful companies using consumer data.”⁷¹ “[H]aving one agency with jurisdiction over these entities would ensure consistent standards and consistent application of such standards.”⁷² Consumers expect that their Internet experience – including the level of privacy protection that their data receives – will remain consistent regardless of where their travels take them and regardless of where the information they seek is stored. The best way to ensure an Internet experience that is both consistently safe for consumers and manageable for Internet service providers is to adopt national privacy practices by appropriate means.⁷³

⁶⁹ See Comcast Comments at 79-80.

⁷⁰ See Notice, ¶ 67; *contra* California Pub. Util. Comm’n Comments, at 24.

⁷¹ Staff of the Federal Trade Commission Comments, at 18 (“FTC Staff Comments”).

⁷² *Id.* at 19.

⁷³ See *id.* (FTC staff believes that the approach to consumer privacy and data security should be “federally enforced”).

Congress expressed its unmistakable intent to have Internet privacy regulated by the FTC, rather than the Commission, when it used the Congressional Review Act to undo the Commission's recent privacy rules.⁷⁴ This legislation was a forceful expression of Congress's desire to reject the FCC's efforts to wade into this area and to reallocate responsibility over these issues from the Commission back to the FTC. The Commission should respect that choice. Some commentators object that the FTC is not suited to protect privacy on the Internet, citing the FTC's "narrower authority and fewer resources than the [Commission],"⁷⁵ or else the absence of a specific statutory directive from Congress to the FTC to regulate privacy.⁷⁶ These criticisms of the FTC are unfounded. As the staff of the FTC and other commenters have explained in the record of this proceeding, the FTC is well positioned to enforce uniform privacy rules, which will benefit consumers and providers alike.⁷⁷ Until recently, the FTC has served for decades as the national, primary regulator of online consumer protection and privacy, without any apparent deficiency.⁷⁸ And the FTC is empowered by Congress to protect consumers' online privacy by prohibiting unfair or deceptive practices – a proven statutory standard.⁷⁹ Given the scope of the FTC's statutory authority and Congress's directive to the Commission to exercise "regulatory

⁷⁴ See Pub. L. No. 115-22, 131 Stat. 88 (Apr. 3, 2017); *see also, e.g.*, Statement of Rep. Blackburn, 163 Cong. Rec. at H2489 (Mar. 28, 2017) (noting that the FCC "unilaterally swiped jurisdiction from the [FTC]," which "has served as our Nation's sole online privacy regulator for over 20 years"); Statement of Rep. Walden, *id.* at H2492 (preferring the FTC's "proven case-by-case approach to privacy enforcement").

⁷⁵ Center for Democracy and Technology Comments, at 14; *see also* Free Press Comments at 73.

⁷⁶ See EFF Comments, at 26-27; Public Knowledge Comments at 93-94.

⁷⁷ See *generally* FTC Staff Comments; *see also, e.g.*, Information Technology & Innovation Foundation Comments, at 15-16 ("ITIF Comments").

⁷⁸ See, *e.g.*, FTC Staff Comments at 3-12; *id.* at 4 ("To date, the FTC has brought over 500 cases protecting the privacy and security of consumer information.").

⁷⁹ See *id.* at 3, 21.

forbearance” to promote broadband investment,⁸⁰ there is no doubt that the Commission may properly defer the regulation of Internet privacy to the FTC’s expertise.

D. Many Commenters Agree on Guiding Principles for Any Future Rules

Whatever the underlying authority, the record shows broad agreement on at least some of the underlying principles and potential to safeguard the open Internet for consumers. The basic idea that consumers should be able to access the lawful Internet content of their choice when and how they want is not controversial. Similarly, the idea that an appropriate framework should encourage investment not just by ISPs, but also by edge providers and content suppliers, is well accepted.⁸¹ Most parties are open to the idea that providers should tell customers what the provider’s policies and practices are for mass market broadband Internet access services, and support rules that prevent providers from blocking consumers’ access to lawful content, applications, or services. Most parties also agree that providers should be able to reasonably and efficiently manage their networks. And, while these areas are more contested, there is still substantial support for the conclusion that broadband access providers should not be able to intentionally slow down or throttle Internet traffic based on the traffic’s source, destination, or content, and for rules that prevent providers from charging content suppliers a fee to deliver their Internet traffic faster than the Internet traffic of others where the result is harm to competition or consumers. There also is support for rules that allow broadband service providers to charge reasonable fees for interconnection arrangements.

Transparency: For example, as we’ve explained in our opening comments, we support rules that require providers to tell customers what the providers’ policies and practices are, and

⁸⁰ 47 U.S.C. § 1302(a).

⁸¹ *See, e.g.*, Microsoft Comments, at 3-4 (urging the Commission to promote the development of the Internet to reflect the entirety of the Internet economy).

when those policies change, but we also believe those disclosure mandates should be reasonable and not require new surveys or studies to create data for disclosure.⁸² CWA/NAACP noted that “[t]here is broad consensus on the importance of full transparency so that consumers can make informed decisions about the Internet access they are purchasing and so that consumers and regulators can hold network and edge providers accountable for the quality of service for which they are paying.”⁸³ T-Mobile also correctly argues for reasonableness in setting transparency guidelines, asserting that the *Title II Order*, as interpreted, has improperly broadened the transparency rule beyond its original intent, and that the Commission should rescind the Enforcement Bureau’s “Enforcement Advisory,” which effectively expanded the transparency rule improperly, and make clear that disclosure may be made at point of sale via a link to public websites.⁸⁴

Reasonable network management: Similarly uncontroversial, many commenters – including Verizon⁸⁵ – agree that providers should be able to reasonably manage their networks without violating other rules. Microsoft acknowledges that “particularly when several users attempt to access the Internet at the same time, certain traffic management techniques may be the only way to ensure the provision of broadband Internet access service to as many users as

⁸² Verizon Comments at 19.

⁸³ CWA/NAACP Comments, at 17.

⁸⁴ T-Mobile Comments at 18-20 (also urging the Commission to revoke the requirement in the *Title II Order* that mobile providers make specific disclosures regarding packet loss). *See also* Sprint Comments, at 14-15 (arguing that carriers should be able to disclose their network management practices on a publicly available web page).

⁸⁵ Verizon Comments at 21.

possible.”⁸⁶ And, as CWA/NAACP explains, “[r]easonable network management shall not constitute unreasonable discrimination.”⁸⁷

Such network management tools should be flexible. Qualcomm urges that in particular, wireless network operators should have “the utmost flexibility in implementing network management tools”⁸⁸ T-Mobile explains that providers must “be free to adopt preventative measures to curb congestion *before* it occurs, and to pursue strategies that will conserve capacity network-wide.”⁸⁹ And Sprint notes that “source, content, and destination agnostic management of classes of applications” should be permissible in order to stimulate experimentation, innovation and consumer choice in mobile data plans and services.⁹⁰

Blocking: There is also substantial agreement with our view that any appropriate no-blocking rule should be based on the principle that providers may not block lawful Internet content, applications, or services from consumers.⁹¹ CWA/NAACP advocates for a rule that a person or entity “engaged in the provision of broadband Internet access services, insofar as such person is so engaged, shall not block lawful content, applications, services, or non-harmful devices”⁹² But as we also explained, the appropriate rule should also allow flexibility for providers to negotiate differentiated arrangements or experiment with different service models

⁸⁶ Microsoft Comments at 16.

⁸⁷ CWA/NAACP Comments at 3.

⁸⁸ Qualcomm Comments, at 4, 5 (arguing that “operators must be able to implement any combination of technological, pricing, and system design tools to conserve bandwidth and satisfy exponentially increasing user demands”).

⁸⁹ T-Mobile Comments at 22.

⁹⁰ Sprint Comments at 11-12.

⁹¹ Verizon Comments at 19-20.

⁹² CWA/NAACP Comments at 3; *accord* Information Technology Industry Council Comments, at 4 (“ITIC Comments”).

that offer consumers the choice, for example, of experiences or capabilities that differ from traditional, best-efforts broadband Internet access service.⁹³ Others agree. As Qualcomm argues, providers should be permitted to offer “any and all mobile broadband pricing plans and data connectivity models” and to create curated plans that offer connectivity “to wireless devices that support a defined collection of applications” supported by a “limited data plan, a sponsored connectivity approach, or some other type of service plan.”⁹⁴ Such approaches, Qualcomm asserts, “will help to close the digital divide by ensuring that more Americans understand the benefits of broadband connectivity”⁹⁵

Throttling: Commenters also agree with our support for rules, however enacted, that prevent providers from intentionally slowing down or throttling particular Internet traffic based on the traffic’s source, destination or content. But as we noted,⁹⁶ and others confirm,⁹⁷ throttling should not be defined so broadly as to limit providers’ ability to use reasonable tools to manage their networks and ensure a good customer experience as customers compete for finite network resources. A throttling rule should not prohibit providers from offering different tiers of service for consumers to choose among, including those that involve slowing of traffic after a monthly usage threshold, provided that they are transparent with customers about their services. Likewise, many providers manage high-bandwidth traffic, such as video, to help ensure a good network experience for all customers. Any throttling rule should not interfere with these types of pro-consumer practices.

⁹³ Verizon Comments at 19-20.

⁹⁴ Qualcomm Comments at 6-7.

⁹⁵ *Id.* at 7.

⁹⁶ Verizon Comments at 20.

⁹⁷ ITIC Comments, at 4 (noting that throttling may be necessary “if certain types of traffic are widely impacting network performance ... so as to improve overall user experience”).

Paid prioritization: Commenters have differing views on the principles behind what is commonly referred to as “paid prioritization,” many of which stretch the term far beyond mass market broadband Internet access service.⁹⁸ But we continue to believe that the definitions matter. As we explained,⁹⁹ we support rules that prevent providers from charging content suppliers a fee to deliver their Internet traffic faster than the Internet traffic of others where the result is harm to competition or consumers. We believe an appropriate paid prioritization rule needs to remain focused on the instance where a provider might harm competition or consumers by slowing a consumer’s access to a particular website or application in favor of another, competing one. But we also think consumers should continue to be able to choose to prioritize certain content or applications, where technologically practicable. Further, as we have noted, providers should continue to offer differentiated arrangements including services that need high bandwidth and extremely low latency such as is necessary for virtual or augmented reality or gaming applications (to the extent such services are broadband Internet access services at all).¹⁰⁰

Similarly, most parties agree that whatever rules are enacted, they should encourage growth and investment, rather than permit so much uncertainty as to dissuade innovation. As the Internet Association argues, the right framework should encourage innovation and investment throughout the Internet.¹⁰¹ Thus, to the extent any new rules are adopted by Congress or the Commission, they should extend only to consumer broadband Internet access services. Even

⁹⁸ See, e.g., Microsoft Comments at 21-22 (urging the FCC to continue to monitor interconnection arrangements so as to respond if they “are used to subvert or evade open Internet protections.”).

⁹⁹ Verizon Comments at 20-21.

¹⁰⁰ See AT&T Comments at 44-45.

¹⁰¹ Internet Association Comments, at ii, 4-6 (“Net neutrality is about not just investment by ISPs, but also investment by providers of edge-based apps and services and consumers of those services”).

under Title II, the Commission does not have authority over specialized services, business-to-business, or other services.¹⁰² Providers should still be able to offer differentiated or specialized services that may appeal to those who are looking for a different offering, and should have flexibility when working with sophisticated business customers.¹⁰³

Interconnection agreements to govern the exchange of information between networks are a common and important part of the Internet ecosystem; they too are distinct from broadband Internet access service agreements and should be governed by market forces rather than Commission regulation, as the *Notice* proposes.¹⁰⁴ The Commission’s flexible approach before the *Title II Order* spurred investment and promoted the innovative network arrangements that, for example, assist users in efficiently streaming high-definition video. This approach also recognized that interconnection agreements are individually negotiated and thus contain individualized terms – the very opposite of common-carriage service. In the *Title II Order*, however, the Commission claimed authority to regulate interconnection agreements under Title II, a decision that it described as “flow[ing] from the Commission’s classification of [broadband service] ... as falling within the ‘telecommunications service’ definition in the Act.”¹⁰⁵ The Commission should revert to the proper classification of broadband service, *see infra* Part II, and thereby also return to its light-touch regulatory approach to interconnection. This flexibility will

¹⁰² AT&T Comments at 38 (observing that the Commission has always allowed “the common ISP practice of logically segregating categories of latency-sensitive IP traffic (such as VoIP or video) from Internet traffic and selling the associated services separately as ‘specialized’ (or ‘managed’) IP services”); *accord id.* at n.71 (noting that “IP traffic that remains on a *single* network does not cross the public Internet, is not considered part of any provider’s ‘broadband Internet access service,’ and is thus not subject to the Commission’s net neutrality rules.”).

¹⁰³ *See, e.g.*, ITIC Comments at 5-6.

¹⁰⁴ *See Notice* ¶ 42.

¹⁰⁵ *Title II Order* ¶ 206, *see id.* ¶¶ 202–206.

in turn promote individualized agreements tailored to meet the constantly evolving demands of content providers and consumers. Notably, some of the loudest proponents of regulating interconnection agreements are edge providers who transmit high volumes of data over networks maintained by others, and thus potentially stand to gain significant windfalls from Commission interference in this area. The Commission’s neutral, light-touch regulatory approach is supported by numerous commenters, reflects the proper limits of the Commission’s authority, and can be expected to promote new methods of efficiently delivering content to consumers.¹⁰⁶

II. The Commission Can and Should Correct the 2015 Open Internet Order’s Reclassification of Broadband Internet Access Service

A. Title II Is Unnecessary Because the FTC Can Enforce Internet Openness

As we explained in our opening comments, Title II common-carrier regulation is not necessary to enforce legitimate open Internet principles.¹⁰⁷ Comments submitted by the acting FTC chair and, separately, by FTC staff (including acting directors of the FTC’s Bureau of Consumer Protection, Bureau of Competition, and Bureau of Economics) confirm that the FTC’s existing authority is fully adequate to promote and protect an open Internet. As Acting Chairman Ohlhausen explains, “[m]any of the practices that concern advocates of net neutrality regulation fall within one or more ... categories of anticompetitive actions and therefore could be addressed by the FTC’s antitrust enforcement.”¹⁰⁸ Moreover, because “many major [broadband service] providers have now explicitly promised to adhere to net neutrality principles,” the FTC has

¹⁰⁶ See, e.g., AT&T Comments at 46-49; Comcast Comments at 73-76; NCTA Comments, at 45-49; Free State Foundation Comments, at 60-61; ADTRAN Comments, at 15-16; Ericsson Comments at 9-10.

