

**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554**

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

**COMMENTS OF NCTA – THE INTERNET & TELEVISION ASSOCIATION**

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NCTA – The Internet & Television Association (“NCTA”) submits these comments in response to the Notice of Proposed Rulemaking adopted and released on May 18, 2017 in the above-captioned proceeding.<sup>1</sup>

NCTA strongly supports core open Internet principles that ensure that all consumers can enjoy free and unimpeded access to the lawful Internet content of their choosing. Indeed, NCTA and its members have long embraced and adhered to these principles regardless of the governing regulatory framework, ensuring through their own actions and policies that the Internet remains free and open for all. And despite the sometimes heated debates over the legal foundations of such principles, there is substantial consensus on what those principles should be.<sup>2</sup> As NCTA

<sup>2</sup> See NCTA, “Reaffirming Our Commitment to an Open Internet,” May 17, 2017, <https://www.ncta.com/platform/public-policy/reaffirming-our-commitment-to-an-open-internet/> (“NCTA May 17 Commitment”); *see also, e.g.*, Internet Association, “Principles To Preserve & Protect an Open Internet,” at 2, Jun. 21, 2017, <https://internetassociation.org/reports/principles-to-preserve-protect-an-open-internet/> (noting that, “[a]s the net neutrality debate unfolds over the coming months, it is important to recognize the broad consensus in favor of a free and open internet that affords consumers unfettered access to the lawful content and applications of their choice, on the device of their choice,” and quoting endorsements of these principles by ISPs and others).

has made clear, the idea that consumers “should have the freedom to go anywhere on the Internet or to run any application with confidence that the delivery of traffic will not be blocked or throttled” is one that “sits at the foundation of Internet services, reflects how consumers enjoy the Internet today, and despite claims to the contrary, has never truly been in jeopardy.”<sup>3</sup>

The best way to safeguard such open Internet principles while ensuring incentives for continued investment and innovation is to classify broadband Internet access service (“BIAS”) as a Title I “information service” under the Communications Act of 1934, as amended (the “Act”). NCTA has long opposed classifying BIAS as a common carrier telecommunications service under Title II—and, prior to the Commission’s adoption of the *Title II Order*, so had a bipartisan set of FCC Chairmen and Commissioners dating back to the Clinton Administration. As NCTA and others have explained on numerous occasions, subjecting Internet service providers (“ISPs”) to common carrier regulation is entirely unnecessary to ensure that the Internet remains open. And subjecting BIAS to regulation under Title II imposes substantial costs—on ISPs, consumers, and society at large—that have nothing to do with open Internet principles.

These concerns have been borne out since the prior Commission’s ill-conceived decision to reverse longstanding precedent and classify BIAS as a common carrier telecommunications service under Title II of the Act.<sup>4</sup> A wide array of studies confirm that common carrier, utility-style regulation constitutes a drag on investment and innovation. The chilling effects of Title II already have begun to be felt in the form of decelerating broadband network investment. Such decelerating investment, in turn, means decelerating broadband speed increases, slowed rural deployment, and delayed or forgone opportunities to roll out innovative and procompetitive

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<sup>3</sup> NCTA May 17 Commitment.

<sup>4</sup> See *Protecting and Promoting the Open Internet*, Report and Order on Remand, Declaratory Ruling, and Order, 30 FCC Rcd 5601 ¶¶ 306-10 (2015) (“*Title II Order*”).

service offerings to consumers. Moreover, as explained in the attached paper by Stanford University economist Dr. Bruce Owen,<sup>5</sup> basic economics and empirical examples teach that the long-term consequences of continuing to impose common carrier regulation in this dynamic marketplace would be even more damaging. Accordingly, NCTA commends the Commission for its willingness to consider restoring the longstanding information-service classification that best effectuates the relevant statutory definitions while also establishing a policy framework that will maximize benefits for consumers.

In reversing the Title II classification of BIAS, the Commission also should eliminate aspects of the *Title II Order* that stemmed from that classification ruling or otherwise strayed far from consensus open Internet principles. The Commission thus should repeal the amorphous and boundless General Conduct Standard it adopted to effectuate Sections 201 and 202 in the broadband context. Additionally, the Commission should confirm that Internet traffic-exchange arrangements will be governed by market forces rather than by common carrier mandates. And there is no sound reason for the Commission to regulate “specialized services,” or “non-BIAS data services,” as the *Title II Order* appeared to contemplate doing.

As for the core open Internet principles themselves, there is no basis to conclude that prescriptive rules are necessary in today’s marketplace to preserve the open Internet—or would even be beneficial as a policy matter. NCTA’s members and other broadband providers have enshrined open Internet principles in existing policies and business practices. Indeed, consistent with broadband providers’ public commitments to remain transparent with respect to network management practices and performance and to refrain from blocking, throttling, or

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<sup>5</sup> See Dr. Bruce Owen, “Internet Service Providers as Common Carriers: Economic Policy Issues,” Jul. 17, 2017 (“Owen Paper”), attached hereto as Appendix A.

anticompetitive paid prioritization, the experience of the last two decades demonstrates that the Internet will remain free and open because that is what consumers expect and demand, not because it is what regulators require.

Notably, the consensus principles of Internet openness are rooted in the four Internet freedoms first articulated by then-FCC Chairman Michael Powell in 2004, and then adopted as a formal statement of Commission policy in 2005 for BIAS.<sup>6</sup> Those freedoms have evolved into the following four tenets that are widely embraced today:

- *Transparency.* NCTA agrees with the NPRM’s observation that “effective disclosure of Internet service providers’ network management practices, performance, and commercial terms of service promotes competition, innovation, investment, end-user choice, and broadband adoption.”<sup>7</sup>
- *No Blocking.* NCTA and its members have long committed not to block lawful content, applications, services, and non-harmful devices.<sup>8</sup> NCTA agrees that “the

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<sup>6</sup> See Michael K. Powell, *Preserving Internet Freedom: Guiding Principles for the Industry*, 3 J. ON TELECOMM. & HIGH TECH. L. 5 (2004); see also *Appropriate Framework for Broadband Access to the Internet over Wireline Facilities; Review of Regulatory Requirements for Incumbent LEC Broadband Telecommunications Services; Computer III Further Remand Proceedings: Bell Operating Company Provision of Enhanced Services; 1998 Biennial Regulatory Review – Review of Computer III and ONA Safeguards and Requirements; Inquiry Concerning High-Speed Access to the Internet Over Cable and Other Facilities Internet Over Cable Declaratory Ruling; Appropriate Regulatory Treatment for Broadband Access to the Internet Over Cable Facilities*, Policy Statement, 20 FCC Rcd 14986 ¶ 4 (2005).

<sup>7</sup> NPRM ¶ 88.

<sup>8</sup> See, e.g., *Net Neutrality: Hearing Before the Senate Committee on Commerce, Science, and Transportation*, 109th Cong. 21 (Feb. 7, 2006) (statement of Kyle McSillarow, President & CEO, National Cable & Telecommunications Association) (“[L]et me be clear, NCTA’s members have not, and will not, block the ability of their high-speed Internet service customers to access any lawful content, application, or services available over the public Internet.”).

