
Written Testimony of

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Before the

**Congress of the United States**
**House of Representatives**
**Committee on Energy and Commerce**
**Subcommittee on Communications and Technology**

Regarding

# "Preserving an Open Internet for Consumers, Small Businesses, and Free Speech"

February 7, 2019

Chairman Doyle, Ranking Member Latta, and esteemed members of the subcommittee, thank you for inviting me to testify.[1]

I'm here today as Vice President of Strategy and Senior Counsel for Free Press and Free Press Action, on behalf of our 1.4 million members across the United States, in all 50 states, the District of Columbia and Puerto Rico, who are calling for reinstatement of the FCC's 2015 Net Neutrality rules and legal framework. That includes the return of the FCC's authority to protect us from current and future Internet Service Provider ("ISP") discrimination and abuse, as well as the FCC's authority to promote broadband choice, affordability, and privacy.

I'm also here today as a Mexican-American woman who grew up in a working class family and became a first generation college graduate. I understand that millions of people who came before me, including members of this House past and present, have fought against discrimination, and struggled for better public school education, workers' rights, a social safety net and other causes that enabled me to be here today. My father grew up in Redondo Beach, California, where, at the time, it was illegal for his family to live based on their ethnicity.

I reflect on this in this testimony because despite all of the anger and frustration with our government in this age, what we are doing here matters in people's lives. The U.S. government has a long, sordid history when it comes to discrimination and racism, beginning but certainly not ending with Native genocide and slavery. Indeed it used the media to legitimize the enslavement of Black people, and the genocide and displacement Native peoples. And although it has taken some steps to reduce racism and discrimination

[1] I would like to thank my colleagues, Matt Wood, Dana Floberg, and S. Derek Turner for assisting me with the preparation of this testimony.

in certain aspects of American life, including but not limited to laws that prohibit housing and employment discrimination, it has done very little to remedy structural racism in the media and communications sectors, among others.

The FCC's *2015 Open Internet Order* is one exception. That order reclassified broadband internet access service as a telecommunications service, which gave the FCC clear authority to prevent and investigate unreasonable discrimination by ISPs.[2] It prevented ISPs from blocking, throttling or discriminating against lawful content. And it empowered the FCC to investigate and stop shady ISP practices. As dozens of civil rights and racial justice groups noted in the FCC record opposing the Trump FCC's Net Neutrality repeal,

> [T]he open Internet has empowered people of color with new opportunities for self-expression, entrepreneurship, political participation, education, employment, housing, healthcare, racial justice, and many other vital human needs. On the other hand, we have witnessed, too, what happens when the powerful few control who is heard in the media. For instance, the vast majority of mainstream media owners and decision makers are white men, and on those platforms we are not able to control our own narratives, we are often absent or dehumanized, we are criminalized, we are habitually painted as threats and as the "others." The open Internet is our digital oxygen in these debates, and the Commission's proposal threatens to take it away.[3]

In 2017, the Trump FCC nevertheless repealed Net Neutrality and abandoned the successful Title II legal framework supporting the rules.[4] The repeal decision was wildly unpopular. According to a University of Maryland poll from April 2018, 82 percent of Republicans, 90 percent of Democrats and 85 percent of Independents object to the

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[2] *See* 47 U.S.C. §§ 153(50), (51), (53), 202(a); *see also Protecting and Promoting the Open Internet*, GN Docket No. 14-28, Report and Order on Remand, Declaratory Ruling, and Order, 30 FCC Rcd 5601, ¶ 129 (2015) ("*2015 Open Internet Order*").

[3] Comments of Voices for Internet Freedom Coalition, WC Docket No. WC- 17-108, at iii (filed July 19, 2017), https://www.freepress.net/sites/default/files/legacy-policy/voices_for_internet_freedom_coalition_comments.pdf.

[4] *See generally Restoring Internet Freedom*, WC Docket No. 17-108, Declaratory Ruling, Report and Order, and Order, FCC 17-166 (rel. Jan. 4, 2018) ("*2017 Net Neutrality Repeal Order*").

FCC's efforts to take away our right to choose where we go, what we do, and with whom we connect online.[5]

Millions of American activists, creators, small business owners and internet users objected, and joined Free Press Action and its allies in calling on Congress to reinstate the *2015 Open Internet Order* under the Congressional Review Act.[6] People of color were among some of the most vocal critics of the repeal, and for good reason: we have more to lose. Never before in history have barriers to entry been lower for people of color to reach a large audience with our own stories in our own words; to start small businesses; to organize for change. We are unwilling to yield our newfound access.

This hits really close to home for me as a racial justice activist, but also because my best friend, Vanessa Martínez Bell, is a blogger, small business owner, and cultural curator of multiracial motherhood. While she was pregnant, and in the midst of the Great Recession, Vanessa was laid off from her job at a non-profit in Las Vegas serving at-risk children and families. With a passion for learning and a penchant for deep research and exploration, Vanessa began blogging from her Las Vegas apartment following the birth of her daughter in 2010. Her blog was a labor of love: her intention was to fill the void of content designed for and by parents raising multiracial children.