¹⁰⁷ Verizon Comments at 15–17.

¹⁰⁸ Federal Trade Commission Acting Chairman Maureen K. Ohlhausen Comments, at 9 (“Ohlhausen Comments”).

authority to “enforc[e]” those promises, and it can also prohibit unfair reversals of promises “even where there was no deception.”¹⁰⁹

Some commenters argue that the FTC’s jurisdiction is too limited to be useful in protecting the open Internet.¹¹⁰ But the FTC Act authorizes the FTC to prevent businesses from “using unfair methods of competition in or affecting commerce,” as well as “unfair or deceptive acts or practices in or affecting commerce.”¹¹¹ If broadband service providers’ conduct falls outside this grant of jurisdiction – that is, if their actions cannot be described as anticompetitive, unfair, or deceptive – then the conduct should not be banned in the first place. Indeed, the government should be *encouraging* broadband providers to offer pro-competitive services on fair terms and in a transparent manner. The fact that the FTC’s broad, consumer-facing jurisdiction is not enough for some commenters serves as a stark reminder that many proponents of the *Title II Order* are special-interest groups and industry players whose interests may not align with those of ordinary consumers.

Furthermore, as Chairman Ohlhausen explains, the FTC’s “case-by-case enforcement” approach has “structural advantages over prescriptive rules,” including a “focus on addressing real harm” that “makes consumers better off” and “creates more business certainty.”¹¹² Market forces also “incentivize firms to match consumer preferences, including non-pecuniary

¹⁰⁹ *Id.* at 10-11.

¹¹⁰ *See, e.g.*, Center for Democracy and Technology Comments, at 14-15; EFF Comments at 15, 26-27; Public Knowledge Comments at 92-94; FTC Commissioner Terrell McSweeney Comments, at 3.

¹¹¹ 15 U.S.C. § 45(a)(2). Because the FTC Act reaches “unfair” practices, the Electronic Frontier Foundation is wrong to contend that broadband providers could engage in “discriminatory activity” as long as they were “open and transparent” about it. *See* EFF Comments at 15.

¹¹² Ohlhausen Comments, at 12-13.

values,”¹¹³ as evidenced by the fact that many broadband providers, including Verizon, have voluntarily committed to abide by open Internet principles regardless of what the government requires. Verizon and the other broadband providers have made these commitments because they are “right for consumers and ... critical to our business.”¹¹⁴ And as our opening comments explain, the FTC has rulemaking authority to combat unfair practices that are “prevalent” and to otherwise carry out the provisions of the statute.¹¹⁵

Restoring the FTC’s jurisdiction over broadband Internet access service providers will thus “restore the FTC’s ability to protect broadband consumers under its general consumer protection and competition authority.”¹¹⁶ Accordingly, there is no risk that consumers will be left unprotected if the *Notice*’s proposal is adopted.

B. Broadband Internet Access Service Is an “Information Service” Under 47 U.S.C. § 153

The Commission has ample legal authority to reinstate its longstanding classification of broadband Internet access service. Several supporters of maintaining the Title II classification offer a flawed legal analysis because they treat this issue as if it were one of first impression. It is not. For two decades prior to the *Title II Order*, the Commission consistently classified broadband Internet access service as an information service, and that classification was upheld by the Supreme Court in *Brand X*.¹¹⁷ The Commission also consistently classified mobile broadband Internet access service as a private mobile service based on the fundamental

¹¹³ *Id.* at 14; *see also, e.g.*, Lerner & Ordovery Reply Decl. ¶ 42 (“The risk of losing subscribers imposes a powerful competitive constraint on broadband Internet access providers facing effective competition.”)

¹¹⁴ Verizon Comments at 1.

¹¹⁵ *See id.* at 16-17; *see also* 15 U.S.C. §§ 46(g); 57a(b)(3).

¹¹⁶ FTC Staff Comments at 2.

¹¹⁷ *See National Cable & Telecom. Association v. Brand X Internet Services*, 545 U.S. 967 (2005) (“*Brand X*”).

difference between the telephone network and the Internet – a difference that persists today because all telephone numbers cannot reach all Internet-protocol addresses, and vice versa.

The *Title II Order* departed from these longstanding regulatory policies based on flawed factual assumptions and erroneous legal conclusions. The Commission is not required to show that anything has changed since the *Title II Order* in order to adopt the *Notice*; especially in light of *Brand X*, it is sufficient that the Commission has concluded that restoring its prior classifications is the best interpretation of the statute.¹¹⁸ And the Commission’s reassessment of the erroneous factual assumptions that were the foundation of the *Title II Order* provides yet another legal basis for the *Notice*.¹¹⁹ In addition, new record evidence, such as the economic evidence that Verizon and others have submitted, provides yet more support for a course correction.¹²⁰ The Commission is not locked into enforcing legally and factually erroneous determinations, particularly those that also undermine the Commission’s policy views about how best to encourage an open Internet and expand access to broadband.

The proper classification of broadband Internet access service under Section 153 of the Communications Act is an important question, but not a difficult one. The answer turns on whether broadband Internet access service merely allows users to “transmi[t]” information to or from endpoints selected by the user “without change in the form or content of the information as sent and received,”¹²¹ or whether instead the service uses transmission technology to offer a more advanced “capability for generating, acquiring, storing, transforming, processing,

¹¹⁸ See Verizon Comments at 53-56.

¹¹⁹ See *id.* at 57-60.

¹²⁰ See generally Lerner & Ordovery Decl. and Lerner & Ordovery Reply Decl.

¹²¹ 47 U.S.C. § 153(50), (53).

retrieving, utilizing, or making available information.”¹²² If broadband Internet access service were like basic telephone service, offering nothing more than an unadorned transmission line, then it would have been reasonable for the *Title II Order* to deem broadband Internet access service a “telecommunications service” subject to common-carrier regulation under Title II.¹²³ But in fact, broadband Internet access service provides advanced capabilities for creating or interacting with information, so it is an “information service” immune from common-carrier regulation, and the Commission’s proposal to restore the Commission’s longstanding light-touch approach is appropriate and justified.¹²⁴

The *Notice* is correct that broadband Internet access service gives users the “capability” to perform each of the information-processing functions that characterize an “information service.”¹²⁵ The record is replete with examples of the innumerable ways that broadband Internet access service provides a “capability for generating, acquiring, storing, transforming, processing, retrieving, utilizing, or making available information.”¹²⁶ Even opponents admit that broadband customers obtain that service in order to interact with information by “access[ing] content, services, and applications from third-party edge providers.”¹²⁷

Commenters who oppose an information-service classification attempt to avoid this conclusion, but they do so primarily by looking, at a high level of generality, at the Internet’s role in transmitting information. A good example is the Public Knowledge-Common Cause joint

¹²² *Id.* § 153(24).

¹²³ *Id.* § 153(50), (53).

¹²⁴ *Id.* § 153(24).

¹²⁵ 47 U.S.C. § 153(24).

¹²⁶ *Id.* § 153(24).

¹²⁷ Public Knowledge Comments at 8.

comments, which argue that broadband Internet access service cannot be an information service because information processing occurs in “end systems at the edges of the Internet” rather than over the network.¹²⁸ Public Knowledge thus claims that a distinction exists between Internet access service and the “applications that run over the Internet,” along with their “related protocols.”¹²⁹ On this view, broadband service should be conceptualized as a pure transmission service because the “content of the payload in a given packet” of data is generally “determined and acted upon by end systems, not the network.”¹³⁰

In other words, in defining the term “information service,” Public Knowledge attempts to draw a legally significant distinction between broadband service and the applications that rely on it.¹³¹ But several problems fatally undermine Public Knowledge’s argument. Most importantly, the statutory definition of an “information service” does *not* require the service to perform the listed functions independently. To be sure, the distinction between broadband service and the applications that rely on it is appropriate (indeed, it is necessary) when classifying mobile broadband under 47 U.S.C. § 332, but that is because Section 332 defines the terms “commercial mobile service” and “private mobile service” by reference to the *technical characteristics* of the service itself. Section 153, by contrast, requires a *functional* analysis because the definition of an “information service” not only specifies the technical operation of the service (it must be provided “via telecommunications,” at least in part), but also focuses on the “*capabilit[ies]*” that it “offer[s],”¹³² without regard to whether the service offers these capabilities independently or

¹²⁸ *Id.* at 31.

¹²⁹ *Id.* at 3; *see also id.* at 6 (discussing the protocols that “segment data into packets on the sending side and reassemble them on the receiving side”).

¹³⁰ *Id.* at 7.

¹³¹ *See id.* at 27.

¹³² 47 U.S.C. § 153(24).

integrates with an application to do so. Broadband Internet access service is a necessary component for many electronic applications designed to use the Internet to generate, acquire, store, transform, process, retrieve, or make available information. It therefore offers the “capability” to perform those functions and satisfies the definition of an information service.¹³³ This approach to broadband service reflects the longstanding view of the Commission that Internet access service cannot be analyzed apart from the “variety of advanced capabilities” that users can “exploit ... *through applications they install on their own computers,*” because subscribers are “able to run those applications ... *precisely because of the enhanced functionality that Internet access service gives them.*”¹³⁴

Public Knowledge resists this straightforward statutory approach by claiming that it leads to the “illogical outcom[e]” that “any telephone service would be (and always has been) an ‘information service’” because “voice communications over the traditional telephone network have long offered access to either automated information services or a live person” who can provide information.¹³⁵ But this argument blends two distinct services together; no one claims that using a basic telephone service to obtain audible information from a third-party information service transforms the telephone service into an information service. Broadband Internet access service is categorically different from standard telephone service in that it is *designed with* advanced features, protocols, and security measures so that it can integrate directly into electronic computer systems and enable users to electronically create, retrieve, modify, and

¹³³ *Id.*

¹³⁴ *Federal-State Joint Board on Universal Service, Report to Congress, 13 FCC Rcd 11,501, ¶ 81 (1998) (emphases added).*

¹³⁵ Public Knowledge Comments at 28-29.

otherwise manipulate information stored on servers around the world. Telephone service merely provides for basic voice-data transmission between specified endpoints.¹³⁶

As *Brand X* makes clear, moreover, the presence of a transmission component in broadband Internet access service is fully consistent with – and in fact is a prerequisite for – its classification as an information service. The Communications Act requires that an information service’s capabilities be provided “via telecommunications,” so “*all* information-service providers ... use ‘telecommunications’” to transmit information.¹³⁷ Since both telecommunications services and information services rely on telecommunications, the relevant question is whether the service provides *solely* for the transmission of information between user-specified endpoints,¹³⁸ or whether instead it *also* offers a “capability for generating, acquiring, storing, transforming, processing, retrieving, utilizing, or making available information,” as broadband service does.¹³⁹ Far from “ignor[ing] the phrase ‘via telecommunications,’”¹⁴⁰ then, the *Notice*’s approach recognizes that while broadband Internet access service includes a transmission component, the service as a whole offers a capability for performing the advanced information-processing functions that typify an information service.

Public Knowledge claims that this approach to classification is “flatly inconsistent with all of the controlling case law, including *Brand X*,” because *Brand X* involved an extensive discussion of whether the transmission component of cable broadband was “sufficiently integrated with the finished service to make it reasonable to describe the two as a single,

¹³⁶ *Notice* ¶ 28.

¹³⁷ *Brand X*, 545 U.S. at 988, 989; 47 U.S.C. § 153(24).

¹³⁸ 47 U.S.C. § 153(50), (53).

¹³⁹ *Id.* § 153(24).

¹⁴⁰ Public Knowledge Comments at 27.

integrated offering.”¹⁴¹ According to Public Knowledge, this discussion would have been unnecessary if the Court could have found that broadband “inherently” offers the capabilities that make it an information service.¹⁴² But the Court in *Brand X* was not presented with the claim that broadband Internet access service *as a whole* can be classified as a mere telecommunications service; it was undisputed in that case that cable broadband did involve an information service. The question before the Court was whether the telecommunications component could reasonably be deemed part of the information-service offering, as the Court held, or whether instead the telecommunications component was separable from the broadband offering.¹⁴³ That question *did* turn on ““the factual particulars of how Internet technology works and how it is provided.””¹⁴⁴ Here, Public Knowledge challenges what the Court assumed to be true in *Brand X*: that broadband Internet access service involves an information service. The Communications Act expressly requires that this question be resolved by reference to the “capabilit[ies]” of broadband Internet access service, not just its operation. And on this issue, *Brand X* nowhere questioned the Commission’s “unchallenged” observation that “[c]able modem service ... provides consumers with a *comprehensive capability for manipulating information* using the Internet via high-speed telecommunications.”¹⁴⁵

Regardless, as *Brand X* also explained, broadband Internet access service is properly classified as an information service based solely on its own features. Broadband Internet access service includes the ISP’s Domain Name System (DNS) and caching services, among numerous

¹⁴¹ Public Knowledge Comments at 28.

¹⁴² *Id.*

¹⁴³ *Brand X*, 545 U.S. at 989-92.

¹⁴⁴ Public Knowledge Comments at 28 (quoting *Brand X*, 545 U.S. at 991).