- freedom to send and receive lawful content and to use and provide applications and services without fear of blocking is essential to the Internet’s openness.”<sup>9</sup> NCTA also agrees that this no-blocking principle does not prevent efforts by ISPs and copyright holders to address copyright infringement and online piracy.<sup>10</sup>
- *No Throttling.* NCTA supports the principle that BIAS providers should not degrade lawful Internet traffic or consumers’ use of non-harmful devices.<sup>11</sup> Just as consumers rightfully expect that their access to online content will not be blocked outright, they also expect that ISPs will not throttle Internet traffic to impair access to the lawful content of their choosing. And this principle likewise does not prevent efforts to address copyright infringement.
  - *No Anticompetitive Paid Prioritization.* Finally, NCTA supports the principle that ISPs should not engage in anticompetitive “paid prioritization” arrangements. Even before adoption of the *Title II Order*, BIAS providers did not engage in paid prioritization and had no intention to do so.<sup>12</sup> To be sure, the acrimony surrounding the term “paid prioritization” in recent years has obscured the underlying policy question—*i.e.*, whether ISPs should be able to provide a guaranteed “quality of service” to any edge provider beyond the standard “best efforts” delivery of Internet content. Both the Department of Justice and the Federal Trade Commission have warned against the adoption of prophylactic bans on all forms of QoS guarantees,

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<sup>9</sup> NPRM ¶ 80.

<sup>10</sup> *See id.* ¶ 93 & n.201.

<sup>11</sup> *See id.* ¶ 83.

<sup>12</sup> *See id.* ¶ 85 & nn.190-91.



noting that these practices can be beneficial to consumers in some circumstances.<sup>13</sup>

Even former Chairman Wheeler recognized the benefits of certain forms of prioritization.<sup>14</sup> But there is no evidence that BIAS providers will pursue paid prioritization arrangements that have the purpose or effect of harming competition and consumers, and if such harms emerge, the federal government can readily respond (through enforcement of antitrust laws or other means).

These core principles are not controversial—and indeed reflect how the Internet has *always* operated, regardless of the governing legal framework.

Nevertheless, to the extent the Commission deems a regulatory backstop necessary, NCTA does not oppose measures enabling federal enforcement of open Internet principles. The most durable and effective way to establish enforceable open Internet requirements would be for Congress to enact new legislation. Congressional leaders have urged “Republicans and Democrats, Internet service providers, edge providers and the Internet community as a whole to come together and work toward a legislative solution” to these issues, in a manner that finally settles any questions regarding the proper legal basis for ensuring Internet openness.<sup>15</sup>

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<sup>13</sup> See Federal Trade Commission, Broadband Connectivity Competition Policy: A Federal Trade Commission Staff Report, at 96-97, 125, 157 (2007), *available at* <https://www.ftc.gov/sites/default/files/documents/reports/broadband-connectivity-competition-policy/v070000report.pdf>; Ex Parte Filing of the United States Department of Justice, WC Docket 07-52, at 2-3 (filed Sep. 6, 2007).

<sup>14</sup> See Matthew S. Schwartz, *Along Party Lines, FCC Votes To Explore Idea of Internet Fast Lanes*, Communications Daily, May 16, 2014, at 3 (asserting that the Commission should not “rule out” services akin to the Government Emergency Telephone Service, which enables government officials to “go to any phone in America and type in this number, and get priority access that [one] can use in a case of emergency”).

<sup>15</sup> See Press Release, “Bicameral Leaders Comment on Pai’s Internet Regulations Announcement,” Apr. 26, 2017, *available at* <https://energycommerce.house.gov/news->

Moreover, Chairman Pai has urged Congress to “tell us what the rules of the road should be,”<sup>16</sup> and Commissioner O’Rielly likewise has stated that the best way to resolve the ongoing debate “once and for all” is “for Congress to consider and enact legislation on the subject matter, as it deems appropriate.”<sup>17</sup>

Absent congressional action, public commitments by BIAS providers to adhere to open Internet principles (*e.g.*, in providers’ publicly stated policies) provide a basis for the Federal Trade Commission (“FTC”) to hold providers to their promises. Relying on such an FTC-led approach would have the advantage of making *all* participants in the Internet ecosystem subject to oversight by a single enforcement agency—given the FTC’s broad jurisdiction under Section 5 of the FTC Act to take action to prevent “[u]nfair methods of competition in or affecting commerce, and unfair or deceptive acts or practices in or affecting commerce.”<sup>18</sup> In addition, in the unlikely event that BIAS providers were to engage in anticompetitive or other harmful conduct—in spite of market forces to the contrary and FTC oversight—the Commission would retain authority to take appropriate action in response. The D.C. Circuit has held that Section 706 of the Telecommunications Act of 1996 provides authority for the Commission to safeguard

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[center/press-releases/bicameral-leaders-comment-pai-s-internet-regulations-announcement](https://www.fcc.gov/press-releases/bicameral-leaders-comment-pai-s-internet-regulations-announcement).

<sup>16</sup> John Eggerton, *FCC’s Pai Backs Congressional Clarification on Internet Authority*, Broadcasting & Cable (Apr. 28, 2017), <http://www.broadcastingcable.com/news/washington/fccs-pai-backs-congressional-clarification-internet-authority/165377>.

<sup>17</sup> Michael O’Rielly, Commissioner, FCC, Remarks at FreedomWorks and Small Business & Entrepreneurial Council Event (Apr. 26, 2017), [https://apps.fcc.gov/edocs\\_public/attachmatch/DOC-344594A1.pdf](https://apps.fcc.gov/edocs_public/attachmatch/DOC-344594A1.pdf) (“The only way to bring resolution to the net neutrality debate once and for all is for Congress to consider and enact legislation on the subject matter, as it deems appropriate.”).

<sup>18</sup> 15 U.S.C. § 45(a)(1).

open Internet principles. And, for certain purposes, the Commission could rely on ancillary authority to effectuate its responsibilities under other provisions of the Communications Act.

Moreover, however the Commission proceeds, it should ensure that any new framework reflects a uniform and technologically neutral policy. In particular, as NCTA has long argued, there is no basis to treat providers of wireless broadband services differently from providers of fixed services.

The Commission should also make clear that state and local governments may not undermine its national policy framework by attempting to subject BIAS providers to additional regulation. It should preempt any efforts to impose franchise fees, licensing obligations, or related requirements, as such measures would directly undermine the important national interest in encouraging increased investment and broadband deployment.

## **DISCUSSION**

### **I. BROADBAND INTERNET ACCESS SERVICE SHOULD BE RECLASSIFIED AS AN INFORMATION SERVICE**

The Commission should reverse the 2015 decision to classify BIAS as a common carrier telecommunications service and restore the agency's longstanding classification of BIAS as an information service. For nearly two decades, the Commission repeatedly rejected calls to subject BIAS to common carrier regulation under Title II. Those decisions—made by Democratic and Republican administrations alike—yielded significant benefits for American consumers and for the nation's economy. And yet, based on dubious policy justifications and questionable statutory analysis, the Commission made an about-face in 2015 and subjected 21st-century broadband technology to antiquated public-utility-style regulation—with the false hope that selective forbearance could retrofit that outdated regulatory regime and mitigate the substantial slowdown in investment and innovation that the industry warned would almost certainly result.