Vanessa, a Los Angeles native, is the daughter of Cuban immigrants. She is married to the son of a Black Baptist preacher. Upon the birth of her daughter she noticed that there was a dearth of news, analysis and information geared towards Black and

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[5] University of Maryland, School for Public Policy, "Overwhelming Bipartisan Public Opposition to Repealing Net Neutrality Persists" (Apr. 18, 2018), http://www.publicconsultation.org /united-states/overwhelming-bipartisan-public-opposition-to-repealing-net-neutrality-persists/ .

[6] The Senate passed the CRA on a bipartisan basis, but the measure died in the House of Representatives upon adjournment of the 115th Congress because then-Speaker Paul Ryan refused to bring up the bill for a floor vote.

Latinx parents, and even less for mothers raising multiracial children. She began writing love letters to her daughter to guide her as she explores and stands in her identity, and to ensure that she sees the beauty and power in Black and Brown women, even in a world that tries subjugate us at every turn. Vanessa's blog, DeSuMama.com, underscores that mothers "are powerful and worthy of being celebrated! We are the story tellers, dream keepers, and legacy builders for the next generation!"[7] As Vanessa explains:

> Multiracial moms have a unique parenting experience. Being of mixed race and bicultural parents, the journey of personal identity for our children will be unlike our own . . . . In addition to raising empowered multiracial children, I feel purposed in the core mission of De Su Mama to build a community of like minded mothers who yearn to fully support the various layers of identity that make up our beautiful mixed kids.

Today it is clear that Vanessa is serving an important niche with relevant and timely analysis and information. I only wish such a resource existed when I was growing up. DeSuMama.com has a loyal following, and is shifting culture and building bridges and understanding across cultures. It is also a successful business that has helped Vanessa supplement the family income while being at home with her children. Notably, it has accomplished all of this at Vanessa's own website, not by relying solely on Facebook or other social media platforms to distribute all of her content. De Su Mama helped support her family's return to Los Angeles, and their purchase of a home. For her, the end of Net Neutrality means that she might not be able to reach the same audience with her stories; or that her voice might be drowned out by corporate media that can pay more to access audience and squash diverse voices. This would not only impair her livelihood, but also the reach of her storytelling and cultural influence. For these reasons, Vanessa is one of

[7] De Su Mama: A Legacy Blog for Multiracial Moms, http://www.desumama.com.

many Free Press members that opposes the Trump FCC's Net Neutrality repeal, and supports reinstatement of the *2015 Open Internet Order*.

**The Three "Bright-Line" Rules in the *2015 Open Internet Order* Alone Are Insufficient To Prevent ISP Discrimination and Protect People on the Internet**

To properly protect internet users, we must reinstate the three "bright-line" rules in the *2015 Open Internet Order*, and also the FCC's authority to investigate and protect people from other forms of ISP discrimination and abuse. In punting away its own authority under Title II of the Communications Act, the FCC either abandoned entirely or vastly weakened its ability to:

- Promote broadband affordability and deployment;[8]
- Modernize and promote the Lifeline program;[9]
- Protect users from privacy invasions by ISPs;[10]
- Protect users from unjust and unreasonable discriminatory practices generally, including investigating whether any new practices might be unjust or discriminatory;[11]
- Examine data cap and zero-rating schemes to determine if they're unreasonably discriminatory;[12]
- Ensure ISP disclosure of hidden fees or data caps;[13]
- Investigate or take enforcement action against improper billing of broadband customers;[14]

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[8] *See, e.g.*, Matt Wood & Gaurav Laroia, "All the Details on Pai's Internet-Breaking Plan," Free Press (Nov. 22, 2017), https://www.freepress.net/our-response/expert-analysis/insights-opinions/all-details- pais-internet-breaking-plan; Jon Brodkin, "If the FCC gets its way, we'll lose a lot more than net neutrality," *Ars Technica* (July 12 2017), https://arstechnica.com/tech-policy/2017/07 /how-title-ii-goes-beyond-net-neutrality-to-protect-internet-users-from-isps/ (hereinafter "Brodkin").

[9] 2017 Net Neutrality Repeal Order, Dissenting Statement of FCC Commissioner Mignon L. Clyburn.

[10] *See, e.g.*, Gigi Sohn, "The FCC's plan to kill net neutrality will also kill internet privacy," *The Verge*, (Apr. 11, 2017), https://www.theverge.com/2017/4/11/15258230/net-neutrality-privacy-ajit-pai-fcc.

[11] Brodkin.

[12] *Id.*

[13] *Id.*

[14] *Id.*

- Promote interconnection and prevent unreasonable access fees that could be charged to third parties and that are not otherwise contemplated or banned by the three bright-line rules;[15]
- Promote public safety;[16] and
- Ensure reasonable access for disabled people.[17]

There will be far more to say about this list if and when the subcommittee moves forward with legislation, about all of the rights that internet users lost when the Pai FCC repealed the 2015 order. For now, it suffices to say that while restoring the three bright-line rules against ISP blocking, throttling, and paid prioritization is essential, that alone would not be enough to safeguard Net Neutrality itself, let alone to restore all of these other rights lost when the FCC abdicated its statutory mandate.

[15] *Id.*

[16] Brian Fung, "Net neutrality activists, state officials are taking the FCC to court. Here's how they'll argue the case.," *Wash. Post*, (Aug. 21, Apr. 2018), https://www.washingtonpost.com/technology/2018/08/21/net-neutrality-activists-state-officials-are-taking-fcc-court-heres-how-theyll-argue-case/?utm_term=.184f35c2b0b4..