¹⁴⁵ *Brand X*, 545 U.S. at 987 (emphasis added).

other features. Both of these features provide a capability for generating, acquiring, storing, transforming, processing, retrieving, utilizing, or making available information via telecommunications. Public Knowledge suggests that DNS and caching should not factor into the analysis at all because each is an “add-on”¹⁴⁶ that is “not functionally integrated or otherwise inextricably intertwined with the transmission function in broadband access service.”¹⁴⁷ But DNS is no more an add-on to broadband Internet access than a steering wheel is to a motor vehicle. Both are practically “essential” to navigation,¹⁴⁸ and the fact that “third parties” *also* “offer public DNS servic[e]”¹⁴⁹ does not in any way lessen its practical indispensability. Beyond that, DNS and caching are behind-the-scenes services that require no configuration on the user’s part and that facilitate the core functions of broadband service. They cannot be separated from broadband service simply because the user could experience a far-degraded version of the service without them.

Public Knowledge also repeats the *Title II Order*’s position that DNS and caching fall within the “telecommunications management exception.”¹⁵⁰ But as Verizon has already explained, that category is meant primarily for ISP tools for managing the network, not user-focused features.¹⁵¹ Public Knowledge also claims that allowing DNS, caching, and other

¹⁴⁶ Public Knowledge Comments at 7-8.

¹⁴⁷ *Id.* at 45; *see id.* at 49.

¹⁴⁸ *Brand X*, 545 U.S. at 990.

¹⁴⁹ Public Knowledge Comments at 45.

¹⁵⁰ Public Knowledge Comments at 45; *see* 47 U.S.C. § 153(24) (excluding from the definition of an “information service” a “capability for generating, acquiring, storing, transforming, processing, retrieving, utilizing, or making available information via telecommunications” that is “use[d] ... for the management, control, or operation of a telecommunications system or the management of a telecommunications service”).

¹⁵¹ Verizon Comments at 58.

features to fall outside the telecommunications management exception would read out that portion of the statutory definition,¹⁵² but that position is grounded in the erroneous premise that these features merely enable the service to operate rather than enhance the user’s experience.

Finally, the position that broadband Internet access service is a telecommunications service because information services “exist in the end systems at the edges of the Internet”¹⁵³ directly conflicts with Sections 230 and 231 of the Communications Act, which show that Congress believed that Internet access service is an unregulated “information service” that does not meet the definition of a telecommunications service.¹⁵⁴ Public Knowledge states that it is “unfathomable” that Congress would have resolved the proper classification of broadband Internet access service in these so-called “ancillary provisions of the Communications Act,” at least without a statement in the “legislative history.”¹⁵⁵ But Internet access service so readily fits the definition of an “information service” that Congress likely believed it was not breaking new

¹⁵² Public Knowledge Comments at 30.

¹⁵³ *Id.* at 31.

¹⁵⁴ 47 U.S.C. §§ 230(b)(2), (f)(2); 231(e)(4). Public Knowledge contends that the *Notice*’s interpretation of Section 230 is “fallacious,” Public Knowledge Comments at 35, but that is demonstrably wrong: Section 230 expressly states that it is the “policy of the United States ... to preserve the vibrant and competitive free market that presently exists for the Internet and other interactive computer services, unfettered by Federal or State regulation.” 47 U.S.C. § 230(b)(2). It then defines an interactive computer service to mean “any information service, system, or access software provider that provides or enables computer access by multiple users to a computer server, *including specifically a service or system that provides access to the Internet.*” *Id.* § 230(f)(2) (emphasis added). The italicized language places Internet access services squarely within the category of an “information service”—the only “service” mentioned in Section 230(f)(2)’s definition of an “interactive computer service.” Moreover, Section 230(b)(2) expresses Congress’s judgment that all interactive computer services should exist in a “competitive free market” that is “unfettered by Federal or State regulation,” which is inconsistent with classification as a telecommunications service subject to Title II. Thus, the best and only interpretation of these provisions is that Internet access service is a type of “information service” and is subject to Congress’s express deregulatory policy.

¹⁵⁵ Public Knowledge Comments at 34.

ground. Again, it bears emphasizing that in *Brand X*, no party or Justice disputed that cable Internet service provided an information service at least in part. In any event, Section 230 is an express, binding congressional statement of policy directly addressing the question at issue here, so it cannot be dismissed as “ancillary.” And Section 231 reinforces this judgment by making clear that Congress views Internet access service as more than a telecommunications service.

C. Mobile Broadband Internet Access Service Is a “Private Mobile Service” Under Section 332

With respect to mobile broadband, many commenters agree with the *Notice* that the Commission should return to its original classification of this service as a private mobile service,¹⁵⁶ while others simply take the position that fixed and mobile broadband should be treated with regulatory parity.¹⁵⁷ We agree that mobile broadband is both an “information service” under Section 153 and a “private mobile service” under Section 332, and thus is twice immune from common-carrier regulation. Importantly, however, these results should be reached independently of each other.¹⁵⁸ As we explained in our opening comments, the Commission should conduct its inquiries under Section 153 and Section 332 separately – a mobile service can be subjected to common-carrier regulation only when it is both “telecommunications services” and also “commercial mobile services.”¹⁵⁹

The Open Technology Institute contends that a “consistent and natural interpretation of the Act” is to classify mobile broadband as a “‘commercial’ service (akin to the mobile calling and texting services)” rather than a “‘private’ radio service (akin to a private taxi or push-to-talk

¹⁵⁶ See, e.g., Free State Foundation Comments at 17; ITIF Comments at 14-15.

¹⁵⁷ See, e.g., Open Technology Institute Comments at 68.

¹⁵⁸ Verizon Comments at 50-51.

¹⁵⁹ Verizon Comments at 51.

workplace network).”¹⁶⁰ But this position disregards the statutory definitions of these terms. Under Section 332, “private mobile service” is a “residual category” encompassing *all* services that are not “commercial mobile service[s],” regardless of how popular or widely used they are.¹⁶¹ The relevant question, then, is whether mobile broadband service provides a service that is “interconnected” with “the public switched network,” and for the reasons already explained, it does not.¹⁶² The Institute claims that “Congress clearly did not intend to forever limit the definition of commercial mobile services” to “mobile *telephone* services.”¹⁶³ That may be true, but it is no justification for defining the term “the public switched network” to refer to two separate networks, or for defining the term “interconnected” to allow for millions of users with no possible way to reach each other.¹⁶⁴ Arguments relying on VoIP,¹⁶⁵ and on the functional-equivalence provision of Section 332,¹⁶⁶ are addressed in Verizon’s opening comments.¹⁶⁷

III. CONCLUSION

We strongly support an open Internet and reasonable, future-proof rules to secure it. The *Title II Order*, however, was an ill-conceived departure from a bipartisan, successful regulatory framework that imposed anachronistic telephone laws on a sophisticated, modern technical architecture. Common-carrier regulation of broadband service is both unnecessary and undesirable to achieve an open Internet, and is not justified by the Communications Act. And

¹⁶⁰ Open Technology Institute Comments, at 66.

¹⁶¹ *U.S. Telecom Ass’n v. FCC*, 825 F.3d 674, 714 (D.C. Cir. 2016); *see* 47 U.S.C. § 332(c)(2), (d)(3).

¹⁶² *See* Verizon Comments at 42-52.

¹⁶³ Open Technology Institute Comments at 78-79.

¹⁶⁴ *See* Verizon Comments at 45-49.

¹⁶⁵ *See* Open Technology Institute Comments at 84-88.

¹⁶⁶ *See id.* at 94-99.

¹⁶⁷ *See* Verizon Comments at 47-50.

this unfortunate detour has already harmed consumers through its effect on innovation and investment. The *Notice* is an important first step toward realigning America's broadband regulatory regime with the law and spurring a new wave of next-generation investment in broadband deployment.

Respectfully submitted,

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EXHIBIT A

Title II Regulation of Broadband Internet Access Providers

**Reply Declaration
of Andres V. Lerner and Janusz A. Ordover**

Title II Regulation of Broadband Internet Access Providers

Reply Declaration of Andres V. Lerner and Janusz A. Ordover*

August 30, 2017

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TABLE OF CONTENTS

I.	Introduction and Executive Summary	1
II.	Title II Regulation Is Ill-Suited Given the Significant Competition that Exists in Many Parts of the Broadband Internet Access Industry	7
	A. There is no dispute that significant competition exists in the provision of <i>wireless</i> broadband Internet access	8
	B. Claims regarding a lack of competition in the provision of <i>wireline</i> broadband Internet access ignore the fact that Verizon faces significant competition where it offers such services	11
	C. Claims that all broadband Internet access providers are monopoly “gatekeepers” over access to their subscribers are economically flawed	16
III.	Title II Regulation Reduces Investment Incentives and Thereby Will Distort Competition and Harm Consumers	29
	A. Claims that Title II regulation has increased investments and industry performance since its implementation in 2015 are unsupported by the empirical evidence	29
	B. Claims that Title II regulation has increased investments by “edge” providers, enhancing a “virtuous cycle” of innovation, are fundamentally unsound	34
IV.	Conclusions	36

I. Introduction and Executive Summary

1. The reclassification of broadband Internet access services from information services to telecommunications services under Title II of the 1934 Communications Act (the “*Title II Order*”),¹ which subjects the broadband Internet access industry to public utility-type regulation, will diminish investment and innovation incentives, distort competition and, ultimately, reduce consumer welfare.² While Title II regulation may be suitable for static utility markets characterized by natural monopolies, it is ill-suited for dynamic and highly competitive industries. The *wireless* broadband Internet access industry in particular is characterized by vigorous competition, and does not come close to resembling a monopolistic industry. And, Verizon faces effective competition essentially everywhere it offers consumer *wireline* broadband Internet access services. Public utility-style regulation of broadband Internet access services imposes significant harms, without any offsetting competitive benefits. Such regulation clearly fails a cost-benefit analysis, and therefore will make consumers of broadband Internet access services worse off. The *Title II Order* fails to identify a market failure that would necessitate public utility-style regulation.

2. Despite the significant competition that exists in many parts of the broadband Internet access industry, the staggering investments and innovation spurred by this competition, and the tremendous consumer benefits created, some commenters claim that all broadband Internet access service providers are monopolists that must be regulated based on the public utility-style regulatory framework. In particular, these parties claim that:

- a) consumers have insufficient competitive alternatives when choosing a broadband Internet access provider, with a large share of consumers having access to only one wireline provider offering high-speed broadband Internet access services;

¹ *Protecting and Promoting the Open Internet*, Report and Order on Remand, Declaratory Ruling and Order, 30 FCC Rcd 5601 (2015) (“*Title II Order*”).

² See Andres V. Lerner and Janusz A. Ordovery, An Economic Analysis of Title II Regulation of Broadband Internet Access Providers, July 17, 2017 (“Lerner & Ordovery Declaration”).

- b) even where there is effective competition for subscribers, broadband Internet access providers are “gatekeepers” that have monopolies over access to their subscribers by online content and service providers;
- c) Title II regulation of broadband Internet access providers has increased investments by both broadband Internet access providers and by online content and service providers and, as a result, has enhanced broadband industry performance, including broadband deployment, speeds, capacities, and competitive alternatives, as well as the quality and variety of online content and services.

3. As we discuss in this declaration, these arguments are economically unsound, unsupported by the evidence, and highly misleading.

4. Claims regarding a lack of competition: With regard to claims regarding a lack of competition for subscribers, none of the comments allege that there is insufficient competition between *wireless* broadband providers. Parties advocating for Title II regulation focus on consumer *wireline* broadband Internet access, but ignore the inconvenient fact that significant competition exists in the wireless marketplace. As we discuss in our initial declaration, the vast majority of consumers have the ability to choose among various different providers of high-speed broadband wireless services.³ The significant rivalry between wireless providers has spurred massive infrastructure investments and innovation, and has engendered intense competition for customers on the basis of price, network coverage and reliability, plan characteristics, and with respect to other important aspects of the wireless ecosystem (such as the provision of handset devices, operating systems, applications, and content). The competitive rivalry among providers, and the presence of effective competitive alternatives, is evidenced by the significant rate of subscriber switching among wireless providers, with 26.5 percent of subscribers switching providers in 2016 alone.⁴ Advocates of Title II regulation do not dispute these facts, nor do they provide any evidence that contradicts the conclusion that the wireless marketplace is highly competitive.

³ Lerner & Ordoover Declaration at 4, 16.

⁴ Lerner & Ordoover Declaration at 4, 20.

5. Some parties claim that there is insufficient competition in the provision of consumer *wireline* broadband Internet access services, with a large share of consumers having access to only one provider offering high-speed broadband services (which they define as 25Mbps/3Mbps). These claims are based on all geographic areas in the aggregate, including areas in which a cable operator competes against a DSL network that offers much lower speeds, or is the only option. But Verizon faces significant competition from next-generation, high-speed cable services in essentially all areas in which it offers consumer wireline broadband services. Virtually all the homes passed by Fios have access to high-speed DOCSIS 3.0 cable services, creating intense competitive rivalry between Verizon and cable operators, as consumers have access to competitive broadband services offering speeds of hundreds of megabits per second. There is no economic basis for the claim that the presence of two strong competitors is insufficient to result in effective competition. In fact, as the economics literature recognizes, the existence of significant sunk costs in the provision of broadband Internet access services tends to create significant competitive rivalry even with a limited number of competitors.

6. Claims that there is limited competition between wireline providers also ignore the fact that wireless broadband Internet access services are increasingly becoming a competitive alternative for wireline networks, as innovation and investments in both wireless broadband networks and mobile devices have made wireless networks viable competitive alternatives to wireline networks for some users. Consumers now access a sizeable and growing share of online content and services from mobile devices rather than computers connected to wireline networks. And, the promises of upcoming 5G technology are likely to considerably increase the competitive pressure from wireless services on wireline broadband.