It did not work, and a course correction is needed. The Commission plainly has the legal authority to reinstate the longstanding information service classification. That long-held judgment of the Commission prior to 2015 is a reasonable interpretation of the Communications Act, as the Supreme Court has confirmed. And restoring that classification—while abandoning the cobbled-together Title II regulatory regime—would further the policy goals that the Commission and Congress have espoused for many years. Accordingly, the Commission should follow through with its proposal to end the unwise experiment with public-utility regulation of the Internet and return to the light-touch regime that had proven so successful for so long.<sup>19</sup>

**A. The Commission Has Authority to Reclassify BIAS as an Information Service**

As a threshold matter, there is no question that the Commission can revisit its 2015 decision to jettison its longstanding information-service classification for BIAS.<sup>20</sup> In *Brand X*, the Supreme Court unequivocally held that the Commission’s prior classification of BIAS as an information service “is a permissible reading of the Communications Act.”<sup>21</sup> BIAS, the Court explained, was reasonably understood to be an “information service” because “it provides consumers with a comprehensive capability for manipulating information using the Internet via high-speed telecommunications”—for example, the ability to “browse the World Wide Web, to transfer files . . . , and to access e-mail.”<sup>22</sup> And, although BIAS providers offer that service “‘via telecommunications,’ . . . it does not inexorably follow as a matter of ordinary language that they also ‘offe[r]’ consumers the high-speed data transmission (telecommunications) that is an input

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<sup>19</sup> NPRM ¶ 23.

<sup>20</sup> *See id.* ¶¶ 52-53.

<sup>21</sup> *National Cable & Telecommunications Ass’n v. Brand X Internet Services*, 545 U.S. 967, 986-89 (2005).

<sup>22</sup> *Id.* at 987.

used to provide this service.”<sup>23</sup> Rather, the Commission reasonably interpreted the Communications Act to treat BIAS as exclusively an information service.<sup>24</sup> The *Brand X* decision remains binding, and the Commission can and should rely on it.

The D.C. Circuit’s recent decision in *United States Telecom Ass’n v. FCC*,<sup>25</sup> despite upholding the *Title II Order*, actually confirms the Commission’s discretion to return to an information-service classification. The D.C. Circuit merely found that a “telecommunications service” classification was *also* a permissible construction of the Act.<sup>26</sup> The court did not hold that the telecommunications-service classification was compelled by the Communications Act, or purport to limit the Commission’s discretion to return to an information-service classification in any way. To the contrary, it expressly rejected petitioner Full Service Network’s argument that BIAS “is unambiguously a telecommunications service because it functions primarily as a transmission service,” observing that the argument “clearly fail[ed] in light of *Brand X*.”<sup>27</sup> And it reiterated that *Brand X* “held that classification of broadband as an information service was permissible.”<sup>28</sup>

The joint authors of the panel decision further reiterated in their separate opinion concurring in the denial of rehearing *en banc* that the proper classification of BIAS was a matter

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<sup>23</sup> *Id.* at 989 (quoting 47 U.S.C. § 153(20)) (emphasis added).

<sup>24</sup> *See id.* at 986 (“The Commission’s interpretation is permissible at both steps.”).

<sup>25</sup> 825 F.3d 674 (D.C. Cir. 2016).

<sup>26</sup> *See id.* at 701-06.

<sup>27</sup> *Id.* at 704.

<sup>28</sup> *Id.*

that the Communications Act “left . . . to the agency’s discretion.”<sup>29</sup> Indeed, as those judges explained, the *Brand X* decision “made clear” the Commission’s discretion to classify BIAS “over and over” again.<sup>30</sup> Thus, while the FCC, in their view, “*could* elect to treat broadband ISPs as common carriers,” no member of the court believed the agency “*ha[d]* to do so.”<sup>31</sup> “As between the two possible classifications, ‘the Commission’s choice of one of them is entitled to deference.’”<sup>32</sup>

The Administrative Procedure Act (“APA”) also poses no obstacle to reinstating the Commission’s prior information-service classification. As a general matter, the APA “make[s] no distinction . . . between initial agency action and subsequent agency action undoing or revising that action.”<sup>33</sup> And a long line of cases—including *Brand X* and *USTelecom* themselves—confirm that the Commission may change its interpretation of an ambiguous statute based on policy considerations.<sup>34</sup> Indeed, an agency “must consider varying interpretations and

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<sup>29</sup> *USTelecom v. FCC*, 855 F.3d 381, 384 (D.C. Cir. 2017) (Srinivasan, J., joined by Tatel, J., concurring in the denial of rehearing *en banc*).

<sup>30</sup> *Id.*

<sup>31</sup> *Id.* (emphasis added).

<sup>32</sup> *Id.* at 386 (quoting *Brand X*, 545 U.S. at 989); *see also New Edge Network, Inc. v. FCC*, 461 F.3d 1105, 1112 (9th Cir. 2006) (according *Chevron* deference to Commission’s “all-or-nothing” interpretation of Section 252(i), after the Commission had previously adopted a contrary “pick-and-choose” interpretation and was upheld in court).

<sup>33</sup> *FCC v. Fox Television Stations*, 556 U.S. 502, 515 (2009).

<sup>34</sup> *See, e.g., Brand X*, 545 U.S. at 981 (“[C]hange is not invalidating, since the whole point of *Chevron* is to leave the discretion provided by the ambiguities of a statute with the implementing agency.”); *USTelecom*, 825 F.3d at 704 (finding that the Commission reclassified BIAS under Title II because it believed doing so was “necessary to establish three bright-line rules, the anti-blocking, anti-throttling, and anti-paid-prioritization rules,” and noting that this justification “represents a perfectly ‘good reason’ for the Commission’s change in position”); *Nat’l Ass’n of Home Builders v. EPA*, 682 F.3d 1032, 1043 (D.C. Cir. 2012) (holding that “inauguration of a new President . . . [was] a perfectly reasonable basis” for agency’s shift in interpretation) (citing *Motor Vehicle*

the wisdom of its policy on a continuing basis . . . for example, in response to . . . a change in administrations.”<sup>35</sup> As long as the Commission “acknowledge[s] and explain[s] the reasons for [a] changed interpretation,” an interpretive change is entirely permissible under the APA.<sup>36</sup>

It is true that, in some cases, an agency must provide “a more substantial justification”<sup>37</sup> for a change in position “than what would suffice for a new policy created on a blank slate.”<sup>38</sup> When the new policy “rests upon factual findings that contradict those which underlay its prior policy” or “when its prior policy has engendered serious reliance interests that must be taken into account, . . . [it] would be arbitrary and capricious to ignore such matters.”<sup>39</sup> But that principle has no application here. The Commission need not rely on any “changed factual circumstances” as “critical to [the Commission’s] classification decision.”<sup>40</sup> Indeed, even the joint authors of the panel decision in *USTelecom* noted that “there is no material difference between the technology considered in *Brand X* and the technology at issue” in today’s context.<sup>41</sup> And there is no credible basis for contending that the 2015 *Title II Order* has “engendered serious reliance interests that

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*Mfrs. Ass’n of U.S. v. State Farm Mut. Automobile Ins. Co.*, 463 U.S. 29, 59 (1983) (Rehnquist, J., concurring in part and dissenting in part)); *New Edge Network*, 461 F.3d at 1113-14 (upholding FCC’s reversal of its prior interpretation of Section 252(i) under the APA, and noting that “public policy considerations allow the government to change its position” on interpretive matters).

<sup>35</sup> *Brand X*, 545 U.S. at 981.

<sup>36</sup> *USTelecom*, 825 F.3d at 706.

<sup>37</sup> *Perez v. Mortg. Bankers Ass’n*, 135 S. Ct. 1199, 1209 (2015) (citing *Fox*, 556 U.S. at 515).

<sup>38</sup> *Fox*, 556 U.S. at 515.

<sup>39</sup> *Perez*, 135 S. Ct. at 1209.

<sup>40</sup> *USTelecom*, 825 F.3d at 709; *see also USTelecom*, 855 F.3d at 386 (Srinivasan, J., joined by Tatel, J., concurring in the denial of rehearing *en banc*) (concluding that “there is no material difference between the technology” considered in *Brand X* and BIAS today).