[17] Alice Wong, "Net Neutrality, Accessibility, and the Disability Community," Center for Media Justice (Nov. 22, 2017), https://centerformediajustice.org/2017/11/22/net-neutrality-accessibility-and-the-disability-community/.

**Without Net Neutrality Rules and Sound FCC Oversight of Broadband Internet Access Services in Place, ISPs Have Abused Their Power**

Prior to the *2015 Open Internet Order*, ISPs in the United States regularly violated the principles of Net Neutrality.[18] One even went so far as to admit that it would like to discriminate against certain kinds of content, even while the version of the Net Neutrality rules in place before 2015 was still in litigation..

In 2005, North Carolina ISP Madison River Communications blocked the voice-over-internet protocol ("VOIP") service Vonage, and the nation's largest ISP, Comcast, began secretly blocking peer-to-peer technologies that Comcast customers were using over its network.[19] Users of services like BitTorrent and Gnutella were unable to connect to these services. In 2007, investigations from the Associated Press, the Electronic Frontier Foundation and others confirmed that Comcast was indeed blocking or slowing file-sharing applications without disclosing this fact to its customers.

From 2007–2009, AT&T forced Apple to block Skype and other competing VOIP phone services on the iPhone. The wireless provider wanted to prevent iPhone users from using any application that would allow them to make calls on such "over-the-top" voice services. The Google Voice app received similar treatment from carriers like AT&T when it came on the scene in 2009.[20]

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[18] Timothy Karr, "Net Neutrality Violations: A Brief History," Free Press (Jan. 24, 2018), https://www.freepress.net/our-response/expert-analysis/explainers/net-neutrality-violations-brief-history.

[19] *Id.*

[20] *Id*.

In 2010, Windstream Communications, a DSL provider with more than 1 million customers at the time, admitted to hijacking users' search queries made using the Google toolbar within the Firefox browser.[21]

In 2011, MetroPCS, at the time one of the top-five U.S. wireless carriers, announced plans to block streaming video over its 4G network from all sources except YouTube.[22] Later that year, the Electronic Frontier Foundation found that several small ISPs – Cavalier, Cogent, Frontier, Fuse, DirecPC, RCN and Wide Open West – were redirecting search queries via the vendor Paxfire. Paxfire would intercept a person's search request at Bing and Yahoo and redirect it to another page. By skipping over the intended search service's results, the participating ISPs would collect referral fees for delivering users to select websites.[23]

From 2011–2013, AT&T, Sprint and Verizon blocked Google Wallet, a mobile-payment system that competed with a different mobile payment app the wireless providers intended to provide, which all three carriers had a stake in developing.[24]

In 2012, the FCC caught Verizon Wireless blocking people from using tethering applications on their phones. Verizon had asked Google to remove eleven free tethering applications from the Android marketplace. These applications allowed users to circumvent Verizon's $20 tethering fee and turn their smartphones into Wi-Fi hot spots. By blocking those applications, Verizon violated a Net Neutrality pledge it made to the FCC as a condition for acquiring spectrum in the 700 MHz auction.[25]

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[21] *Id*.
[22] *Id*.
[23] *Id.*
[24] *Id.*
[25] *Id.*

Then in 2013, Verizon made its intentions plain during oral arguments in *Verizon v. FCC*. When judges asked whether it would favor some preferred services, content or sites over others if the court overruled the agency's existing open internet rules, Verizon's outside counsel Helgi Walker stated, "I'm authorized to state from my client today that but for these rules we would be exploring those types of arrangements."[26]

In 2012, AT&T's proclivity for blocking competing voice and video-calling apps returned, when AT&T announced that it would disable use of Apple's FaceTime video-calling app over AT&T customers' cellular connections unless they also subscribed to a more expensive text-and-voice plan. Essentially, AT&T separated customers from more of their money by blocking alternatives to AT&T's own products.[27]

Throughout 2013 and 2014, major broadband providers including AT&T, Time Warner Cable, and Verizon, deliberately limited the capacity at ISP interconnection points, effectively throttling the delivery of Netflix content to thousands of U.S. businesses and residential customers across the country while impacting the delivery of content from other sites and sources too.[28]

The *2015 Open Internet Order* helped to curb much of this ISP misbehavior, giving the FCC tools to investigate and even put a stop to any such practices it might have found to be harmful. Since the Pai FCC repealed the 2015 rules and legal framework, we have seen some seriously suspect ISP behavior – even in the face of massive scrutiny from the public and Congress. But because the FCC has abdicated its authority to protect consumers from ISP abuse, it doesn't even have the power to

[26] *Id.*
[27] *Id.*
[28] *Id.*

investigate these instances. According to Lindsay Stern from consumer advocacy group Public Knowledge,[29] there have been several potential Net Neutrality violations and other examples of unreasonable ISP behavior since the repeal:

- Wireless carriers like AT&T, T-Mobile and Verizon distort and contort the meaning of the word "unlimited" by offering multiple unlimited plans. But the more expensive varieties tend to be either paired with the company's own streaming services, as the carriers also degrade the quality of the video under certain conditions. These practices may give the carrier's content an advantage in the marketplace over smaller, independent video producers.
- A recent study shows that the largest U.S. telecom companies, including Verizon, AT&T, and T-Mobile, are slowing down internet traffic from apps like YouTube and Netflix. The same researchers suggest that Sprint also has been throttling internet traffic to Microsoft's Skype service, causing the video quality to be poorer than it should be. This could be especially worrisome when carriers slow down or treat differently video apps that compete with their own content and preferred partners, or in the Sprint case because Skype is a tool that competes with Sprint's calling service.
- Comcast has new speed limits under which videos will be throttled to 480p on all its mobile plans unless customers pay extra, and wired ISPs like AT&T are beginning to experiment again with data caps and overage fees not justifiable as reasonable network management on a wired connection.[30]
- Verizon's throttling of services even affected the Santa Clara County Fire Department's ability to provide emergency services during the California wildfires. The fire department experienced slowed down speeds on their devices and had to sign up for a new, expensive plan before speeds were restored.