7. Claims regarding “gatekeeper monopolies”: Echoing the *Title II Order*,⁵ some parties argue that, even when wireless and wireline broadband Internet access providers face effective competition, those providers are “gatekeepers” that have monopolies over access to subscribers by providers of online content and services (so-called “edge” providers). According to this theory, the level of competition between broadband Internet access providers for subscribers is irrelevant to the ability of broadband providers to engage in anticompetitive conduct vis-à-vis “edge” providers. In fact, according to the “gatekeeper” theory, even a small broadband

⁵ *Title II Order*, ¶ 80.

provider with a few customers would be a monopolist over access to those subscribers. These commenters seem to argue that such a “gatekeeper” position over access to subscribers also necessitates public utility-style Title II regulation.

8. The claim that broadband Internet access providers have a monopoly power irrespective of the degree of competition for subscribers is flawed as a matter of economics.⁶ The “gatekeeper” claims incorrectly dismiss competition for subscribers, instead arguing that once a consumer chooses a broadband provider, the provider is a monopolist over access to that subscriber. But this *ex post* view of competition ignores the *ex ante* competition to sign up customers in the first place.

9. Where broadband competition exists, competition for subscribers competitively constrains broadband Internet access providers with respect to actions that the provider can take vis-à-vis “edge” providers. Actions that a broadband provider takes towards “edge” providers (such as blocking or thwarting access to content, imposing artificially-high fees, or otherwise imposing unreasonable requirements) would lower subscribers’ demand for the network itself, creating incentives for current subscribers to switch to other providers and inhibiting the ability of the broadband provider to attract new customers. The risk of losing subscribers provides a powerful competitive constraint on broadband Internet access providers facing effective competition. While some parties try to dismiss this competitive constraint, arguing that consumers’ demand for a broadband network would not decrease as a response of reduced access to online content and services, such a claim is contradicted by the evidence that consumers do switch providers based on the quality of access to online content they desire.

10. The two-sided nature of the marketplace—wherein broadband Internet access networks enable interactions between subscribers, on one side, and providers of online content and services, on the other—does not mean that the network has a monopoly over one side (*i.e.*, online content providers). The “gatekeeper” theory ignores the fundamental two-way linkages between the two sides of the network—online content providers value access to consumers, but consumers also value access to online content.

⁶ See Lerner & Ordovery Declaration at 5, 30.

11. Claims regarding the impact of Title II on investments: Some commenters claim that Title II regulation of broadband Internet access providers has increased investments both by broadband Internet access providers and by “edge” providers, pointing to continued investments and advancements in network performance since the implementation of Title II regulation in 2015 as evidence. There is no empirical or economic basis for these assertions. Claims that continued investments and improvements over the past two years have been driven by Title II regulation simply defy common sense. Investments in broadband networks are impacted by many factors, and there is significant inertia in capital investments going into specific development projects (such as 5G). Thus, one would not expect that investments would “stop on a dime” as a result of Title II regulation. But this does not mean that public utility-style regulation will not adversely impact investments going forward. Claims that Title II regulation has enhanced the performance of broadband networks—including broadband deployment, speeds, capacities, and the availability of competitive alternatives, as well as the quality and variety of online content and services—are even more illogical. Those advancements were enabled by significant competition and investments that flourished under a light-touch regulatory framework prior to the *Title II Order*, not by Title II regulation.

12. It is unambiguous that public utility-style regulation will decrease investments and adversely affect innovation going forward. Title II regulation creates significant regulatory risks, and the ever-present threat of onerous regulatory interference. Regulation that decreases financial returns to investments and/or increases uncertainty weakens investment incentives. Investments in broadband Internet access networks, which inherently entail large initial sunk and irreversible costs and long-term benefits, are highly sensitive to increased risks. As a result, small increases in risk can significantly reduce the expected profitability of investment projects, and therefore incentives to invest. Because continual investments and innovation in broadband networks are key to providing services that benefit consumers, diminished incentives to invest and innovate have the potential to significantly distort competition and harm consumer welfare.

13. At odds with the basic economic conclusion that the threat and uncertainty of public utility-style regulation will hamper investments, some commenters claim that Title II regulation *increases* incentives to invest. First, they claim that Title II regulation actually *reduces* uncertainty and therefore enhances investment incentives. Second, these parties claim that Title II regulation will enhance investments and innovation by “edge” providers which, in turn, will

increase incentives to investment by broadband network providers in a “virtuous cycle” of investment and innovation. These arguments are fundamentally unsound.

14. With respect to the first claim, although the *Title II Order* abstains from applying many of the Title II provisions to broadband Internet access providers, some of the most significant provisions, including the basic provisions underlying most rate and service regulation, remain in place. Under the *Title II Order*, the Commission has the power to impose onerous public-utility requirements such as rate regulation. Moreover, under the “general conduct” standard, the Commission could regulate any practice that it considers “unreasonable” (such as free or sponsored data arrangements). Regulation that gives broad discretion to the regulator, as the *Title II Order* does, creates significant regulatory uncertainty.

15. The claim that Title II regulation will encourage investments by broadband Internet access providers because it will protect and enhance investments by “edge” providers also is fundamentally unsound. A “virtuous cycle” of investment and innovation—with investments in the broadband network increasing incentives to invest by “edge” providers, and vice-versa, due to complementarities between the network and the content and services accessed via the network—may indeed exist. However, the claim that repealing Title II regulation will hamper this “virtuous cycle” is exactly backwards. Title II regulation has no incremental value in encouraging investments and innovation by “edge” providers, compared to more targeted rules designed to protect access by consumers to the content and services of their choice. In fact, the claim that Title II regulation has encouraged investment by “edge” providers is incredulous given the lack of any evidence of widespread blocking or thwarting of access to content, and the significant innovation and investment by online content providers that flourished under light-touch regulation prior to the imposition of Title II. In fact, there is absolutely no evidence that investments by “edge” providers increased as a result of Title II regulation.

16. But Title II regulation does directly and adversely affect incentives to invest by broadband providers, as discussed above. Because of the “virtuous cycle” that the *Title II Order* highlights, this reduction in network investments will reduce investments by “edge” providers which, in turn, will further decrease network investments, and so on. Without significant continued investments in core broadband networks, consumers may not continue to benefit from the full potential diversity of online content and services. This is particularly true for online

services that will require improved network performance (*e.g.*, speed or latency). Targeted rules designed to protect consumer access to online content and services strike the right balance in encouraging investments by all parties—protecting investments by “edge” providers while at the same time limiting any adverse effects on investments by broadband Internet access providers. Title II regulation does the opposite—by imposing onerous and unnecessary regulations on network providers, without offering any incremental protection to “edge” providers.

17. More generally, advocates of Title II regulation offer no evidence of any benefits generated by Title II regulation compared to rules narrowly designed to protect the ability of consumers to access online content and services (and on top of existing antitrust and consumer protection laws). As a result, their arguments simply do not pertain to Title II regulation. In order to benefit consumers, the costs and harms associated with Title II regulation must be outweighed by the incremental benefits of imposing such public-utility regulation compared to such targeted rules. It is unambiguous that Title II regulation creates significant harms, without any offsetting incremental benefits. As a result, Title II regulation will diminish innovation and investment, distort competition and, consequently, harm consumer welfare.

18. This paper is organized as follows. Section II.A describes the significant competitive rivalry between wireless broadband providers, which advocates of Title II regulation do not seem to dispute. Section II.B explains that Verizon also faces significant competitive constraints in the provision of consumer *wireline* broadband services. Section II.C explains that claims that broadband providers are “gatekeeper” monopolists are flawed and inconsistent with the provision of broadband Internet access service. Section III discusses the incorrect assertions by some parties that Title II regulation has and will continue to encourage investments and innovation. Section IV offers concluding remarks.

II. Title II Regulation Is Ill-Suited Given the Significant Competition that Exists in Many Parts of the Broadband Internet Access Industry

19. Despite the significant competition that exists in many parts of the broadband Internet access industry, the staggering investments and innovation spurred by this competition, and the tremendous consumer benefits created, some commenters claim that public utility-style regulation is justified because the broadband Internet access industry is characterized by

monopoly broadband providers. In particular, these commenters argue that consumers have insufficient competitive alternatives when choosing a broadband Internet access provider, with a large share of consumers having access to only one wireline provider offering high-speed broadband Internet access services.⁷ These claims are inconsistent with the realities of the marketplace, including the provision of *wireless* broadband Internet access services and the provision of consumer *wireline* broadband Internet access in areas where Verizon offers such services in competition with cable operators.

A. There is no dispute that significant competition exists in the provision of *wireless* broadband Internet access

20. While some commenters argue that “broadband markets are not competitive,”⁸ none of the comments allege that the provision of *wireless* broadband Internet access is not competitive. Instead, parties advocating for Title II regulation focus entirely on consumer *wireline* broadband Internet access and ignore the inconvenient facts regarding the wireless marketplace. For instance, AARP claims that “*fixed* broadband shows that broadband is delivered almost exclusively by legacy telephone companies and legacy cable companies.”⁹ The omission of the wireless marketplace from the discussion in these comments is not surprising given the vigorous competition that exists between wireless broadband providers.

21. As we discuss in our initial declaration, the vast majority of consumers can choose among various different providers of wireless broadband Internet access services.¹⁰ In particular, as of December 2015, approximately 96 percent of the U.S. population lived in areas with at least three providers offering LTE services, and approximately 89 percent lived in areas with at least four providers offering LTE services.¹¹ The vast majority of U.S. consumers also has

⁷ See, e.g., *Restoring Internet Freedom*, WC Docket No. 17-108, Comments of INCOMPAS, July 17, 2017 (“INCOMPAS Comments”) at 26; *Restoring Internet Freedom*, WC Docket No. 17-108, Comments of AARP, July 17, 2017 (“AARP Comments”) at 73.

⁸ AARP Comments at 73.

⁹ AARP Comments at 73 (emphasis added).

¹⁰ Lerner & Ordovery Declaration at 4, 16.

¹¹ These numbers likely understate the share of the population as wireless carriers have continued to build out since 2015. Number of providers based on network coverage in the Census block. (FCC, *19th Annual Mobile Wireless Competition Report*, Chart III.A. and Chart III.A.2.)

access to high-speed 4G LTE services from multiple providers: Verizon offers 4G LTE coverage to over 96 percent of the U.S. population, AT&T to 98 percent, T-Mobile to 96 percent, and Sprint to 93 percent.¹² These estimates imply that at least 94 percent of U.S. consumers have access to two 4G LTE services (at least from Verizon and AT&T), and at least 83 percent have access to four 4G LTE services.¹³ In addition, resellers and mobile virtual network operators (MVNOs), which do not own facilities but instead purchase wholesale wireless services and then resell those services to consumers, also are part of the competitive wireless landscape.¹⁴ And, cable providers have begun to enter the wireless marketplace in order to bundle wireless and cable services, and are expected to continue doing so.¹⁵

22. The broad availability of high-speed wireless Internet access has been enabled by massive investments by wireless providers in deploying high-speed broadband services and improving network coverage and capacity.¹⁶ In addition to competing through investments in network infrastructure, wireless providers compete intensely for customers on the basis of price, network plan characteristics, and with respect to other important aspects of the wireless ecosystem.¹⁷

23. The significant competitive rivalry among providers, and the effective competitive alternatives available to consumers, is evidenced by the significant rate of subscriber switching among wireless providers, with 26.5 percent of wireless subscribers switching providers (or “churning”) in 2016.¹⁸ Wireless consumers switch among providers not only because of price,

¹² Estimates based on share of U.S. population in 2016. (FCC, *19th Annual Mobile Wireless Competition Report*, note 18; Census Bureau, “U.S. and World Population Clock,” *available at* <https://www.census.gov/popclock/>.)

¹³ AARP acknowledges that consumers have the ability “to choose from four nationwide [wireless] providers, and in some cases additional smaller regional and local carriers.” (*Restoring Internet Freedom*, WC Docket No. 17-108, Reply Comments of AARP, August 16, 2017 (“AARP Reply Comments”) at 27-28.)

¹⁴ See Lerner & Ordovery Declaration at 17.

¹⁵ See Lerner & Ordovery Declaration at 17-18.

¹⁶ FCC, *19th Annual Mobile Wireless Competition Report*, ¶ 9.

¹⁷ See Lerner & Ordovery Declaration at 4, 20.

¹⁸ Robert F. Roche and Kathryn Malarkey, *CTIA’s Wireless Industry Indices Report, Year-End 2016 Results* at 39.

but also due to data download speeds, data coverage, and other quality attributes.¹⁹ The significant rate of switching is consistent with the existence of low switching costs. All major wireless carriers have essentially ended the practice of signing up subscribers to standard two-year contracts, thereby making switching among wireless carriers even easier.²⁰ Industry analysts have recognized that the shift from the two-year contract business model has increased flexibility and facilitated switching by consumers.²¹ The risk of losing customers and the potential for substantial foregone revenues from subscriber defections creates substantial economic incentive for broadband providers to implement business practices that benefit consumers.²²

24. This vigorous competitive rivalry between wireless providers has led to important consumer benefits. Mobile wireless speeds continue to rise and prices per megabyte of data continue to fall. Wireless competition also has facilitated the availability of a wide variety of devices (and associated operating systems), apps, and services that are complements to a robust wireless broadband ecosystem. The significant investments and vigorous competition between wireless providers also has led to a rapid increase in output, both in terms of consumer connections and usage. The decrease in the quality-adjusted price of wireless broadband services and increases in output are the opposite of what one would expect in industries characterized by monopoly power.²³

25. Advocates of Title II regulation do not dispute these facts, nor do they provide any evidence that contradicts the conclusion that the wireless marketplace is highly competitive.

¹⁹ FCC, *19th Annual Mobile Wireless Competition Report*, note 375.

²⁰ See, e.g., Julian Chokkattu, “How to Avoid Early Termination Fees and Switch Phone Carriers Like a Pro,” DigitalTrends, December 10, 2016, available at <https://www.digitaltrends.com/mobile/how-to-switch-phone-carriers/>. The Commission has noted the “continued phase-out of contract service plans.” (FCC, *19th Annual Mobile Wireless Competition Report*, ¶ 86.)