<sup>41</sup> *USTelecom*, 855 F.3d at 386 (Srinivasan, J., joined by Tatel, J., concurring in the denial of rehearing *en banc*).

must be taken into account.” It was in effect for only two years before the Commission announced its intention to revisit the classification issue, and it has been subjected to ongoing challenges in the courts,<sup>42</sup> and the subject of legislative repeal efforts,<sup>43</sup> the entire time. Any claimed “reliance” interests here are entirely insubstantial.<sup>44</sup>

## **B. Classifying BIAS as an Information Service Continues To Represent the Best Interpretation of the Communications Act**

Not only is an information-service classification for BIAS based on a permissible reading of the Communications Act; that reading also continues to be the best one.<sup>45</sup>

### *1. BIAS Is a Quintessential “Information Service” Under the Communications Act*

The Communications Act defines an “information service” as “the offering of a capability for generating, acquiring, storing, transforming, processing, retrieving, utilizing, or making available information via telecommunications.”<sup>46</sup> BIAS fits that definition perfectly—offering end users access to every one of these information-processing functions. As the NPRM observes, by “posting on social media or drafting a blog” on Facebook or Tumblr, “a broadband Internet user is able to *generate and make available information* online.”<sup>47</sup> Through “reading a newspaper’s website,” such as the New York Times or the Washington Post, or by “browsing the

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<sup>42</sup> See *USTelecom*, 825 F.3d at 689.

<sup>43</sup> See, e.g., Restoring Internet Freedom Act of 2017, S. 993, 115th Cong. (2017); Restoring Internet Freedom Act of 2016, S. 2602, 114th Cong. (2016).

<sup>44</sup> Cf. *USTelecom*, 825 F.3d at 709 (rejecting claims of reliance on the prior information-service classification even where the court assumed that the classification question was “settled” for only five years—“a short period of time”—between the 2005 *Brand X* decision and the 2010 Notice of Inquiry on classification issues).

<sup>45</sup> See NPRM ¶¶ 26-37, 54.

<sup>46</sup> 47 U.S.C. § 153(24).

<sup>47</sup> NPRM ¶ 27 (emphasis added).



results from a search” on Google or Bing, “a broadband Internet user is able to *acquire and retrieve information* online.”<sup>48</sup> Through an Internet “address book” at Gmail or Hotmail or Yahoo or Comcast.net, or an online “grocery list” on Amazon Grocery or Instacart, or even the caching functionality offered as part of BIAS, she can “*store and utilize information* online.”<sup>49</sup> And by “uploading filtered photographs” to Instagram “or translating text into a foreign language” through Google Translate, she “is able to *transform and process information* online.”<sup>50</sup> These observations in the NPRM are unquestionably correct, and a list of such examples could go on and on. Those capabilities alone qualify BIAS as a quintessential “information service.”<sup>51</sup>

Moreover, as discussed at length in prior Commission proceedings, providing BIAS also involves a series of information-processing functions that are less transparent to the ordinary user, but no less central to a BIAS offering, by inextricably “combin[ing] computer processing, information provision, and other computer-mediated offerings with data transport.”<sup>52</sup> In affirming the *Cable Modem Declaratory Ruling*, the *Brand X* Court singled out functions

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<sup>48</sup> *Id.* (emphasis added).

<sup>49</sup> *Id.* (emphasis added).

<sup>50</sup> *Id.* (emphasis added).

<sup>51</sup> See *Brand X*, 545 U.S. at 987 (noting that all parties agreed that BIAS is an information service because it “enables users, for example, to browse the World Wide Web, to transfer files from file archives on the Internet via the ‘File Transfer Protocol,’ and to access e-mail and Usenet newsgroups”).

<sup>52</sup> *Federal-State Joint Board on Universal Service*, Report to Congress, 13 FCC Rcd 11501 ¶ 73 (1998); see also, e.g., *Inquiry Concerning High-Speed Access to the Internet Over Cable and Other Facilities*, Declaratory Ruling and Notice of Proposed Rulemaking, 17 FCC Rcd 4798 ¶ 17 (2002) (“*Cable Modem Declaratory Ruling*”); See *Appropriate Framework for Broadband Access to the Internet over Wireline Facilities*, Report and Order and Notice of Proposed Rulemaking, 20 FCC Rcd 14853 ¶ 15 (2005) (“*Wireline Broadband Order*”).

including Domain Name System (“DNS”) services and caching as integrated information-processing components.<sup>53</sup> A user “cannot reach a third party’s web site without access to the Domain Naming Service (DNS) capability ‘which (among other things) matches the Web site address the end user types into his browser (or ‘clicks’ on with his mouse) with the IP address of the Web page’s host server.’”<sup>54</sup> And while Internet access theoretically might be possible without the complex “caching” algorithms that preserve network bandwidth and speed information retrieval, it would certainly be a significantly worse experience for the user.<sup>55</sup> Both services continue to be integral aspects of the service BIAS providers offer today.<sup>56</sup>

Moreover, ISPs offer several additional information-processing capabilities that are functionally integrated into BIAS, including Dynamic Host Configuration Protocol (“DHCP”) functionality, security features including spam filtering and distributed denial-of-service

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<sup>53</sup> See *Brand X*, 545 U.S. at 999-1000.

<sup>54</sup> *Wireline Broadband Order* ¶ 15 (quoting *Brand X*, 545 U.S. at 999).

<sup>55</sup> See *Cable Modem Declaratory Ruling* ¶ 17 n.76 (“‘Caching’ is the storing of copies of content at locations in the network closer to subscribers than their original sources, *i.e.*, data from websites, that subscribers wish to see most often in order to provide more rapid retrieval of information.”); *Brand X*, 545 U.S. at 999 (noting that caching “obviates the need for the end user to download anew information from third-party Web sites each time the consumer attempts to access them, thereby increasing the speed of information retrieval”).

<sup>56</sup> See, *e.g.*, Letter of Richard Bennett to Marlene Dortch, FCC, GN Docket Nos 14-28, 10-127, at 8 (filed Dec. 30, 2014) (“Bennett Letter”) (“DNS is an indispensable part of the Internet Service provided by ISPs.”); *Weinstein v. Islamic Republic of Iran*, 831 F.3d 470, 474-76 (D.C. Cir. 2016) (discussing DNS and caching capabilities included in today’s BIAS offerings). Indeed, the record reflects that ISPs have expanded their DNS offerings in recent years. See Letter from Christopher M. Heimann, AT&T to Marlene H. Dortch, FCC, GN Docket Nos. 14-28, 10-127, at 6 (filed Feb. 2, 2015) (describing “DNS Assist,” by which an ISP “suggests to Internet access customers the sites they may want to reach” based on incomplete web address); Bennett Letter at 8 (describing how DNS service “validates the correctness of the domain name to IP address mapping,” “protects users from man in the middle . . . attacks,” and directs traffic from “Content Delivery Network users to the nearest and/or fastest location”).

(“DDoS”) protection, and IPv4-to-IPv6 conversion.<sup>57</sup> DHCP, for example, provides each of an ISP’s users their own unique Internet Protocol (“IP”) address whenever they connect to the Internet—a dynamic process without which the rest of the service could not function.<sup>58</sup> DDoS protections prevent users’ computers from being hijacked by viruses that could, among other things, “take over end-user systems in order to enlist them into their botnets” for broad scale attacks on commercial or governmental websites.<sup>59</sup> These information-processing functions are all part and parcel of the “acquiring,” “transforming,” “processing,” and “retrieving” of information online that BIAS offers.