These examples continue to show that internet companies have likely used the lack of Net Neutrality rules and FCC oversight to their advantage, to make money, slow content based on its source, and escape scrutiny for these and other unreasonable actions.

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[29] Lindsay Stern, "Broadband Providers Are Quietly Taking Advantage of An Internet Without Net Neutrality Protections," Public Knowledge (Jan. 29, 2019), https://www.publicknowledge.org/ news-blog/blogs/broadband-providers-are-quietly-taking-advantage-of-an-internet-without-net-neutrality-protections.

[30] *See* Phillip Dampier, "AT&T Drops Data Caps for Free if You Subscribe to DirecTV Now," *Stop The Cap!* (Dec. 19, 2018), https://stopthecap.com/2018/12/19/att-drops-data-caps-for-free-if- you-subscribe-to-directv-now/.

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**The FCC's Main Justification for Scrapping Net Neutrality Is Built on Lies: the Rules Did Not Dampen ISP Investment, Which Continued on Pace After the 2015 Order, But Has Not Increased as Chairman Pai Promised Since the Repeal**

During the course of the 2017 proceeding that wrongfully repealed the *2015 Open Internet Order*, Free Press used ISPs' own data and their statements to investors to show the true impact – or, more aptly, the lack of any such impact – from the the rules the Trump FCC nonetheless voted to abandon. Even if there were some broadband industry business case to be made here for eliminating the rules, then the policy considerations, statutory rights, and moral arguments above calling for an open and equitable pathway to the internet could easily outweigh those ISP claims. Luckily for us, we face no such choice here: the 2015 Net Neutrality rules were working beautifully for everyone, including ISPs themselves, and the repeal of those rules was a fact-free exercise in irresponsible deregulation by untethered ideology.

During the two years before Chairman Pai's appointment as chair, when the 2015 rules and Title II framework were in place, broadband investment and speeds increased in rural and urban areas alike. This did not stop Chairman Pai from relying for his repeal on faulty arguments and flimsy evidence, cherry-picked and even fabricated to convey the false impression that the 2015 rules and legal framework were somehow negative for ISPs' deployment and spending decisions.

Beyond claiming (falsely) that the 2015 order had harmed ISPs' investment, Pai and his allies confidently predicted in the 2017 repeal decision and elsewhere "that reclassification of broadband Internet access service from Title II to Title I is likely to increase ISP investment and output."[31] These claims can also be tested now against the

[31] *See, e.g., 2017 Net Neutrality Repeal Order* ¶ 98.

reality of broadband providers' investment data and deployment decisions over the course of the past two years – either since the appointment of Chairman Pai at the beginning of the Trump administration, with his pre-ordained conclusion and promise to repeal the *2015 Open Internet Order*; since the more recent Net Neutrality repeal vote in December 2017; or since that repeal took effect in mid-June 2018.

No matter which of those periods we examine, one thing is clear: individual broadband providers' capital expenditures have not uniformly skyrocketed since the FCC's repeal of Net Neutrality rules in December 2017, even coupled (as that repeal unfortunately was) with massive corporate tax cuts and giveaways made law that same month by the 115th Congress and the Trump White House.[32] In fact, many of the largest ISPs have now reported to investors that their capital expenditures fell in 2018, decreasing year-over-year from 2017 – the last full year before the Pai repeal and the Trump tax cuts were both voted on and approved.

In other words, even "freed" from the basic obligation not to discriminate unreasonably against their customers and simultaneously awash in cash from sweeping tax "reform," many of the largest ISPs invested less (and even slashed their workforces at the same time). This proves yet again, as Free Press has maintained in each of its many filings and analyses of broadband investment, that Title II classification and strong Net Neutrality rules are no deterrent to ISP investment, and their removal was no spur to them. The rules aren't even a significant factor influencing investment decisions.

As we did when discussing investment and deployment results during the period when Title II and the 2015 rules were in place, we caution against over-reliance on

[32] *See, e.g.*, John Wagner, "Trump signs sweeping tax bill into law," *Wash. Post* (Dec. 22, 2017).

aggregate investment expenditures, the sheer dollar amount spent by ISPs, or other such minimally meaningful metrics. The blunt measure of an aggregate total is easily swayed by changes in either direction at any large firm, and it obscures changes (if any) in investment decisions, cycles, and strategies by all of the individual firms that make up the total. Looking at those individual results, the majority of publicly traded broadband providers in their own financial disclosures reported investment increases after the *2015 Open Internet Order* issued. And even these individual spending totals are less important than the actual results internet users saw from that spending, in the form of faster speeds, improved coverage, and increased competition.