²¹ See, e.g., Kara Brandeisky, “How to Break Up With Your Cell Phone Carrier,” Money, June 12, 2016, available at <http://time.com/money/4362611/end-contract-leave-switch-cell-phone-plan/>.

²² See Lerner & Ordoover Declaration at 23.

²³ See Lerner & Ordoover Declaration at 24-25 for discussion of these consumer benefits.

B. Claims regarding a lack of competition in the provision of *wireline* broadband Internet access ignore the fact that Verizon faces significant competition where it offers such services

26. Some commenters argue that there is insufficient competition in the provision of wireline broadband Internet access services, pointing to the fact that most consumers have access to only one or two wireline providers offering high-speed broadband Internet access services, typically defined as 25Mbps/3Mbps. For instance, AARP claims that “[u]nder the best of circumstances, for most consumers, the result is a duopoly market—two choices for a broadband connection. Other evidence shows that for higher speed broadband, monopoly market conditions exist for most consumers.”²⁴ In particular, AARP claims that, in California, only 32 percent of households have access to more than one provider of wireline broadband Internet access at a speed of at least 25 Mbps/3Mbps.²⁵ Similarly, INCOMPAS claims that “[o]nly 38% of Americans have more than once [sic] choice of providers” offering 25 Mbps/3 Mbps services.²⁶

27. However, these estimates are based on all geographic areas in the aggregate (or various urban and rural areas in California), including areas in which a cable operator competes against a DSL network that offers much lower speeds, or is the only option. While more than 80 percent of households served by DSL have access to services with download speeds of less than 25 Mbps (and approximately 40 percent have access to download speeds of less than 10 Mbps), virtually all households passed by a fiber network such as Fios have access to services with download speeds of greater than 100 Mbps, and sometimes greater than 1 Gb.²⁷ Similarly, the vast majority of households served by cable have access to cable services with download speeds greater than 50 Mbps.²⁸

²⁴ AARP Comments at 74. Based on a study of 17 counties, including both urban and rural Census blocks.

²⁵ AARP Comments at 76.

²⁶ INCOMPAS Comments at 26-27.

²⁷ National Broadband Map, Broadband Statistics Report, Access to Broadband Technology by Speed, *available at* <https://www.broadbandmap.gov/download/Technology%20by%20Speed.pdf>.

²⁸ National Broadband Map, Broadband Statistics Report, Access to Broadband Technology by Speed, *available at* <https://www.broadbandmap.gov/download/Technology%20by%20Speed.pdf>.

28. Because competitive conditions in the wireline industry vary across geographic areas, and wireline broadband providers compete on a local or regional basis, it is inappropriate to draw blanket conclusions regarding the degree of competition among wireline broadband providers on an aggregate level (*e.g.*, on a national or state basis).²⁹ Broad claims that broadband Internet access providers do not face sufficient competition ignore the wide variation in competitive conditions facing providers of consumer wireline broadband Internet access.

29. It is undisputed that Verizon faces significant competition from next-generation, high-speed cable services in essentially all areas in which it offers wireline broadband Internet access services.³⁰ Virtually all the homes passed by Fios have access to high-speed DOCSIS 3.0 cable services. For instance, data from the National Broadband Map shows that, already as of 2013, 97 percent of Census blocks where Verizon Fios was available, at least one cable firm offered broadband service with maximum advertised speeds of greater than 50 Mbps (more recent data is unavailable).³¹ Where Fios is available, there is intense competitive rivalry between Verizon and cable operators in terms of price and quality attributes.³²

30. Some commenters seem to suggest that availability of two providers offering high-speed broadband Internet access services is insufficient, and results in less than competitive market outcomes. For instance, AARP states “[u]nder the best of circumstances, for most consumers, the result is a duopoly market—two choices for a broadband connection,”³³ suggesting that such

²⁹ See Lerner & Ordovery Declaration at 16, 25-26.

³⁰ While next-generation cable services have greater capacity limitations than fiber networks, particularly for upload speeds, these services offer high download speeds exceeding the demands of most of today’s consumers, with services currently available that offer download speeds of greater than 100 Mbps.

³¹ U.S. Department of Commerce, *National Telecommunications and Information Administration, State Broadband Initiative*, CSV format, December 31, 2013. AARP claims that “the vast majority of households in the U.S. do not have access to fiber connections (by year-end 2016 about 30 million homes are passed by fiber in the U.S., *i.e.*, about 24% of all U.S. homes.” (AARP Reply Comments at 29.) This claim, however, obviously does not dispute the fact that in areas passed by Fios, there are effective competitive alternatives.

³² Lerner & Ordovery Declaration at 26.

³³ AARP Comments at 74.

a “duopoly” market is not competitive.³⁴ However, there is no economic basis that the presence of two strong competitors is insufficient to result in effective competition. In fact, as the economics literature recognizes, the existence of significant sunk and irreversible investments in the provision of broadband Internet access services can create significant competitive rivalry even with a limited number of competitors.³⁵ The low variable or marginal costs of serving subscribers, combined with significant sunk and irrecoverable investments in building the network, gives broadband Internet access providers incentives to compete aggressively for new customers.

31. AARP claims that a “market with a small number of service providers may perform just as poorly as a monopoly with regard to pricing and investment.”³⁶ While such an outcome is theoretically possible when firms engage in tacit collusion, there is absolutely no evidence that such tacit coordination occurs between Verizon and cable operators. In fact, significant competitive rivalry between Fios and cable operators offering high-speed broadband Internet access services belies such a claim.³⁷ AARP also claims that the existence of effective competition in areas with two strong competitors is contradicted by the fact that “the introduction of a ‘disruptive’ facilities-based wireline competitor has been consistently observed to elicit dramatic price reductions and quality improvements in wireline duopoly markets.”³⁸ In particular, AARP claims that “[w]here Google Fiber has entered broadband markets, it has had a disruptive impact on the cozy relationship that has developed between ILECs and cable companies, thus providing a ‘natural experiment’ to test the [] hypothesis that existing duopoly markets are ‘highly competitive.’”³⁹ However, AARP provides no evidence of such competitive

³⁴ See also, AARP Reply comments at 29.

³⁵ See, e.g., Joseph Farrell and Carl Shapiro, *Antitrust Evaluation of Horizontal Mergers: An Economic Alternative to Market Definition*, 10 (1) THE B.E. JOURNAL OF THEORETICAL ECONOMICS, Article 9 (2010): “In recent decades, however, industrial organization scholars and the courts have been more apt to stress that high concentration can be compatible with vigorous competition and efficient market performance.”

³⁶ AARP Reply Comments at 43.

³⁷ Lerner & Ordoover Declaration at 25-27.

³⁸ AARP Reply Comments at 42.

³⁹ AARP Reply Comments at 43.

effects of entry in Fios areas. Indeed, Fios itself has been a “disruptive” competitor, inducing significant competitive responses by cable operators in areas where Fios entered.⁴⁰ Moreover, the claimed impact of the entry of Google Fiber on prices does not indicate that rates were not competitive prior to entry. First, Google’s entry could be driven by other considerations, such as encouraging use of its services (*e.g.*, Google search and YouTube).⁴¹ Second, Google’s entry and business model for Google Fiber may not be sustainable—in fact, Google has stopped deploying fiber networks in new cities.⁴²

32. Claims that there is limited competition when consumers have access to two wireline providers offering high-speed broadband services also ignore the fact that *wireless* broadband Internet access services are increasingly becoming a competitive alternative for wireline networks. Innovation and investments in both wireless broadband networks and wireless devices have made wireless networks more and more viable alternative to wireline networks. Significant improvements in speed and capacity of wireless networks have allowed consumers to perform many of the same tasks on wireless devices as they perform on computers connected via wireline networks. And, the promises of upcoming 5G technology are likely to increase the competitive pressure from wireless services on wireline broadband. The advent of advanced wireless devices, particularly tablets, also has blurred the distinction between wireless and wireline *devices*, and how content providers access consumers using those devices. As a result, Internet content and service providers receive a sizeable and growing share of their user traffic from mobile devices rather than computers connected to wireline networks.⁴³

⁴⁰ In areas where FiOS was first launched, cable incumbents responded by lowering prices. *See Protecting and Promoting the Open Internet*, GN Docket No. 14-28, Declaration of Andres V. Lerner, Competition in Broadband and ‘Internet Openness’, July 15, 2014 at 15-16.

⁴¹ *See, e.g.*, Mike Freeman, “Is Google Fiber going wireless for the last mile?” The San Diego Tribune, November 4, 2016, *available at* <http://www.sandiegouniontribune.com/business/technology/sd-fi-google-internet-20161104-story.html>: “For Google, affordable bandwidth is the key to its Web businesses such as Google search and YouTube.”

⁴² *See, e.g.*, Aaron Pressman, “Google Fiber Still Expanding But More Slowly Than Ever,” Fortune, March 29, 2017, *available at* <http://fortune.com/2017/03/27/google-fiber-expanding-slowly/>.

⁴³ *See* Lerner & Ordoover Declaration at 28 for further discussion of these issues.

33. Some commenters claim that high switching costs diminish competition between wireline broadband providers. For instance, INCOMPAS claims that “market power in both markets is reinforced by high switching costs.”⁴⁴ According to INCOMPAS, “switching costs include early termination fees, the inconvenience of ordering, installing, and set-up, the difficulty in returning the earlier broadband provider’s equipment, the risk of temporarily losing service, and the frustration of learning how to use new equipment.”⁴⁵ Similarly, Netflix claims that consumers’ ability to respond to “unreasonable” broadband Internet access provider practices are “limited by switching cost.”⁴⁶ However, contracts are generally fairly short term, and subscriber agreements change to month-to-month at the end of their initial contract term.⁴⁷ More directly, claims regarding switching costs are refuted by the significant rate of switching by subscribers. For instance, a 2014 survey by Global Strategy Group found that consumers switch broadband providers frequently, with 17.6 percent switching in the prior 12 months, 33.1 percent switching in the prior 2 years, and 49.4 percent switching in the prior 4 years.⁴⁸ The significant rate of switching indicates that wireline provider contracts, and any inconveniences of switching (such as the need to return broadband equipment), do not inhibit subscriber switching.

34. In sum, while regulating natural monopolies may be economically justified in some circumstances due to the allocative inefficiencies that harm consumers due to monopoly pricing,⁴⁹ the wireless broadband Internet access services industry does not come close to resembling a monopolistic industry, and Verizon faces significant competition essentially

⁴⁴ INCOMPAS Comments at 33.

⁴⁵ INCOMPAS Comments at 33.

⁴⁶ *Restoring Internet Freedom*, WC Docket No. 17-108, Comments of Netflix, Inc., July 17, 2017 (“Netflix Comments”) at 3.

⁴⁷ A survey of cable bundle packages (all of which include broadband access services) by SNL Kagan found that the longest contract term was 24 months, with some providers offering month-to-month terms, and some contracts as short as six months. (SNL Kagan, “Bundle Pricing by Provider,” 2014.)

⁴⁸ Global Strategy Group Internet Survey, conducted July 10-14, 2014, cited in Mark A. Israel, “Economic Analysis of the Effect of the Comcast-TWC Transaction on Broadband: Reply to Commenters,” September 22, 2014 at 196.

⁴⁹ See, e.g., Dennis W. Carlton and Jeffrey M. Perloff, *MODERN INDUSTRIAL ORGANIZATION* 700-702 (Prentice Hall, 4th ed., Addison-Wesley 2004).

everywhere it offers consumer wireline broadband Internet access services. Competition creates incentives for broadband Internet access providers to implement business models and practices that benefit consumers. The greater the degree of competition, the less likely that individual broadband Internet access providers would have the incentive or ability to engage in practices that harm consumers or competition, as consumers can choose broadband networks that best suit their purposes in terms of price and quality attributes, including the speed and reliability of delivery of their desired content.

C. Claims that all broadband Internet access providers are monopoly “gatekeepers” over access to their subscribers are economically flawed

1. The fundamental assumptions of the “gatekeeper” theory are not present in the provision of broadband Internet access.

35. Some commenters claim that, even when there is effective competition between broadband Internet access providers for *subscribers*, the two-sided aspect of the broadband Internet access marketplace means that broadband Internet access providers are monopolists vis-à-vis *providers of online content and services (i.e., so-called “edge” providers)*. In particular, echoing the *Title II Order*,⁵⁰ some parties claim that broadband providers are “gatekeepers” that have monopolies over access by “edge” providers to their subscribers.⁵¹ These parties seem to argue that such a “gatekeeper monopoly” position over access to subscribers necessitates public utility-style Title II regulation.⁵² According to this theory, the level of competition between broadband Internet access providers for subscribers is irrelevant to the ability of broadband Internet access providers to engage in anticompetitive conduct vis-à-vis “edge” providers. In fact, according to the “gatekeeper” theory, even a small broadband Internet access provider with a few customers would be a monopolist over access to its subscribers. For instance, Ad Hoc states that

⁵⁰ *Title II Order*, ¶ 80.

⁵¹ *Restoring Internet Freedom*, WC Docket No. 17-108, Comments of The Ad Hoc Telecom Users Committee, July 17, 2017 (“Ad Hoc Comments”) at 8, claiming that “once the subscriber chooses a provider, that provider has a monopoly over access to the subscriber.” *See also*, Ad Hoc Telecom Comments at ii, 2; INCOMPAS Comments at 38; AARP Comments at 78.

⁵² Ad Hoc Comments at ii.

Competition in the consumer broadband market, no matter how robust it may be, cannot constrain the market behavior of a subscriber's ISP towards the businesses seeking to communicate with that subscriber. Once a subscriber selects an ISP, businesses and other edge providers have no option for communicating with the subscriber besides that ISP, regardless of the competitive choices available to the subscriber at the time of selection.⁵³

36. The claim that broadband Internet access providers have a monopoly power irrespective of the degree of competition for subscribers is flawed as a matter of economics.⁵⁴ When there is effective competition between firms, competition creates incentives for firms to offer attractive services at competitive prices. Indeed, where it exists, broadband competition for subscribers imposes a competitive constraint on broadband Internet access providers with respect to actions that the provider can *take vis-à-vis online "edge" providers*.