It is neither new nor relevant that some broadband customers choose to rely on third parties for some of these functions, instead of their BIAS provider.<sup>60</sup> As the Commission has repeatedly recognized and the Supreme Court has affirmed, the central question is what BIAS

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<sup>57</sup> See generally Bennett Letter.

<sup>58</sup> See *id.* at 4.

<sup>59</sup> *Id.* at 7; see also *id.* (“There is no parallel to DDoS attack using amplification to bring a web site to its knees in the realm of plain old telephone service.”).

<sup>60</sup> See NPRM ¶ 28. For instance, consumers’ use of third-party e-mail providers is not a new development, and indeed was a prevalent practice at the time the Commission issued its prior decisions classifying BIAS as an information service. See, e.g., *Cable Modem Declaratory Ruling* ¶ 25 (noting that consumers at the time were “free” to “use instead . . . e-mail in the form of Microsoft’s ‘Hotmail’”); see also, e.g., Microsoft, Annual Report (Form 10-K), at 6 (2005), [https://www.microsoft.com/investor/reports/ar05/downloads/MS\\_2005\\_AR.doc](https://www.microsoft.com/investor/reports/ar05/downloads/MS_2005_AR.doc) (“MSN Hotmail is one of the world’s largest e-mail services with more than 205 million accounts [worldwide]. . . .”); Peter Mika, Researcher, Data Architect – Yahoo, Making the Web Searchable, MAVIR Seminar (2009), <http://mavir2006.mavir.net/docs/SemanticSearch-Madrid-pmika.pdf> (“Yahoo! Mail is the #1 Web mail provider in the world with 243 million users [ ] and nearly 80 million users in the U.S.”); Single Ajax Interface for Yahoo Mail & IM Arriving, TechChip (Nov. 11, 2006), <https://techchip.wordpress.com/2006/11/11/ajax-interface-for-yahoo-mail-im-arriving/> (noting that in October 2006, Yahoo! Mail had 79 million users, MSN Hotmail had 45 million users, AOL had 40 million users, and Google Gmail had 10 million users in the U.S. market).

providers “offer[],” not what all customers utilize or third parties *also* make available.<sup>61</sup> It is no more significant that not every customer relies on her ISP’s DNS service (though the vast majority do) than it is that not every customer posts stories on a blog or uses a website to translate foreign texts. In either case, BIAS providers “offer[]” their customers the “capability” to make information available or to transform information online.<sup>62</sup> And that is all the statute requires.

Nor are these capabilities of BIAS best understood to represent mere “telecommunications management” functions carved out from the definition of “information service.”<sup>63</sup> As the Commission and the Department of Justice correctly explained to the Supreme Court in *Brand X*, these capabilities are “*not* used ‘for the management, control, or operation’ of a telecommunications network,” but instead provide “information-processing capabilities . . . used to facilitate the information retrieval capabilities that are inherent in Internet access.”<sup>64</sup> As noted in the NPRM, the Commission has previously observed that “telecommunications management” functions “generally are not ‘useful to end users, rather than carriers.’”<sup>65</sup> The fact that these functions are offered by third parties independent of BIAS and relied upon by consumers is strong evidence that these functions *are* useful to end users—not

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<sup>61</sup> 47 U.S.C. § 153(24) (emphasis added); *see, e.g., Cable Modem Declaratory Ruling* ¶¶ 25, 38 (emphasis added); *Brand X*, 545 U.S. at 998-99.

<sup>62</sup> 47 U.S.C. § 153(24).

<sup>63</sup> *See* NPRM ¶ 37; *cf. USTelecom*, 825 F.3d at 705-06 (finding only that the *Title II Order*’s contrary conclusion was not “unreasonable”).

<sup>64</sup> *See* Fed. Pet’rs Reply Br. 6 n.2, S. Ct. Dkt. No. 04-277, 2005 WL 640965.

<sup>65</sup> NPRM ¶ 37 (quoting *Petitions for Forbearance from the Application of Section 272 of the Communications Act of 1934, As Amended, to Certain Activities, Bell Operating Companies*, Memorandum Opinion and Order, 13 FCC Rcd 2627 ¶ 18 (Com. Car. Bur. 1998)).

just to BIAS providers. Indeed, the D.C. Circuit in *USTelecom* acknowledged that DNS and caching are information services when offered by third parties.<sup>66</sup> It is plainly reasonable for the Commission to treat the same functionalities as falling outside the scope of “telecommunications management” when offered by ISPs.

2. *BIAS Is Fundamentally Distinct from the “Telecommunications Service” Envisioned by the Communications Act*

The Communication Act’s definition of “telecommunications service,” by contrast, is not the best fit for BIAS. Under the Act, a “telecommunications service” is “the offering of telecommunications for a fee directly to the public, or to such classes of users as to be effectively available directly to the public, regardless of the facilities used.”<sup>67</sup> “[T]elecommunications,” in turn, is “the transmission, between or among points specified by the user of information of the user’s choosing, without change in the form or content of the information as sent and received.”<sup>68</sup> The prototypical telecommunications service—the one to which these definitions are plainly intended to apply—is, of course, traditional, circuit-switched telephone service. BIAS is a fundamentally different kind of service. And the statutory definition designed to describe traditional, circuit-switched telephony does not readily describe BIAS in three principal respects.

First, a telecommunications service must involve the offering of pure “transmission” of information “without change in the form or content.”<sup>69</sup> Traditional telephone service providers do exactly that, “promis[ing] to send and receive information between end points without

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<sup>66</sup> See *USTelecom*, 825 F.3d at 706.

<sup>67</sup> 47 U.S.C. § 153(53).

<sup>68</sup> *Id.* § 153(50).

<sup>69</sup> *Id.*

alteration of the information’s form or content.”<sup>70</sup> The same cannot be said for BIAS. Rather, as discussed above, BIAS providers offer transmission *only* in conjunction with information-processing functions that “routinely change the form or content of the information sent over their networks—for example, by using firewalls to block harmful content or using protocol processing to interweave IPv4 networks with IPv6 networks.”<sup>71</sup> To be sure, many of these functions are invisible to most users, but they are no less integral to the service.

Second, a telecommunications service must offer the capability for end users to transmit information “between or among points *specified by the user*.”<sup>72</sup> Traditional circuit-switched telephone services, for example, involve a relatively simple series of transmissions conveyed to a specific end point, indicated by the call recipient’s telephone number, on the same path in both directions for the duration of a call. BIAS is far more dynamic. With BIAS, users rarely, if ever, specify the end point of their communications (for example, by manually typing in the IP address of the webserver hosting specific content).<sup>73</sup> Rather, “consumers are often unaware of where online content is stored.”<sup>74</sup> And “routing decisions are based on the architecture of the network, not on consumers’ instructions.”<sup>75</sup> Data may flow on different paths, the paths may change dynamically during the session, and the paths may even be redirected to obtain certain

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<sup>70</sup> Bennett Letter at 2.

<sup>71</sup> NPRM ¶ 30; *see supra* at 14-16.

<sup>72</sup> 47 U.S.C. § 153(50) (emphasis added).

<sup>73</sup> *See, e.g., Weinstein*, 831 F.3d at 473 (explaining that while “[o]ne may dial a set of numbers to connect to other individuals through the telecommunications system and the same is true vis-à-vis an IP address and the Internet[,] . . . an ordinary Internet end-user does not operate this way, and noting that “Google has the IP address ‘173.194.65.113’ but few would maintain that entering that address in an Internet browser is the most practical way to access the Google web page”).