As always, individual companies' investment decisions and directions may vary from one another, with ISPs explaining to their investors in copious detail the reasons for their individual decisions. Those are based on the technological upgrade cycles that tend to take place across different sub-sectors as, say, most cable ISPs upgrade to a new generation of technology during the course of a few years, followed by a subsidence in cable expenditures and an increase in wireless expenditures when it is cellular providers' turn to evolve. What's more, as Free Press never tires of noting, AT&T itself perhaps most succinctly explained the nature of carriers' investment cycles and fluctuations.

> [T]here is no reason to expect capital expenditures to increase by the same amount year after year. Capital expenditures tend to be "lumpy." Providers make significant expenditures to upgrade and expand their networks in one year (*e.g.*, perhaps because a new generation of technology has just been introduced), and then focus the next year on signing up customers and integrating those new facilities into their existing networks, and then make additional capital expenditures later, and so on. Minor variations from year to year thus should not be surprising[.][33]

[33] Comments of AT&T, WT Docket No. 10-133, at 34 (filed July 30, 2010); *see also id.* at 39.

But accounting for these individual variations, or perhaps it is fairer to say because of these variations, we can say three things quite certainly today:

(1) the fact that more publicly traded ISPs saw investment go up under Title II and the 2015 rules than the smaller number of ISPs that reported decreases shows that the now-repealed framework did not uniformly (or even typically) decrease investment by individual ISPs;

(2) the fact that several large ISPs have now reported decreased investment in 2018, after the FCC voted for the Pai repeal along partisan lines in December 2017 and after that repeal took effect in June 2018, shows that the repeal did not uniformly increase investment for individual ISPs; and

(3) in either case, there is no evidence of any change in 2015, 2016, or now in 2017 either, to ISPs' *status quo* buildout trajectory, which shows steady and even rapid improvements in speed and coverage over the last several years even though deployment gaps persist in some areas.

***Investment and Deployment Under the 2015 Rules***

Any claim that Title II delayed or dampened broadband rollouts simply is not true. ISPs' own data (discussed in greater detail in Free Press's initial comments in the 2017 proceeding[34]) proves such arguments wrong beyond a shadow of a doubt.

Broadband deployment is by no means satisfactory in every area in the nation, and even where it may be sufficiently fast and available at present not every person can afford to subscribe. Yet despite these continuing challenges of availability and affordability, ISPs' own deployment and investment data show that Title II's reinstatement and the 2015 Net Neutrality rules did not slow down deployment, speed upgrades, or overall investment by ISPs. The data that these companies report to the FCC – and also to their own investors, to Wall Street analysts, and to the U.S. Securities and Exchange Commission – all show that deployment continued apace during the time that Title II was in place.

[34] *See* Comments of Free Press, WC Docket No. 17-108, at 86–294 (filed July 17, 2017) ("Free Press 2017 Comments").

Among hundreds of pages and dozens of figures Free Press filed and prepared for its comments, replies, and reports in the 2017 docket, the most well-known showed an aggregate increase in investment by a group of twenty-four publicly traded ISPs.[35] Far more important and illustrative than that aggregate total, as explained above, is our reporting on how different ISPs' spending changed during the two years before adoption of the *2015 Open Internet Order* and the two years following its adoption. For instance, as that same figure shows, Comcast saw its capital expenditures increase by more than 26 percent with Title II and the 2015 order in place.

That figure and another we prepared later, more graphically comparing ISPs' capital expenditures in the year before 2015 order with those made in the two years after its adoption,[36] illustrate this point neatly. Twice as many publicly traded ISPs increased their capital expenditures, due to new and continued network upgrades unperturbed by the reinstatement of Title II and the adoption of strong Net Neutrality rules, than the smaller fraction of ISPs that decreased their expenditures due to the completion of prior deployment and upgrade cycles. This fact alone does much to disprove the fanciful notion that Title II systemically threatened or harmed investment across the entire industry.

Some still insist on incorrectly claiming some harm to broadband investment from Title II focus on supposed decreases in aggregate investment figures for that time period, but the manipulated totals they cite stem from vague and unspecified tabulations for the broadband industry as a whole. They distort the amount invested by certain ISPs while

[35] *Id.* at 130.

[36] *See* Free Press Action, "Broadband Investment Basics" (May 15, 2018), *available at* https://www.freepress.net/sites/default/files/2018-06/fpaf_broadband_investment_basics.pdf.

ignoring freely available public statements explaining individual firms' decisions.[37] Alternatively, they sometimes point to supposed decreases or decisions not to invest by small and rural ISPs – rarely if ever backing up those claims with any concrete data, facts or figures. Several such claims appeared in December 2017, just days before the FCC's Net Neutrality repeal vote. Free Press quickly demonstrated that despite unsubstantiated claims from an assortment of small ISPs arguing that they had been forced to curtail investment by the 2015 rules and legal framework, these providers had in fact greatly expanded their coverage areas, their speeds, or both with those 2015 rules in place.[38]

Most of all, proponents of the now thoroughly-disproved notion that 2015 ordered harmed investment willfully ignore the fact that individual ISPs' various upgrade paths and spending under Title II show there was no uniform decrease from prior periods in individual companies' investments during that time. Most of the individual ISPs we can track (thanks to their publicly-traded status) spent more in the two years following instatement of the rules than they had prior to adoption of the *2015 Open Internet Order*, as explained in these carriers' advance guidance and subsequent reports to investors.