37. The "gatekeeper" claims incorrectly dismiss this competition for subscribers, instead arguing that once a consumer chooses a broadband Internet service provider, the provider is a monopolist over access to that subscriber. But this *ex post* view of competition ignores the *ex ante* competition to sign up customers in the first place. By the same token, a movie theater, theme park, or stadium could be characterized as a "gatekeeper" monopolist over customers who have entered the venue, and therefore could take advantage of those customers (as well as any suppliers wishing to serve those customers, such as soft-drink suppliers). But this would ignore the competition to attract customers to the venue. Customers' demand for the venue is affected not just by ticket prices, but also by the price and availability of soft-drinks, food, and other products sold inside the venue.

38. AARP claims that the movie theater, theme park, and stadium analogies show the type of "gatekeeper" market power that broadband Internet access providers have. AARP states that

anyone who has been to a movie theater, theme park, or stadium knows, once inside the venue, the power of a gatekeeper is clearly visible. The \$5 price for a bottle of water at the ballpark or concert reflects the impact of a gatekeeper's market power, and even non-economists are likely to have noticed that outside of the stadium, numerous competing vendors manage to deliver a bottle of water for \$1. Something about passing through the stadium gate causes prices to rise dramatically, and Verizon/Compass Lexicon [sic] deny this market reality. The

⁵³ Ad Hoc Comments at 9.

⁵⁴ See Lerner & Ordovery Declaration at 5, 30.

ex ante competition theory is not consistent with reality, either at the ballpark, or with regard to a consumer's broadband ISP connection.⁵⁵

But this claim reflects a fundamental misunderstanding of competition economics in general, and of market power in particular. A movie theater that faces significant competition in attracting customers does not suddenly gain market power once customers walk into the theater. The ability of a theater to charge high prices for water or soft-drinks does not reflect that it has market power in a way that is meaningful from a competition policy perspective. If a movie theater that faces effective competition charges supracompetitive prices for soft-drinks, without a commensurate decrease in the price of movie tickets, customer losses to rivals will make such supracompetitive soft-drink prices unprofitable. Over time movie-goers will stop patronizing the theater in sufficient numbers to make such pricing unprofitable. The idea that all movie theaters, theme parks, stadiums, and many other types businesses are “gatekeeper” monopolists once consumers make a decision to use their services simply makes no economic sense. By the same token, the theory that broadband Internet access providers are “gatekeeper” monopolists once a customer chooses a provider also is wholly misguided because it ignores the competition to sign up subscribers in the first place.

39. The nature of broadband Internet access means that the fundamental assumptions of the “gatekeeper” theory are not present when there is effective competition, and distinguishes broadband Internet access services from other services where the Commission has invoked that theory in the past. As we discuss in our prior declaration, the “gatekeeper” framework is based on the economic theory of “competitive bottlenecks.”⁵⁶ The theory is based on a model of two-sided platforms, in which users on one side of the platform (say, side A) participate in only one platform (*i.e.*, “single-home”), while users on the other side of the platform (side B) participate in all platforms (*i.e.*, “multi-home”) in order to reach all members of group A. Because each member of group A (say, a subscriber) single-homes, once the platform (say, a network service provider) has signed up some members of group A, the only way for members of group B (say, online content and service providers) to reach to those members of group A is to join the

⁵⁵ AARP Reply Comments at 34.

⁵⁶ Mark Armstrong, *The Theory of Access Pricing and Interconnection*, in HANDBOOK OF TELECOMMUNICATIONS ECONOMICS, Vol. I (M. Cave, S. Majumdar, and I. Vogelsang eds. 2002).

platform. It further follows that if a member of group B wants to reach all members of group A, it has to join all the platforms that the members of group A have joined. Thus, in the context of the theoretical model, once a platform has signed up some members of group A (in fact, even a small share of all members of group A) it has a “monopoly” over access to those members.⁵⁷ According to the theory, the platform’s monopoly over access to its members of group A exists irrespective of the size (or market share) of the platform, or the level of competition in the market for members of group A.

40. The model of “competitive bottlenecks” assumes that there are no effective market mechanisms that constrain the bottleneck platform’s ability and incentive to set high prices to the “multi-homing” side (group B, here, “edge” providers). Members of group A (here, subscribers) do not switch to other networks in response to high prices or restrictive policies imposed by the network on group B.⁵⁸ However, when higher prices or restrictive policies on members of group B cause some members of group A to switch platforms, this provides a competitive constraint on the conduct of the platform vis-à-vis members of group B. The reactions of group B to higher prices (or restrictive policies) by the platform can include passing through the higher price imposed by the platform in higher prices or lower quality of the services provided by group B to group A, or otherwise encouraging members of group A to switch platforms. Some members of group B also may drop out of the platform in response to higher prices which, given positive inter-side network effects between the two sides of the platform, also can lower demand by members of group A. These “feedback” mechanisms are particularly strong when (1) there is significant platform competition for, and switching across platforms by, members of group A and (2) when there are positive inter-side network effects between the two sides of the platform.

41. Thus, the two-sided nature of the marketplace—wherein broadband Internet access networks enable interactions between subscribers, on one side, and providers of online content

⁵⁷ Mark Armstrong, *Competition in Two-Sided Markets*, 37(3) RAND JOURNAL OF ECONOMICS 668, 669-670 (2006).

⁵⁸ In fact, because of inter-platform competition in the market for group A, higher prices charged by the platform to members of group B are competed away in lower prices to members of group A. As a result, in the “competitive bottlenecks” theory, competition compels a platform to charge high prices to members of group B and low (possibly zero or negative) prices to members of group A.

and services, on the other—does not automatically give broadband Internet access providers monopoly power over one side (*i.e.*, online content providers). The “gatekeeper” theory ignores the fundamental two-way linkages between the two sides of the network or ecosystem. In the current context, “edge” providers value access to consumers, but consumers also value access to online content and services.

42. Actions that a broadband provider takes with regard to “edge” providers, such as blocking or thwarting access to content, imposing artificially-high fees, or otherwise imposing unreasonable requirements, would lower subscribers’ demand for the network’s services, creating incentives for current subscribers to switch to other providers and inhibiting the ability of the broadband provider to attract new customers. The risk of losing subscribers imposes a powerful competitive constraint on broadband Internet access providers facing effective competition.

43. Because content is complementary to the broadband network, the value to subscribers of the broadband network itself is in large part driven by the availability and price of high-quality content and the quality of access to that content (*e.g.*, the speed and reliability of transmission). Any reduction in the quality or availability of content that can be accessed by subscribers of a particular broadband network, or any increases in the price of content, would reduce subscriber demand for that network.⁵⁹ For instance, because subscribers value access to online content and services, blocking or thwarting such content or services would directly reduce demand for the broadband network. The reduction in demand for a broadband access network is likely to be especially significant in the case of wireless providers, as well as in areas where Verizon offers

⁵⁹ AARP claims that such actions vis-à-vis “edge” providers would not result in subscriber losses. In particular, it states that “[f]or example, if Verizon discriminated against Netflix, but Comcast did not; while at the same time Comcast discriminated against YouTube, while Verizon did not, the following (confusing) message from the two affected edge providers, directed at the same end-user would result: ‘If you want Netflix, subscribe to Comcast, and if you want YouTube, don’t subscribe to Comcast.’” (AARP Reply Comments at 36.) But such a statement does not refute the fact that both Verizon and Comcast would lose subscribers from such conduct where they compete head-to-head and, therefore, that each would have incentives to refrain from engaging in such “discrimination.” For instance, Verizon would lose subscribers if it “discriminated against Netflix,” whether or not Comcast “discriminated against YouTube.”

consumer wireline broadband service in direct competition to one or more wireline broadband providers, since in such instances subscribers have good competitive alternatives.⁶⁰

2. *Competitive dynamics in the provision of broadband Internet access services are fundamentally different from those of long-distance voice services.*

44. Some commenters, such as Ad Hoc, claim that the “gatekeeper” monopoly power by broadband Internet access providers is analogous to the application of the theory to long-distance voice services. In particular, Ad Hoc claims that

the Commission has addressed this very market dynamic when it reviewed terminating access charges in the switched voice market. The Commission’s analysis and approach in that context is instructive for this proceeding because the terminating charges imposed by local exchange carriers (“LECs”) on interexchange carriers (“IXCs”) terminating long distance calls to the LECs’ customers are analytically identical to the types of charges ISPs seek to impose on unaffiliated content providers for delivery and prioritization of content to the ISPs’ subscribers.⁶¹

45. Contrary to these superficial claims, the market characteristics inherent in the IXC situation are fundamentally different from the provision of broadband Internet access services. In the context of long-distance voice services, local exchange carriers (“LECs”) were claimed to be “terminating access monopolies” because long-distance carriers (known as “inter-exchange carriers” or “IXCs”) required access to the LEC’s network to reach the LEC’s customers. In this market setting, there were no effective market constraints on the ability of LECs to impose high termination fees on IXCs for termination of long-distance calls. A LEC could charge the IXC a high price to reach its customer and, because the IXC provided no service to and had no relationship with the end user on the terminating end, there was no mechanism for the IXC to pass those costs back to the terminating LEC’s customer (*i.e.*, the called party). Furthermore,

⁶⁰ In fact, commenters advocating for Title II regulation acknowledge this feedback mechanism. In describing a “virtuous cycle” between investments by broadband providers and investments by providers of online content and services due to the complementarities of the two sides of the network (which we discuss below), INCOMPAS recognizes that by restricting access to online content and services, a broadband provider “actually chokes consumer demand for the very broadband product it can supply.” (INCOMPAS Comments at 40.)

⁶¹ Ad Hoc Comments at 10. *See also*, Ad Hoc Comments at 12: “The ‘market failure’ that the Commission addressed for switched voice services is identical to the market failure faced by businesses seeking to communicate with an ISP’s subscriber.”

because IXCs were barred by regulations from refusing to terminate traffic to LECs with inflated rates, the IXCs had no way to discipline LECs that imposed inflated terminating rates.

46. In that context, there were limited, if any, market constraints on the ability and incentives of LECs to impose supra-competitive termination fees on IXCs because there was no effective market mechanism by which these high fees charged to the IXC could or would affect the choice of a terminating LEC by the called party. The IXC could not constrain the behavior of the terminating LEC or the called party. The IXC had no direct arrangement with the called party, and therefore had no means of passing on termination fees to those customers.⁶² Consequently, the terminating LEC's customers had no incentive to switch to a rival, even if there were one. Simply, there were no adverse market consequences for a terminating LEC to impose unreasonably-high termination fees on IXCs.⁶³

47. The IXC could try to pass on the higher termination fees to customers of all LECs by increasing long-distance rates. However, although this may have reduced demand for telephone services in general, neither the terminating carrier nor the called party took these costs into account. Because the reduction in long-distance calls could lower demand by all potential parties called by the originating subscriber, including parties that subscribe to other carriers, higher termination fees imposed an “externality” on other carriers that was not considered by the terminating carrier in setting its fees.⁶⁴

⁶² The Telecommunications Act of 1996 contains provisions requiring interconnection between carriers, diminishing the ability of an IXC to simply refuse to terminate calls to a customer of an LEC. *See, e.g., Access Charge Reform, Seventh Report and Order and Further Notice of Proposed Rulemaking*, 16 FCC Rcd 9923, April 26, 2001 at 37.

⁶³ In fact, because of competition between LECs and CLECs for subscribers, higher termination fee revenues were passed through to subscribers in *lower* prices for telephone service and, thus, consumers had incentives to choose carriers that imposed high termination fees (and competition therefore compelled carriers to do so). *See, e.g., Noel D. Uri, Monopoly power and the problem of CLEC access charges*, 25 TELECOMMUNICATIONS POLICY 611, 614 (2001).

⁶⁴ Noel D. Uri, *Monopoly power and the problem of CLEC access charges*, 25 TELECOMMUNICATIONS POLICY 611, 615 (2001). This externality due to the interconnection between independent carriers, which is the basis for the market failure in telephone networks, is highlighted by the fact that the “terminating access monopoly” problem existed only for “off-net” calls (*i.e.*, where senders and receivers belong to different network), and not for “on-net” calls (*i.e.*, where senders and receivers both subscribe to the same network operator). In the latter case, the carrier internalized any costs that high termination fees imposed on originating

48. These market characteristics are fundamentally different from the provision of broadband Internet access services. In contrast to market conditions in the provision of long-distance voice services, actions that a broadband provider takes with regard to an online content provider resonate back to the broadband access provider's own customers, as discussed above. That is, there is a direct "feedback loop" whereby blocking or thwarting access, setting artificially-high fees, or imposing unreasonable requirements on content providers would lower subscribers' demand for the network itself, creating incentives for current subscribers to switch to other providers and inhibiting the ability of the broadband provider to attract new customers.

49. Moreover, content and service providers also could pass on to subscribers any hypothetical fee imposed in a higher price for the content or service, which would reduce demand for the broadband Internet access provider's services.⁶⁵ These higher quality-adjusted prices for the content or services of online providers would reduce demand by subscribers for a broadband network that imposes supra-competitive fees or restrictive policies on content providers.

50. In contrast, there was no effective market mechanism that constrained the ability or incentives of a terminating LEC to set monopoly prices. IXCs did not have a relationship with, and could not impose fees on, the terminating LEC's customers (*i.e.*, the called party), and even if they could levy a surcharge on the originating LEC's customers (*i.e.*, the calling party), such a surcharge would not have had an effect on the terminating LEC or its customers. The market feedback in the case of broadband services is direct and, where there is effective competition (such as in wireless broadband and consumer wireline broadband in areas where Verizon offers those services), there are competitive alternatives to which customers can switch if a provider imposed business models that were unreasonably harmful to content or service providers.

callers, and the presence of competition limited the ability of the carrier to set supra-competitive termination fees.