<sup>74</sup> NPRM ¶ 29.

<sup>75</sup> *Id.*

information from other sources (*e.g.*, proxies, Content Delivery Networks (“CDNs”), caching servers, or other third-party sources) during a single communications session.<sup>76</sup> For example, many ISPs have Netflix CDNs storing video content hosted in their networks. Users watching a Netflix show may think that they are communicating with a distant Netflix facility when in fact they are interacting with a CDN located blocks away. And for content that is delivered from further away over the public Internet, packets of data are “dispersed across the various networks, interconnection nodes, and other resources that make up the Internet’s physical infrastructure” before reaching the destination “where the[y] are eventually reconfigured.”<sup>77</sup> This complex process for enabling access to information over the Internet is a far cry from simple transmission between points specified by an end user.

Third, a telecommunications service offers the ability to transmit “information of the user’s choosing.”<sup>78</sup> That aspect of the definition makes perfect sense in the context of a traditional circuit-switched telephone service; such a service simply enables “an interaction between persons using telephone handsets that are essential elements of the telephone network,”<sup>79</sup> and the only information that is transmitted is precisely what the sender and receiver convey. BIAS, by contrast, is far more complex and “involves continual interaction between computers and the transmission network as well as between computers and each other.”<sup>80</sup> With

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<sup>76</sup> See Bennett Letter at 9-13.

<sup>77</sup> *Register.com, Inc. v. Verio, Inc.*, 356 F.3d 393, 410 n.11 (2d Cir. 2004); see also *Internet Protocol: DARPA Internet Program Protocol Specification*, IETF RFC 791 (Sep. 1981), <https://tools.ietf.org/html/rfc791#ref-6>; see also *Advanced Media Networks LLC v. Gogo LLC*, 2013 WL 12123237, at \*8 (C.D. Cal. June 14, 2013).

<sup>78</sup> 47 U.S.C. § 153(50).

<sup>79</sup> Bennett Paper at 2.

<sup>80</sup> *Id.*

BIAS, “the human user—if there is one, which is not the case for Internet of Things applications—interacts with the computer, and the computer mediates this interaction with the network and the paired computer or computers.”<sup>81</sup> And users of Internet of Things devices, such as appliances that have a WiFi connection, do not choose what information is transmitted, and may not even know that communication is happening, yet it is the customer’s BIAS service that is making the transmission. The complex exchange of interactions handled by computers, routers, and servers thus is far more than simply the transmission of “information of the user’s choosing.”

Moreover, if the Commission were to continue to apply the ill-fitting “telecommunications service” label to BIAS under the reasoning espoused in the *Title II Order*, then it would need to confront whether to apply that classification to a wide array of other participants in the Internet ecosystem that have deployed substantial physical networks. The *Title II Order* takes an overly simplistic view of BIAS—one that focuses myopically on the transmission functionality of the service, mistakes the *use* of transmission for the *offering* of transmission, and either ignores critical information-processing capabilities or mischaracterizes those capabilities as “telecommunications management” functions. Under this reasoning, a whole host of other entities that make use of their own broadband transmission facilities to deliver Internet content likely would qualify as providers of “telecommunications services” as well.

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<sup>81</sup> *Id.*



Cloud services offered by Amazon, for example, entail the use of Amazon Web Services’ “global infrastructure” to transmit information to and from remote storage locations.<sup>82</sup> Amazon markets its cloud services as offering “high transfer speeds,”<sup>83</sup> much like the speed-related advertising from BIAS providers that the Commission selectively cited in the *Title II Order*. These services also are offered to the public under standard, published rates and terms.<sup>84</sup> And under the reasoning of the *Title II Order*, the “telecommunications management” carve-out could be applied to the “DDoS mitigation” capabilities and other components of these cloud service offerings.<sup>85</sup> Indeed, Amazon also utilizes its CloudFront network, along with other fiber asserts deployed across the country as part of its Amazon Web Services backbone, to deliver Amazon Video service to consumers.<sup>86</sup>

So too with Google. Even apart from its Google Fiber BIAS offering, the company offers cloud services that leverage Google’s extensive fiber facilities and “globally distributed edge points of presence” to “accelerate content delivery” for cloud customers.<sup>87</sup> Like Amazon, Google markets its cloud services based on speed—*e.g.*, as enabling “faster page loads”—and

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<sup>82</sup> See Amazon.com, Inc., “Amazon CloudFront,” <https://aws.amazon.com/cloudfront/> (last accessed Jul. 17, 2017) (“Amazon CloudFront Overview”).

<sup>83</sup> *Id.*

<sup>84</sup> See Amazon.com, Inc., “Amazon CloudFront Pricing,” <https://aws.amazon.com/cloudfront/pricing/> (last accessed Jul. 17, 2017).

<sup>85</sup> See Amazon CloudFront Overview.

<sup>86</sup> See Amazon.com, Inc., “AWS Re:Invent, Raising the Bar on Video Streaming Quality by Utilizing AWS, Amazon Video Case Study,” Oct. 7, 2015, <https://www.slideshare.net/AmazonWebServices/spot209-raising-the-bar-on-video-streaming-quality-using-aws> (last accessed Jul. 17, 2017).

<sup>87</sup> See Google, “Cloud CDN,” <https://cloud.google.com/cdn/> (last accessed Jul. 17, 2017).

offers service to the public at fixed prices.<sup>88</sup> Moreover, the logic of the *Title II Order* presumably would allow the “DNS” functionality and related capabilities of Google’s service to be deemed “telecommunications management” functions.<sup>89</sup> Google likewise uses its globally distributed network infrastructure—including data centers, “edge points of presence” that connect to other network operators, and “edge nodes” that provide deeper connectivity with ISPs using “Google-supplied servers inside [ISPs’] network[s]”—to deliver YouTube video content and other Google services to consumers.<sup>90</sup>

Netflix similarly delivers its video content through “Open Connect”—a “global network” owned by Netflix “that is responsible for delivering Netflix TV shows and movies to [its] members world-wide.”<sup>91</sup> Open Connect relies on a “suite of purpose-built server appliances, called Open Connect Appliances (OCAs),” that “store and serve [Netflix’s] video content, with the sole responsibility of delivering playable bits to client devices as fast as possible.”<sup>92</sup> Netflix has installed these OCAs at a vast number of Internet exchange points, where the OCAs “are interconnected with mutually present ISPs.”<sup>93</sup> When “[a] user on a client device requests playback of a title from the Netflix application,” the device is sent a specific URL for the OCA that is best positioned to deliver the content, at which point “video streams from [that] OCA to

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<sup>88</sup> *See id.*

<sup>89</sup> *See id.*

<sup>90</sup> *See* Google, “Google Edge Network,” <https://peering.google.com/> (last accessed Jul. 17, 2017).

<sup>91</sup> *See* Netflix, Inc., “Open Connect Overview,” at 1, <https://openconnect.netflix.com/Open-Connect-Overview.pdf> (last accessed Jul. 17, 2017) (“Netflix OC Overview”).

<sup>92</sup> *Id.* at 2.