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[37] *See* Free Press 2017 Comments at 145–151; *see also id.* at 151 (quoting AT&T's explanation that the company's costs were falling due to technological improvements and the efficiencies therefrom, not due to any regulatory concerns, as evidenced by the fact that AT&T was then "going to deploy more fiber next year than we did this year, but the capital requirements are going down").

[38] *See* Letter from Matthew F. Wood, Free Press, to Marlene H. Dortch, Secretary, Federal Communications Commission, WC Docket No. 17-108 (filed Dec. 11, 2017), https://www.freepress.net/sites/default/files/legacy-policy/free_press_net_neutrality_investment_ex_parte.pdf.

***Investment Since Chairman Pai's Appointment and Net Neutrality's Repeal***

It has now been more than two years since the 2016 presidential election, however, which further increased already dire threats to people of color in this country and on its borders. It's even been two full years since Donald Trump appointed Ajit Pai to lead the FCC in January 2017, and since the beginning of Pai's efforts to strip away Net Neutrality along with seemingly as many other vital communications rights as he can.

To hear Pai and his enablers tell it, the repeal of Net Neutrality and the Title II framework – first threatened by the new administration in early 2017, then carried out before the end of that year – should have automatically and almost magically unleashed ISP innovation and investment. That wouldn't have been a good deal for internet users, who deserve networks that are both affordable and open under Congress's mandate to the FCC; but Pai and others suggested implausibly and offensively that repealing safeguards for broadband customers is a prerequisite to closing the digital divide.

Despite a string of press releases and stray tweets from lobbyists crowing that the investment magic is working, the numbers show otherwise. We were supposed to see booming investment across the board after the Net Neutrality repeal, further bolstered by the Trump administration tax cuts that gifted large ISPs' tens of billions of dollars[39] they might have spent on infrastructure and jobs. Instead, we've seen ISPs cut spending, cut jobs, and pocket the tax savings.

During just the last few weeks, as major ISPs began reporting their 2018 revenues and investment numbers, Verizon reported total company capital expenditures down by

[39] *See, e.g.*, S. Derek Turner, "Don't Fall for AT&T's Billion-Dollar Swindle," Free Press (Nov. 14, 2017), https://www.freepress.net/our-response/expert-analysis/insights-opinions/dont-fall-atts-billion-dollar-swindle.

half a billion dollars, or about 3.4 percent in 2018 when compared to 2017.[40] AT&T reported that its 2018 capital expenditures dropped 1.4 percent compared to 2017,[41] all while revealing that instead of the tax-cut fueled job growth it had promised AT&T instead would be laying off workers.[42] And Comcast reported that capital expenditures for 2018 likewise decreased, by 3 percent in Comcast's case,[43] after the double-digit investment growth for this cable company in the years when Title II and the 2015 Net Neutrality rules were in place.

Looking forward, Wall Street analysts report capital spending among the nation's four largest cable providers (Altice, Comcast, Charter's Spectrum, and CableONE) is expected to decline by another 5.8 percent in 2019.[44] Can we say that the Title II and Net Neutrality repeal are causing these declines? No, no more so than we can say the reinstatement of Title II and the adoption of strong rules in 2015 caused the increases in investment documented above and discussed far more thoroughly in our FCC comments. As we've said repeatedly in the past, equating causation with correlation is a fool's errand, especially with regard to market fluctuations and long-planned corporate investments like broadband infrastructure builds. And it becomes even more foolish if one tries to aggregate investment by multiple ISPs and draw simplistic conclusions from the resulting sum.

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[40] Timothy Karr, "Pai is No Jedi," Free Press (Jan. 31, 2019), https://www.freepress.net/our-response/expert-analysis/explainers/pai-no-jedi.

[41] *Id.*

[42] Jon Brodkin, "Report: AT&T plans layoffs despite claiming tax cut would create 7,000 jobs," *Ars Technica* (Jan. 9, 2019), https://arstechnica.com/information-technology/2019/01/att-reportedly-plans-layoffs-despite-tax-cut-and-fcc-deregulation/.

[43] Karr, "Pai is No Jedi."

[44] Jeff Baumgartner, "Cable & Wireless: A Tale of Two Capex Scenarios in 2019," *Light Reading* (Jan. 22, 2019), https://www.lightreading.com/financial/cable-and-wireless-a-tale-of-two-capex-scenarios-in-2019/d/d-id/748966.

In reality, investment cycles in tech rarely if ever swing on any single FCC policy. Trump's giant corporate tax cuts didn't even move the needle. And companies' investments rarely move in lockstep with one another. (For example: While AT&T, Verizon and Comcast investment all went down in 2018, both Sprint and Charter's capex numbers were up last year). There are so many other factors – including new technologies, interest rates and the economy, and competitive pressures – that come into play. It's all about economics on the ground, and what's already in the ground and where.

***ISPs' Improving (But Still Imperfect) Speed and Coverage Improvements***

Turning finally then to look at what is in the ground, and what as a result is on offer for broadband internet access customers, Free Press research shows the utter foolishness of fixating on investment totals rather than the broadband performance, competition, coverage, and speeds people see as a result of any industry investments.