⁶⁵ There appear to be no material transaction costs or impediments for online content and service providers to set prices for their services that differ depending on the broadband provider used by the subscriber. Even for online content and service providers that have no contractual relationship, and for content that has a "zero price," an online content and service provider may implement a higher "effective price" by increasing the number of advertisements shown to users or by reducing the amount of "free" content or services available.

3. *Claims that subscriber losses would be insufficient to constrain the actions of broadband providers vis-à-vis “edge” providers are inconsistent with the facts.*

51. Some commenters claim that, for various reasons, subscriber switching in response to actions that a broadband Internet access provider takes with regard to “edge” providers would provide an insufficient competitive constraint. AARP, for instance, claims that such a market mechanism would not constrain the conduct of broadband Internet access providers because “the prospect of consumers dropping broadband service in response to ISP mischief is very small, precisely due to the lack of consumer choice in broadband markets.”⁶⁶ It states specifically that “[g]iven the prevalence of monopoly and duopoly conditions in broadband markets, easy switching is not a possibility for many customers, especially those who want high-speed broadband, such as that available from cable companies, but which is not available from DSL providers.”⁶⁷ As we discuss, however, AARP completely ignores the significant competition and existence of competitive alternatives in the wireless marketplace. And, Verizon also faces effective competition in essentially all areas in which it offers wireline services.⁶⁸

52. AARP also seems to claim that subscriber losses would be insufficient to constrain broadband Internet access providers from blocking or thwarting access, setting artificially-high fees, or imposing unreasonable requirements on content providers when “the platform owner produces its own versions of the complementary services, and thus faces competition from the third-party providers for its own complementary services.”⁶⁹ According to AARP, “[u]nder those circumstances, the internalization of complementary efficiencies is outweighed by the broadband ISP’s desire to increase the profitability of its own offerings, e.g., its own video

⁶⁶ AARP Reply Comments at 31.

⁶⁷ AARP Reply Comments at 31-32.

⁶⁸ See discussion, Sections II.A and II.B. AARP also puts forth a straw-man argument that “discriminatory” conduct vis-à-vis an online service provider such as Netflix would not induce “customers who use Verizon FiOS to ‘switch to AT&T U-verse...’ because “Verizon and AT&T do not compete against one another in wireline broadband markets...” (AARP Reply Comments at 35.) Of course, switching between Fios and U-verse would not occur since these networks do not compete in the same geographic areas, but this says nothing about the potential for significant subscribers switching between broadband Internet access providers that do compete head-to-head, such as between Fios and cable operators, or between wireless providers.

⁶⁹ AARP Reply Comments at 32.

programming.”⁷⁰ AARP provides no empirical basis for the conclusion that subscriber losses would be outweighed by the supposed benefits to a broadband provider’s own online services. For instance, using Netflix as an example, AARP claims that “when a broadband ISP also provides video programming, interfering with Netflix traffic would result in the broadband ISP gaining a competitive advantage for its own video programming, as its video offerings would not be subject to the discrimination.”⁷¹ But losses from subscriber defections due to, for example, blocking or thwarting access to Netflix could dwarf any gains to the broadband provider’s own video service. More generally, AARP’s argument itself refutes the “gatekeeper” theory—which is based on the assumption that no feedback mechanism exists between the two sides of a platform and, therefore that competition on one side (for subscribers) does not constrain the platform’s conduct vis-à-vis the other side (online content providers). AARP merely reaches a purported empirical conclusion—*without providing any factual evidence for it*—that subscriber losses would be outweighed by gains to a broadband provider’s vertically-integrated online services.

53. INCOMPAS offers a different argument in attempting to dismiss the competitive constraint on broadband providers. In particular, it argues that consumers’ demand for a broadband Internet access provider would not decrease in response to a degradation of access to particular online content and services because subscribers are not “fully responsive to the imposition of such” degradation.⁷² INCOMPAS states that

Switching costs are further exacerbated because: 1. Consumers may not know why they are having trouble using an existing online service. 2. Selective degradation may not rise to the level of a problem that would motivate switching, especially when it is new and nascent competitors that are disadvantaged. 3. Consumers have no certainty that problems with accessing particular content will not be the same with a new provider.⁷³

54. However, such a claim is contradicted by the evidence that consumers do switch providers based on the quality of access to online content they desire. According to a survey by

⁷⁰ AARP Reply Comments at 32.

⁷¹ AARP Reply Comments at 34.

⁷² INCOMPAS Comments at 38.

⁷³ INCOMPAS Comments at 34.

Consumer Reports, 71 percent of respondents said they would switch to a competing service if their ISP started to block or charge extra to use high-bandwidth internet services.⁷⁴ One study found that of U.S. households that switched broadband providers, 35 percent did so for faster broadband speed and only 18 percent for a lower price of a comparable-speed service.⁷⁵ This significant rate of switching due to non-price factors highlights that consumers are sensitive to differences between broadband Internet access providers in the quality of access to content.

55. Information on broadband Internet access provider practices is widely available from various sources. Numerous third-party websites, social media sites, and publications provide detailed information to consumers, and an active online community closely monitors provider practices. For instance, a variety of websites, as well as many broadband Internet access providers themselves (including Verizon), offer Internet speed test tools that allow users to test the speed of their broadband connection.⁷⁶ Surveys indicate that a large share of broadband customers actually use such tools to monitor the speed of their Internet access service.⁷⁷ And, because broadband consumers often “multi-home”—*i.e.*, use various different broadband providers (such as a wireline broadband service at home, a wireline broadband service at work, and one or more wireless broadband services)—consumers readily can compare the performance of broadband networks in terms of the speed and other aspects of the quality of transmission.

⁷⁴ Consumer Reports, “71% of U.S. households would switch from providers that attempt to interfere with Internet,” February 18, 2014, *available at* <http://www.consumerreports.org/cro/news/2014/02/71-percent-of-households-would-switch-if-provider-interferes-with-internet-traffic/index.htm>.

⁷⁵ “Parks Associates research shows faster broadband speeds drive more switching than do lower fees,” Parks Associates, November 30, 2015, *available at* <https://www.parksassociates.com/blog/article/pr-11302015-needforspeed>.

⁷⁶ *See, e.g.*, Ookla Speedtest, *available at* <http://beta.speedtest.net/>; Spectrum Speed Test, *available at* <https://www.spectrum.com/internet/speed-test>; Verizon Speed Test, *available at* <https://www.verizon.com/speedtest/>; AT&T Internet Speed Test, *available at* <http://speedtest.att.com/speedtest/>.

⁷⁷ Speedtest by Ookla reports that approximately 60 million of its speed tests were run in the U.S. on fixed broadband networks in the first half of 2016. (Speedtest Market Report, United States, August 3, 2016 *available at* <http://www.speedtest.net/reports/united-states/>.) Cisco reported that 43 percent of survey respondents in its Bandwidth Consumption and Broadband Reliability study used an online speed test to validate their Internet package service speed. (Cisco, *Bandwidth Consumption and Broadband Reliability - Studying Speed, Performance, and Bandwidth Use in the Connected Home*, July 2012 at 6.)

Consumers therefore can monitor the practices and performance of their broadband network provider and switch to a rival provider if they cannot get adequate access to the content they desire. And, transparency rules would ensure that consumers have information regarding their broadband services and practices of broadband Internet service providers.

56. Moreover, because “edge” providers have a direct relationship with subscribers—*i.e.*, subscribers are direct consumers of “edge” providers—they are well-positioned to inform subscribers of the broadband provider of any unfavorable practices, thus bringing substantial customer and public pressure on any broadband provider that engaged in anticompetitive practices. Rival providers also would have incentives to inform consumers of any such practices, through advertising and other means, in order to attract customers that highly value particular content.

57. Ad Hoc seems to acknowledge that because consumers demand certain content, broadband Internet access providers are competitively constrained in the actions they take with regard to “edge” providers. However, it claims that such consumer demand for content “would only apply to the largest and most well-known content providers.”⁷⁸ In particular, according to Ad Hoc:

While it is conceivable that an ISP might be forced to allow access to certain content or content providers because the ISP’s customers demand it, such demand would only apply to the largest and most well-known content providers. Small start-ups, companies with little funding or name recognition, and those in the process of building their customer base ... would have little recourse or leverage against ISPs whose customers were insufficiently numerous or vocal in demanding access to their content.⁷⁹

However, consumers have diverse demands for online content and services, such that those that are not accessed by many subscribers may still be highly valued by some. And, subscribers are likely to value the variety of the available content itself. Moreover, while the subscriber loses that result from any “discrimination” against online content or services that are valued by fewer subscribers would be lower, any gains from such “discrimination” also would be lower. Thus, there is no economic basis for Ad Hoc’s claim that broadband Internet access providers would

⁷⁸ Ad Hoc Comments at 12.

⁷⁹ Ad Hoc Comments at 13.

block or thwart access, or impose unreasonable requirements, on “[s]mall start-ups, companies with little funding or name recognition, and those in the process of building their customer base.”⁸⁰

58. In sum, where broadband competition exists, competition for subscribers imposes a competitive constraint on broadband Internet access providers with respect to actions that the provider can take vis-à-vis online content and service providers. As a result, the fundamental assumptions of the “gatekeeper” theory are not present. As AARP acknowledges,

If the market for broadband Internet access were subject to economic competition, then market forces could discipline broadband Internet access provider behavior. If consumers had choice from among multiple broadband ISPs, then consumers could ‘vote with their pocket books’ and select a different provider if a broadband ISP blocked, throttled, or otherwise interfered with a consumer’s ability to access the ‘lawful Internet content, applications, and services of their choosing.’⁸¹

Indeed, because Verizon faces significant competition essentially everywhere it offers broadband Internet access services, “consumers could ‘vote with their pocket books’ and select a different provider if a broadband ISP blocked, throttled, or otherwise interfered with a consumer’s ability to access the ‘lawful Internet content, applications, and services of their choosing.’”⁸²

59. Lastly, it is important to note that even if, hypothetically, broadband Internet access providers had bargaining power vis-à-vis “edge” providers, it would not mean that public-utility style regulation such as Title II is appropriate. Targeted rules designed to protect consumer access to online content and services can effectively address such concerns. In contrast, Title II regulation is an overly-broad regulatory framework which will retard investments, as we discuss below, without any offsetting incremental benefits in addressing concerns regarding consumer access to online content and services of their choice.

⁸⁰ Ad Hoc Comments at 13.

⁸¹ AARP Comments at 73. *See also*, AARP Comments at 77: “If consumers had numerous alternatives of broadband Internet access, market forces could mitigate the ability of broadband ISPs to pursue harmful unilateral actions.”

⁸² AARP Comments at 73.

III. Title II Regulation Reduces Investment Incentives and Thereby Will Distort Competition and Harm Consumers

60. As we discuss in our prior declaration, public utility-style regulation will decrease investments and adversely affect innovation. Title II regulation creates significant regulatory risks, and the ever-present threat of onerous regulatory interference. Regulation that decreases financial returns to investments and/or increases uncertainty weakens investment incentives.⁸³

61. At odds with these basic economic principles, some commenters claim that Title II regulation of broadband Internet access actually increases, rather than diminishes, investment incentives. First, they argue that Title II regulation of broadband Internet access providers has actually increased investments both by broadband Internet access providers and by “edge” providers, pointing to continued investments and advancements in network performance since the implementation of Title II in 2015 as evidence. Second, some commenters claim that Title II regulation will enhance investments and innovation by “edge” providers which, in turn, will increase incentives to invest by broadband network providers in a “virtuous cycle” of investment and innovation. As discussed below, the claims are fundamentally unsound and inconsistent with the evidence.

A. Claims that Title II regulation has increased investments and industry performance since its implementation in 2015 are unsupported by the empirical evidence

62. Some commenters claim that the empirical evidence shows that Title II regulation has not decreased investment by broadband providers and, in fact, that it has *increased* investments, both by broadband Internet access providers and by “edge” providers, pointing to continued investments and advancements in network performance since the implementation of Title II regulation in 2015 as evidence. Free Press claims, for example, that “reclassification has had little to no impact on the investment decisions made by broadband providers in the two years since reclassification,” in fact, “individual company investments, revenues, profits, and capabilities alike have increased since the 2015 order issued.”⁸⁴ Similarly, Netflix claims that “[n]ot only is there little evidence that investment by broadband providers has been harmed

⁸³ See Lerner & Ordoover Declaration at 9-11.

⁸⁴ Free Press Comments at 64.

following the 2015 Open Internet Order, research indicates that some providers have increased investment since it took effect.”⁸⁵

63. Claims that continued investments and improvements over the past two years have been driven by Title II regulation are unsupported by the evidence, and simply defy common sense. There is absolutely no empirical basis for the conclusion that Title II regulation has urged broadband Internet access providers to increase investments. Empirically quantifying the impact of Title II regulation on investments is complex, especially given the short timeframe since the reclassification of broadband Internet services.⁸⁶ Investments in broadband networks are impacted by many factors, and there is significant inertia in capital investments going into specific development projects (such as 5G). Thus, one would not expect investments to “stop on a dime” as a result of Title II regulation. The analyses of investments offered by commenters advocating for Title II regulation do not control for these exogenous factors or the inertia in investments. Thus, there is absolutely no basis that any claimed increases in investment were the result of, or were positively affected by, Title II regulation. The fact that broadband Internet access providers have continued to invest over the past couple of years does not mean that public utility-style regulation will not adversely impact investments going forward.

64. AARP claims that our initial declaration “offers evidence that robust broadband investment has continued following the *2015 Title II Order*” and therefore “concede[s] that under Title II wireless providers are investing at high levels to roll out 5G.”⁸⁷ In addition, according to AARP, our initial declaration “clearly explain[s] the importance of competition in driving broadband ISP investment decisions” and “that competition in the wireless industry has continued to drive investment following the *2015 Title II Order*.”⁸⁸ There is no doubt that

⁸⁵ Netflix Comments at 3-4.