<sup>93</sup> *Id.*

[the user's] device.”<sup>94</sup> This platform falls squarely within the *Title II Order*'s expansive reading of “telecommunications service.” Again, if one accepts the notion that a provider's “use” of telecommunications over its facilities to provide a service to consumers constitutes an *offering* of that telecommunications capability to consumers, then Netflix's Open Connect is every bit as much a “telecommunications service” as BIAS was deemed to be in the *Title II Order*. The Commission also could apply the reasoning of the *Title II Order* to conclude that this transmission capability is offered “to the public” as “video streams from [Netflix's] OCA to [the user's] device.”<sup>95</sup> Moreover, under the logic of the *Title II Order*, the information-processing aspects of Open Connect, including its dynamic assignment of playback URLs, could simply be dismissed as “telecommunications management” functionalities rather than viewed as integrated components of an information service.

In sum, if it were correct that the telecommunications functionality within BIAS is properly viewed as a form of transparent telecommunications service, then it should follow that Amazon, Google, and Netflix “offer” telecommunications to a user who uses their services to receive content via telecommunications. There is no reasonable basis on which the Commission could defend any refusal to treat these similarly situated parties similarly.<sup>96</sup> While the *Title II Order* attempted to distinguish cloud services (like those owned by Amazon, Google, and Netflix) as not “provid[ing] the capability to transmit data to and receive data from all or

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<sup>94</sup> *Id.* at 4.

<sup>95</sup> Netflix OC Overview at 4.

<sup>96</sup> *See, e.g., Burlington N. & Santa Fe Ry. v. Surface Transp. Bd.*, 403 F.3d 771, 777 (D.C. Cir. 2005) (“Where an agency applies different standards to similarly situated entities and fails to support this disparate treatment with a reasoned explanation and substantial evidence in the record, its action is arbitrary and capricious and cannot be upheld.”) (internal citations omitted).

substantially all Internet endpoints,”<sup>97</sup> that distinction establishes only that these services do not fall within the traditional definition of *BIAS*. It does not follow that these services are immune from classification as “telecommunications services” under the theory advanced in the *Title II Order*. The potentially far-reaching implications of the *Title II Order*’s broad reading of the definition of “telecommunications service” only underscore that a Title II classification is a poor fit for *BIAS*.

3. *Other Provisions of the Communications Act Support an Information Service Classification*

Two other provisions of the Communications Act confirm that *BIAS* is best understood as an information service, rather than as a telecommunications service.

First, Section 230 of the Act identifies “a service or system that provides access to the Internet” as an example of an “information service.” That section declares that “[i]t is the policy of the United States . . . to promote the continued development of the Internet and other interactive computer services and other interactive media.”<sup>98</sup> Section 230(f)(2), in turn, defines an “interactive computer service” as “any information service . . . 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.”<sup>99</sup> That is, an “information service” is defined as “including . . . a service or system that provides access to the Internet.”

In *USTelecom*, the D.C. Circuit expressed doubt that Congress would have “attempt[ed] to settle the regulatory status of broadband Internet access services in such an oblique and

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<sup>97</sup> *Title II Order* ¶ 340 (internal citations and quotation marks omitted).

<sup>98</sup> 47 U.S.C. § 230(b)(1).

<sup>99</sup> *Id.* § 230(f)(2).

indirect manner,”<sup>100</sup> relying on the Supreme Court’s frequent observation that “Congress . . . does not alter the fundamental details of a regulatory scheme in vague terms or ancillary provisions—it does not, one might say, hide elephants in mouseholes.”<sup>101</sup> But that misapprehends the significance of Section 230 to the appropriate classification of BIAS. It is certainly true that the proper classification of BIAS is a fundamental aspect of the Communications Act’s regulatory scheme, with vital implications for all participants in the Internet ecosystem and for the national economy more broadly. But NCTA does not contend that Section 230 “alter[ed]” that fundamental aspect of the scheme. Rather, Section 230 simply *confirms* what the rest of the Act makes clear—and appears to have been taken for granted by the Congress that enacted the provision: services that “provide access[] to the Internet” *are* “information services.” So even if Section 230 does not *preclude* a “telecommunications service” classification for BIAS,<sup>102</sup> it plainly counsels against it.

Section 231 of the Act is similar. That provision makes it a crime to knowingly make available to a minor, via the World Wide Web, any commercial communication that “includes any material that is harmful to minors.”<sup>103</sup> Exempted from this prohibition, however, are “person[s] engaged in the business of providing an Internet access service.”<sup>104</sup> The section defines “Internet access service” in precisely the manner one would expect—as “a service that enables users to access content, information, electronic mail, or other services offered over the

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<sup>100</sup> *USTelecom*, 825 F.3d at 703.

<sup>101</sup> *E.g.*, *Whitman v. American Trucking Ass’ns*, 531 U.S. 457, 468 (2001).

<sup>102</sup> *USTelecom*, 825 F.3d at 703.

<sup>103</sup> 47 U.S.C. § 231(a)(1).

<sup>104</sup> *Id.* § 231(b)(2).

Internet.”<sup>105</sup> It then makes crystal clear that the term “Internet access service” “does *not* include telecommunications services.”<sup>106</sup> Again, while Congress may not have intended to “*alter* the fundamental details” of the Act’s treatment of BIAS through a definitional provision of a criminal prohibition on indecent communications,<sup>107</sup> that is beside the point. Congress’s repeated references to “Internet access services” as information services—or not telecommunications services—is simply more evidence that Congress did not believe that the proper classification of BIAS was in any doubt.

### **C. An Information Service Classification for BIAS Would Best Serve the Commission’s Policy Goals**

Classifying BIAS as an information service not only is most faithful to the text of the Communications Act, but also represents the best way to foster the “virtuous circle” of innovation, demand for online content and applications, and broadband deployment.<sup>108</sup>

#### *1. The Internet Ecosystem Thrived Under the Prior Information Services Classification*

For years, the Commission’s bipartisan treatment of Internet access as an information service yielded significant benefits for American consumers. As Chairman Kennard explained nearly two decades ago, “with competition and deregulation as [the] touchstones,” the Commission took “a hands-off, deregulatory approach to the broadband market.”<sup>109</sup> And “the

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<sup>105</sup> *Id.* § 231(e)(4).

<sup>106</sup> *Id.* (emphasis added).

<sup>107</sup> *USTelecom*, 825 F.3d at 703 (emphasis added).

<sup>108</sup> *See* NPRM ¶¶ 44-51.

<sup>109</sup> Remarks by FCC Chairman William E. Kennard Before the Federal Communications Bar Northern California Chapter, San Francisco, CA, Jul. 20, 1999, at 4, *available at* <http://transition.fcc.gov/Speeches/Kennard/spwek924.doc>.

marketplace . . . responded with enormous investment” in broadband services for consumers.<sup>110</sup> By 2010, “the American broadband ecosystem ha[d] evolved rapidly,” as the Commission found in its *National Broadband Plan*, and advances in broadband technologies and networks had been “[f]ueled primarily by private sector investment and innovation” with “limited” government oversight.<sup>111</sup> And by the time the Commission adopted the *Title II Order* in 2015, broadband had become the fastest growing and most transformative technology in history.

Indeed, under every measure, the Commission’s deliberate policy of minimal regulation was an unqualified success, as ISPs and edge providers made massive investments and the Internet remained open and free without need for prescriptive rules, let alone the overkill of Title II regulation. The Commission’s restrained approach helped drive the Internet’s rapid growth and evolution and spurred BIAS providers to invest over *\$1.5 trillion* of private capital in their networks.<sup>112</sup> This prodigious level of investment *increased* over time while BIAS was classified as a Title I service, as ISPs’ annual capital expenditures *rose* from \$62 billion in 2005 to \$76 billion in 2015.<sup>113</sup> And these substantial capital expenditures positioned the United States as a global leader in broadband investment. From 2004 to 2014, nearly a quarter of the world’s

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<sup>110</sup>

*Id.*

<sup>111</sup>

Federal Communications Commission, *Connecting America: The National Broadband Plan*, at xi, 5 (2010).