Even if the manipulated aggregate figures to which Chairman Pai and his repeal order cling were correct (and they aren't), we have explained before that a myopic focus on raw dollars spent ignores the Commission's statutory mandate to promote deployment – as well as the overwhelming evidence that the pace of deployment continued (and even improved) in the years following the 2015 order. In other words, any recent increases in individual broadband providers' speeds, coverage areas, and competition to provide high-speed service just continue a trend uninterrupted by the *2015 Open Internet Order*.

Broadband providers spoke at length after the 2015 vote and reclassification decision about how they were leveraging technological advances to deploy higher capacities at a lower capital cost than prior upgrade cycles.[45] AT&T CEO Randall

[45] *See, e.g.*, Free Press 2017 Comments at 151 n.307.

Stephenson, at the end of 2015 and thus almost a full year after the adoption of the 2015 rules, bragged to investors that there was a "downward bias on [AT&T] capital spending" – not only because the company had finished major upgrades in 2014, but because technological changes to network software and architecture, the upgrade to LTE, and the upgrade to fiber all meant "capex has come down rather dramatically."[46] But while that was good for AT&T's balance sheet, it was by no means bad for broadband deployment or for the company's internet customers. As Stephenson said of AT&T's fortunes:

> We are going to deploy more fiber next year than we did this year, but the capital requirements are going down. It continues to get cheaper . . . . The guy with the best spectrum position has the best cost position in terms of deploying capital in the network. . . . Our capital requirements are getting more and more efficient all the time.[47]

This explanation from AT&T aligns perfectly with the reality we observed in the broader broadband marketplace at the nationwide level from 2014 through 2017. During that time – now spanning periods before and after Title II's reinstatement, and even including the year in which Chairman Pai promised then delivered on its repeal – ISPs continued to rollout better quality and coverage. Free Press analyzed FCC Form 477 deployment data to arrive at the answer to this central question about changes in the capacities of the broadband access market change following the FCC's February 2015 adoption of a Title II classification and Net Neutrality protections.

This FCC Form 477 data is a rich source of information on broadband deployment. Every ISP submits it to the FCC on a semi-annual basis, providing information on the types of technology and the transmission speeds it makes available for every Census Block in which that ISP offers broadband. We analyzed this data for four

[46] *Id.*
[47] *Id.*

annual periods: deployments as of December 31, 2014, which was less than two months prior to the FCC's adoption of the 2015 *Open Internet Order*; deployments as of December 31, 2015; deployments as of December 31, 2016 (two years after this policy change – and just before Ajit Pai became FCC chairman and announced his intent to dismantle the strong Net Neutrality rules); and deployments as of December 31, 2017.

Our analysis of this FCC data shows the broadband access market continued to expand following Title II reclassification. ISPs large and small dramatically expanded their offerings, showing no concern about common carrier classification or the strong 2015 Net Neutrality rules. ISPs substantially increased capacities of their broadband internet access services. In particular, telephone company ISPs deployed substantial upgrades to maintain their competitiveness with cable ISPs, which themselves continued their cost-effective DOCSIS3.x system upgrades. These post-Title II restoration deployments resulted in a significant increase in the proportion of U.S. internet users with two or more choices for wired home broadband at the FCC minimum defined speed.

These findings from the FCC's deployment data affirm the Wheeler-era FCC's expectations: With the settling of legal issues surrounding Net Neutrality, ISPs understood that their path to continued profitability could not be discriminatory schemes that diminish output and then charge more for this artificial scarcity. With paid prioritization, blocking, throttling, and other unreasonable discrimination off the table, ISPs realized their growth would come from selling internet users the capacities they demand, spurred by exponential growth in online content and applications.

Highlights of our analysis of the FCC's broadband deployment data show that:

- Residential broadband deployment and system capacity upgrades increased substantially following the FCC's February 2015 restoration of Title II and its adoption of Net Neutrality rules.
    - Residential wired home internet access services (at any speed) were already nearly universally available prior to the FCC's restoration of Title II, with 95.8 percent of the U.S. population living in a Census Block served by one or more wired carriers.
    - But although reported availability was relatively high even at faster speed thresholds prior to 2015 reclassification, large growth in coverage occurred at all speed levels during this time.
        - At the end of 2014, 89.1 percent of the U.S. population lived in a Census Block served by one or more wired home ISPs offering downstream speeds at or above 25 Mbps. By the end of 2016, two years after the FCC's adoption of strong Net Neutrality rules, this increased to 91.1 percent of the population.
        - At the end of 2014, 71.4 percent of the U.S. population lived in a Census Block served by one or more wired home ISPs offering downstream speeds at or above 100 Mbps. By the end of 2016, this increased to 83.6 percent of the population.
        - At the end of 2014, only 10.6 percent of the U.S. population lived in a Census Block served by one or more wired home ISPs offering downstream speeds at or above 300 Mbps. By the end of 2016, this increased to 48.9 percent of the population.
- The number of Census Blocks with available home broadband services increased substantially following the FCC's February 2015 restoration of Title II and adoption of Net Neutrality rules, particularly those at higher speed thresholds.
    - The number of Census Blocks with one or more wired ISP grew by nearly 300,000 between the end of 2014 and the end of 2016, a 4.2 percent increase. Much of this activity occurred in previously unserved rural areas, due in part to the FCC increasing the amount of USF deployment funding.
    - Deployment of faster services continued at a high rate following the 2015 order.
        - At the end of 2014, there were 5.6 million Census Blocks served by one or more wired home ISPs offering 25 Mbps or higher downstream speeds. By the end of 2016, two years after the FCC's adoption of strong Net Neutrality rules, this increased to 6.1 million Census Blocks, a near 8 percent increase.
        - At the end of 2014, there were fewer than 500,000 Census Blocks served by one or more wired home ISPs offering 300 Mbps or

higher downstream speeds. By the end of 2016, two years after the FCC's adoption of strong Net Neutrality rules, this increased to 2.7 million Census Blocks, a more than 470 percent increase.