⁸⁶ In fact, AARP acknowledges that “quantifying the precise impact of the *2015 Title II Order* on broadband investment is challenging, given the short-time period since reclassification, and the need for data to account for the many factors, other than regulation, that influence investment decisions.” (AARP Comments at 47; see also, AARP Comments at 71.) However, against its own warning, it nevertheless concludes that evidence of the lack of impact on investments “is reflected in broadband performance data.” (AARP Comments at 66.)

⁸⁷ AARP Comments at 27.

⁸⁸ AARP Comments at 28.

competition continues to drive broadband Internet access service providers to invest significantly in improving and expanding their networks, but this reflects the significant competition and investments developed under light-touch regulation prior to the imposition of Title II. And, there is no doubt that innovation and investments in broadband networks will continue going forward. However, whether overall investments in broadband networks will continue, given market growth and other profit opportunities, is not the relevant question. The relevant question is whether investment incentives will be lower—*all else equal*—because of regulatory uncertainty from Title II regulation. The risks of regulatory interference do not imply that all investments and innovation will cease—in fact, wireless providers continue to invest in new technologies (such as 5G). But the effect on investments is unambiguously negative. Regulatory uncertainty will diminish investment activity by reducing the profitability of investment projects.

65. Some parties also allege that Title II regulation has enhanced the performance of broadband Internet access networks. Free Press, for instance, states that “the transmission capabilities of broadband services offered by carriers large and small increased dramatically in the two years under restored common carriage, with additional improvements continuing at an historic pace.”⁸⁹ According to Free Press, these performance improvements include broadband deployment,⁹⁰ transmission speeds,⁹¹ capacities,⁹² and the availability of high-speed broadband competitive alternatives,⁹³ as well as the quality and variety of online content and services.⁹⁴

⁸⁹ Free Press Comments at 86.

⁹⁰ Free Press Comments at 90: “Broadband Deployment Increased at a Historic Pace.” *See also*, Free Press Comments at 101: “ISPs Accelerated Deployment of Faster Broadband”; Free Press Comments at 120: “Many Rural Areas Previously Served Only by Fixed Wireless Technology Saw New Wired Deployments, Primarily from Telephone Company ISPs.”

⁹¹ Free Press Comments at 94: “The Number of Available ISPs at Higher-Level Transmission Speeds Increased Dramatically, Largely Reflecting Widespread Upgrades by Telephone Company ISPs Made to Narrow the Capacity Gap with Cable Company ISPs.”

⁹² Free Press Comments at 96: “Available Transmission Capacities Increased Dramatically After the Open Internet Order, Reflecting ISPs Response to Increased Demand for Streaming Video-Capable Telecommunications Services.”

⁹³ Free Press Comments at 98: “The Percent of the Population Living in High-Speed Broadband Monopolies Declined Sharply following Restoration of Title II, Reflecting Telephone Company ISP Deployments.”

⁹⁴ Similarly, AARP asserts that “[i]f investment were being withheld by broadband ISPs, then it would be reasonable to see a plateau or decline in measured broadband speeds following the

The claim that improvements in the performance of broadband networks over the past couple of years have been driven, or have been positively affected, by Title II regulation lacks any basis, and is simply illogical. Those advancements in broadband performance have been enabled by significant competition and investments that flourished under a light-touch regulatory framework prior to the *Title II Order*, not by Title II regulation. There is absolutely no evidence that these improvements in performance were enabled or positively influenced by Title II regulation, as Free Press claims.

66. It is unambiguous that by reclassifying broadband internet services as telecommunications services, the *Title II Order* will reduce investment and adversely affect innovation going forward. Although the *Title II Order* abstains from applying many of Title II provisions to broadband Internet access providers, some of the most significant provisions (*e.g.*, the basic provisions underlying most rate and service regulation) remain in place. Under the *Title II Order*, the Commission has the power to impose onerous public-utility requirements such as rate regulation. Moreover, under the “general conduct” standard, the Commission could regulate any practice that it considers “unreasonable” (such as free or sponsored data arrangements).

67. The threat that broadband Internet access providers will be subjected to public utility-style regulation creates significant business risks. Regulation that decreases financial returns to investments and/or increases uncertainty weakens investment incentives and hampers innovation in the long term. Basic investment theory shows that increased risks, including regulatory risks, have the effect of reducing the profitability of investment projects and therefore diminishing investment activity. Investments in wireless broadband Internet access networks, which inherently entail large initial sunk costs and long-term benefits, are highly sensitive to increased risks.⁹⁵ Moreover, as the economics literature shows, because investments in broadband Internet access networks are “irreversible”—in the sense that they cannot be sold to firms for uses other than providing broadband Internet access services—regulatory uncertainty can have a significant

2015 Open Internet Order. However, observed broadband speeds have shown above-average growth during the past two years.” (AARP Comments at 66.)

⁹⁵ See Lerner & Ordovery at 9.

adverse effect on investment incentives.⁹⁶ As a result, small increases in risk can significantly reduce the expected profitability of investment projects. Consistent with these fundamental principles, various empirical studies of telecommunications industries find that increased regulation deters investment and innovation.⁹⁷

68. At odds with the basic economic conclusion that the threat and uncertainty of public utility-style regulation will hamper investments, some commenters claim that Title II regulation increases incentives to invest because it *reduces* uncertainty. Free Press, for instance, claims that Title II regulation actually “Created Marketplace Certainty” and thereby encouraged investments.⁹⁸ However, regulation that gives broad discretion to the regulator, as the *Title II Order* does, creates significant regulatory uncertainty. Uncertainty about what practices will be permitted—for instance, how the “general conduct” standard will be interpreted by the Commission and the courts—creates significant risks, and thereby lowers expected returns on investments. Uncertainty about what practices will be permitted creates incentives to delay marginal investments until additional information that reduces that uncertainty becomes available (such as through Commission proceedings). Such delays in investments can have serious detrimental effects on broadband performance and innovation, and thereby adversely impact consumers.⁹⁹

⁹⁶ Robert S. Pindyck, *Irreversibility, Uncertainty, and Investment*, 29 JOURNAL OF ECONOMIC LITERATURE 1110 (September 1991); Robert S. Pindyck, *Mandatory Unbundling and Irreversible Investment in Telecom Networks*, MIT Sloan Working Paper 4452-03 (2004).

⁹⁷ See, e.g., Michal Grajek and Lars-Hendrik Röller, *Regulation and Investment in Network Industries: Evidence from European Telecoms*, 55 JOURNAL OF LAW AND ECONOMICS 189 (February 2012); J. E. Prieger, *Regulation, Innovation and the Introduction of New Telecommunications Services*, 84 REVIEW OF ECONOMICS AND STATISTICS 704 (2002).

⁹⁸ Free Press Comments at 170; See also, Free Press Comments at 173: “Title II’s restoration and the Open Internet rules brought that degree of certainty to all participants in the broadband market.”

⁹⁹ AARP claims that “the FCC exercised substantial forbearance, and onerous public-utility requirements have not been imposed on broadband ISPs. However, much of the discussion in the *Verizon/Compass Lexicon* [sic] paper is premised on the assumption that the FCC will impose ‘onerous public-utility requirements’ on broadband ISPs.” (AARP Reply Comments at 25.) This is incorrect. Even if the FCC does not impose public utility-type requirements on broadband Internet access providers in the future, the possibility of such regulation and

69. Because continual investments and innovation are key to providing services that benefit consumers, diminished incentives to invest have the potential to significantly distort competition and harm consumers by reducing coverage and/or lowering the quality of services. Diminished investments by access providers will be particularly harmful for *wireless* broadband Internet access services, where new technologies are still being developed and deployed, and for which there is the potential for significant improvements in quality (such as in speed, latency capacity, and reliability). Further deployment of and improvements in high-speed wireless broadband Internet access services has the potential to significantly benefit millions of consumers, and would benefit not just those individuals receiving high-speed wireless broadband Internet access services, but for the broader economy as well.

B. Claims that Title II regulation has increased investments by “edge” providers, enhancing a “virtuous cycle” of innovation, are fundamentally unsound

70. Some commenters also argue that Title II regulation will enhance investments and innovation by “edge” providers which, in turn, will increase incentives to invest by broadband network providers in a “virtuous cycle” of investment and innovation. For instance, AARP claims that “the externality associated with the two-sided market sets up the ‘virtuous circle’ of investment and innovation ... edge providers will invest more if they can reach a large number of subscribers who have high-quality broadband services, and subscribers demand high-quality broadband services to benefit from the existence of a large number of edge providers, thus promoting investment by broadband ISPs.”¹⁰⁰ Similarly, INCOMPAS claims that “[t]he gatekeeper role poses a direct threat to the virtuous circle...”¹⁰¹

71. This argument is fundamentally unsound. A “virtuous cycle” of investment and innovation may indeed exist. Broadband Internet access services and online content and services are complementary components of an overall “system,” with components interacting with each

ambiguity regarding what practices will be permitted creates significant uncertainty, and deters investments.

¹⁰⁰ AARP Comments at 78. *See also*, AARP Reply Comments at 26: “If the Commission abandons the *2015 Title II Order’s* framework, a different set of business actors—edge providers—will face increased business risk, and that business risk will also diminish investment incentives.”

¹⁰¹ INCOMPAS Comments at 39.

other in this system to create value for consumers. Because broadband Internet access services and “edge” provider services are complementary, if the value of the broadband network to subscribers increases (*e.g.*, due to higher speeds, greater capacity, or lower latency), the value of “edge” provider services also increases. And, conversely, enhancements in “edge” provider services (and access to those services) increase the value of the broadband network to consumers. Thus, due to these complementarities, investments in the broadband network increase incentives to invest by “edge” providers, and vice-versa.

72. However, the claim that repealing Title II regulation will hamper this “virtuous cycle” is exactly backwards. Title II regulation provides no incremental value in encouraging investments and innovation by “edge” providers, compared to more targeted rules designed to protect access by consumers to the online content and services. Investments by “edge” providers would be protected by targeted rules meant to ensure that consumers can access the content and services of their choice. In fact, the claim that Title II regulation has encouraged investment by online content and service providers is incredulous given the lack of any evidence of widespread blocking or thwarting of access to content, and the significant innovation and investment by “edge” providers that flourished under light-touch regulation prior to the imposition of Title II.

73. Some commenters make the mistake of assuming that, without Title II regulation, broadband Internet service providers will block or thwart access to particular content, reducing the potential customer base for “edge” providers, and therefore diminishing their incentives to invest. For example, AARP states that “edge providers will invest more if they can reach a large number of subscribers who have high-quality broadband services, and subscribers demand high-quality broadband services to benefit from the existence of a large number of edge providers, thus promoting investment by broadband ISPs.”¹⁰² It claims that broadband Internet access providers can diminish incentives to invest by reducing access to customers.¹⁰³ However, the assumption that without Title II regulation broadband Internet service providers would block or thwart access to content is incorrect, given both competitive realities and broadband Internet

¹⁰² AARP Comments at 78.

¹⁰³ AARP Comments at 80.

access providers' support for reasonable rules designed to protect consumers' ability to access the online content of their choice.

74. While Title II regulation does not provide any incremental value in protecting investments by “edge” providers, it does directly and adversely affect incentives to invest by broadband providers, as discussed above. Because of the “virtuous cycle” that the *Title II Order* highlights, this reduction in network investments will reduce investments by “edge” providers which, in turn, will further decrease network investments, and so on. Without significant continued investments in core broadband networks, consumers may not continue to benefit from the full potential diversity of online content and services. This is particularly true for online services that will require improved network performance (*e.g.*, speed or latency).

75. All in all, targeted rules designed to protect consumer access to online content strike the right balance in encouraging investments by all parties—protecting investments by “edge” providers while at the same time limiting any adverse effects on investments by broadband Internet access providers. Title II regulation does the opposite—by imposing onerous and unnecessary regulations on the network, without any incremental benefit to “edge” providers.

76. More generally, advocates of Title II regulation offer no evidence of any benefits generated by Title II regulation compared to rules designed to protect unfettered consumers access to online content. As a result, their arguments simply do not pertain to Title II regulation. In order to benefit consumers, the costs and harms associated with Title II regulation must be outweighed by the incremental benefits of imposing such public-utility regulation compared to targeted rules aimed at ensuring consumer access to online content and services (and on top of existing antitrust and consumer protection laws). It is unambiguous that Title II regulation creates significant harms, without any offsetting incremental benefits. As a result, Title II regulation will diminish innovation and investment, distort competition and, consequently, harm consumer welfare.

IV. Conclusions

77. Claims by some commenters that all broadband Internet access providers are monopolists that must be regulated based on the public utility-style regulatory framework are economically unsound, unsupported by the evidence, and highly misleading. These comments are based on a

failure to recognize (or even assess) the significant competition in the wireless segment, and on an incorrect assessment of consumer wireline competition in areas where Verizon offers such services. Faced with the fact that there is vigorous competition in many parts of the broadband Internet access industry, commenters resort to a “gatekeeper” monopoly theory that simply does not fit the nature of competitive forces in the provision of broadband Internet access services. And, their theories that, contrary to basic economics and empirical studies of regulation, public utility-style regulation will actually *increase* investments are economically illogical. All in all, none of the comments refutes the fact that Title II regulation of broadband Internet access providers imposes significant costs on firms and consumers, and provides little (if any) competitive benefit. Title II regulation is ill suited in addressing concerns about consumer access to online content and services of their choice, imposing significant costs without any incremental benefits compared to more reasonable protections that are targeted at achieving such an objective.

I declare under penalty of perjury that the foregoing is true and correct.

A handwritten signature in blue ink that reads "Andres Lerner". The signature is fluid and cursive, with the first name "Andres" and the last name "Lerner" clearly distinguishable.

Andres V. Lerner
August 30, 2017

I declare under penalty of perjury that the foregoing is true and correct.

A handwritten signature in black ink that reads "Janusz Ordover". The signature is cursive and somewhat stylized, with the first name "Janusz" and the last name "Ordover" clearly distinguishable.

Janusz A. Ordover
August 30, 2017