- The data reflects substantial growth in deployment of higher-speed broadband services in previously underserved areas (*i.e.*, areas with just one high-speed option previously). This is an important indicator of firms' confidence in the market and lack of concern about regulatory costs (because if Title II really did deter investment, this would deter ISP entry into already-served areas where the potential market shares are lower than in unserved areas).
    - At the end of 2014, the average number of available wired home ISPs offering 25 Mbps or higher level service was 1.26, increasing to 1.52 by the end of 2016 . This increase reflects substantial upgrades by telephone company ISPs of their first-generation DSL systems to higher-capacity technologies.
    - At the end of 2014, 34.1 percent of the nation's population resided in areas served by two or more ISPs offering service with downstream speeds at or above 25 Mbps. Two years later, following the adoption of the *2015 Open Internet Order*, this had increased to nearly 54 percent.
    - At the end of 2014, less than one percent of the nation's population resided in areas served by two or more ISPs offering service with downstream speeds at or above 300 Mbps. Two years later, following the adoption of the *Open Internet Order*, this had increased to nearly 9 percent, and that increase continues today (standing at 29.1 percent as of the end of 2017).
- Legacy telephone company wired ISPs, which have traditionally lagged behind their cable company ISP competitors in terms of offered capacities, were largely responsible for this competitive push into the areas previously dominated by cable companies. These telephone company ISPs did so primarily by upgrading their legacy DSL networks to higher-speed technologies, including fiber-to-the-home ("FTTH").
    - The number of Census Blocks with FTTH service increased more than 33 percent in the two years following the *2015 Open Internet Order*.
    - The number of Census Blocks with ADSL2/2+ service increased nearly 60 percent in the two years following the *2015 Open Internet Order*.
- In sum, U.S. internet users are seeing substantial increases in the capacities of the services available to them, and that trend continued following the adoption of the *2015 Open Internet Order*.
    - In the two years while the FCC's strong Net Neutrality rules were in place, the average maximum available downstream speed for terrestrial home

broadband in deployed Census Blocks increased by 150 percent, from 117.5 Mbps to 294.1 Mbps.

- In the two years while the FCC's strong Net Neutrality rules were in place, the average maximum available downstream speed for wired broadband in deployed Census Blocks increased by 154 percent, from 123.8 Mbps to 313.9 Mbps.
- These overall increases were driven by upgrades in all types of broadband technologies.
  - The block-level average maximum deployed FTTH downstream speed more than doubled during 2014–2016, from 261 Mbps to 587 Mbps.
  - The block-level average maximum deployed DOCSIS 3.0 downstream speed more than doubled during 2014–2016, from 121 Mbps to 284 Mbps.

All of these findings tell a consistent story about the remarkable level of deployment and capacity upgrades during the period that followed the FCC's adoption of the *2015 Open Internet Order*. These results are irrefutable evidence that the broadband industry's progress continued unhindered by the restoration of Title II authority and the adoption of strong rules – even though, quite obviously, the types of speed and coverage increases documented above have continued since 2017 as well. Those improvements will likely continue looking forward, yet not due to the Pai FCC's repeal and abdication of its authority. And the fact that these continuing upgrades have not yet ensured that broadband is fast enough or that coverage is ubiquitous in every rural market or within each local market is no reason to believe that repealing the rules will change the fundamental economics of serving high-cost areas.

This evidence all strongly suggests that the central premise of the Chairman Pai's repeal was completely wrong. There is simply no evidence that restoration of Title II and adoption of strong Net Neutrality rules negatively impacted broadband internet access deployment and investment. Nor is there any evidence that Chairman Pai's 2017 repeal

has altered the industry's trajectory. All of this data reflects the reality well understood on Wall Street and in ISPs' own engineering and finance divisions: broadband deployment is almost exclusively a function of technology cycles, what is already deployed, and whether or not the economy is in or expected to remain in a prolonged recession. ISPs have historically spent between 10 to 20 percent of their revenues on capital investments, and this fluctuates up or down depending on the particular technology cycle.

That broadband deployment and the level of available competition increased during the 2015-2017 period is completely unsurprising, based on the myriad public statements from ISPs that Title II restoration would not impact their deployment plans.[48] If anything is remarkable about the experience of 2014–2017, it is the level of upgrades pushed out by telephone company ISPs which face a much higher upgrade cost than their cable competitors. This deployment increase despite higher relative costs reflects the confidence these ISPs had in the future of their businesses under Title II and the wrongfully repealed 2015 Net Neutrality rules.

Thank you for this opportunity to testify, and I look forward to your questions.

[48] *See, e.g.*, Free Press 2017 Comments at 209–294 .