<sup>112</sup>

See NPRM ¶¶ 1-2 (citing USTelecom, “Broadband Investment,” available at <http://www.ustelecom.org/broadband-industry/broadband-industry-stats/investment>).

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See USTelecom, “Historical Broadband Provider Capex,” available at <https://www.ustelecom.org/broadband-industry-stats/investment/historical-broadband-provider-capex>.

broadband investment occurred in the United States,<sup>114</sup> and U.S. BIAS providers invested more than twice as much as their counterparts in the European Union on a per-household basis.<sup>115</sup>

As a direct result of this investment, broadband in the United States became the fastest deploying technology ever known. The average cable broadband customer saw top speeds increase by a whopping 3,200 percent between 2005 and 2015.<sup>116</sup> At the same time, ISPs rapidly expanded their networks to bring higher speeds and more services to more Americans. Between June 2005 and December 2014, the number of Internet connections grew from roughly 42 million to more than 320 million.<sup>117</sup> By 2014, 85 percent of the U.S. population could access download speeds of 100 Mbps or more.<sup>118</sup> And nearly 98 percent of the U.S. population could

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<sup>114</sup> See Roslyn Layton, *The European Union's Broadband Challenge*, American Enterprise Institute for Public Policy Research, at 2 (Feb. 2014), available at [http://www.aei.org/files/2014/02/18/-the-european-unions-broadband-challenge\\_175900142730.pdf](http://www.aei.org/files/2014/02/18/-the-european-unions-broadband-challenge_175900142730.pdf) ("Layton Study"); see also Roslyn Layton, *When It Comes To High-Speed Internet, The Grass Isn't Greener In Europe*, *Forbes*, Feb. 7, 2014, available at <http://www.forbes.com/sites/realspin/2014/02/07/when-it-comes-to-high-speed-internet-the-grass-isnt-greener-in-europe/> ("Layton Article").

<sup>115</sup> See Layton Study at 2.

<sup>116</sup> See NCTA, "Preview the State of America's Broadband Ahead of President Obama's Visit to Iowa," Jan. 15, 2015, available at <https://www.ncta.com/platform/broadband-internet/preview-the-state-of-americas-broadband-ahead-of-president-obamas-visit-to-iowa/>.

<sup>117</sup> See *Internet Access Services: Status as of Jun. 30, 2009*, at 6, Table 1, available at [https://apps.fcc.gov/edocs\\_public/attachmatch/DOC-301294A1.pdf](https://apps.fcc.gov/edocs_public/attachmatch/DOC-301294A1.pdf) (reporting total Internet connections in June 2005 above 200 kbps); *Internet Access Services: Status as of Dec. 31, 2014*, at 4, Figure 1, available at [https://apps.fcc.gov/edocs\\_public/attachmatch/DOC-338630A1.pdf](https://apps.fcc.gov/edocs_public/attachmatch/DOC-338630A1.pdf) (reporting total Internet connections in December 2014).

<sup>118</sup> See Layton Article.



access download speeds of at least 10 Mbps, while over 99 percent could access speeds of at least 3 Mbps.<sup>119</sup>

At the same time, the price for broadband service in the United States, as measured on a per-Mbps basis, plummeted during the same pre-Title II period. From 1996 to 2012, while the speed of connections offered under Comcast’s standard broadband Internet service tier *increased* by approximately 900 percent, the price that subscribers paid per Mbps *declined* by at least 87 percent.<sup>120</sup> Customers of other ISPs saw similar reductions in the price per Mbps for broadband service during the period in which BIAS was classified as an information service.<sup>121</sup> By 2014, fixed wireline broadband service in the United States was more affordable than comparable services in Germany, Italy, France, the United Kingdom, Japan, South Korea, and Canada.<sup>122</sup>

As broadband networks improved and expanded and as high-speed Internet access became affordable and accessible to vast swaths of the population, the Internet economy skyrocketed. For instance, paid subscriptions to online video distribution (“OVD”) services simply did not exist in 2005; by 2010, there were 24.4 million paid OVD subscribers, and that

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<sup>119</sup> FCC and NTIA, *National Broadband Map: Broadband Statistics Report*, at 3-4 (Feb. 2014), available at <http://www.broadbandmap.gov/download/Technology%20by%20Speed.pdf> (“FCC/NTIA Feb. 2014 Report”).

<sup>120</sup> Comments of Comcast Corp., GN Docket No. 12-228, at 12 (filed Sep. 20, 2012).

<sup>121</sup> See, e.g., Comments of Time Warner Cable, GN Docket No. 09-51, at 9 (filed Jul. 21, 2009) (reporting that TWC subscribers could experience 10 to 20 times more speed than they could have received at the same price a decade earlier).

<sup>122</sup> Progressive Policy Institute, *The State of U.S. Broadband: Is It Competitive? Are We Falling Behind?*, at 7-8 (Jun. 2014), available at [http://www.progressivepolicy.org/wpcontent/uploads/2014/06/2014.06-Ehrlich\\_The-State-US-Broadband\\_Is-it-competitive-are-we-falling-behind.pdf](http://www.progressivepolicy.org/wpcontent/uploads/2014/06/2014.06-Ehrlich_The-State-US-Broadband_Is-it-competitive-are-we-falling-behind.pdf).

number rose to 88.7 million by 2015.<sup>123</sup> From 2006 to 2015, the percentage of Internet traffic devoted to online video spiked from 12 percent to 76 percent.<sup>124</sup> Other segments experienced similar growth; the app economy, which had yet to launch in 2005, employed 1.66 million Americans by 2015, which was more than double the amount in 2013.<sup>125</sup> And as a whole, Silicon Valley saw a tremendous rise in investment; by the end of 2014, total venture capital funding for the Valley reached nearly \$20 billion—up from roughly \$6 billion in 2005.<sup>126</sup> In light of this staggering growth, there is simply no question that the Internet ecosystem in the United States thrived for decades under Title I to the benefit of all Americans.

2. *The Threat of and Eventual Adoption of the Title II Order Significantly Dampened Investment and Innovation*

As the NPRM recognizes, the prior Commission’s *Title II Order* “put at risk online investment and innovation, threatening the very open Internet it purported to preserve.”<sup>127</sup> Before the *Title II Order* was adopted, the broadband industry was unanimous in its warnings to the Commission that imposing a common carrier regime would have such an adverse effect. Several recent economic studies in the wake of the Commission’s order show that those

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<sup>123</sup> Tom Fitzgerald, *Pay Cable vs. SVOD: How They Stack Up*, Media Life, Jan. 28, 2016, available at <http://www.medialifemagazine.com/pay-cable-vs-svod-stack/>; SNL Kagan, State of Online Video Delivery, at 8 (2015).

<sup>124</sup> See Cisco Visual Networking Index (2007-2012); Cisco Virtual Networking Index (2015-2020).

<sup>125</sup> See Progressive Policy Institute, “App Economy Jobs in the United States (Part 1)” (Jan. 6, 2016), available at <http://www.progressivepolicy.org/slider/app-economy-jobs-part-1/>.

<sup>126</sup> Egon Terplan and Kathryn Mullins, “Prosperity and Opportunity in the Bay Area’s Innovation Economy,” San Francisco Bay Area Planning and Urban Research Association, Mar. 2, 2015, available at <http://www.spur.org/news/2015-03-02/prosperity-and-opportunity-bay-area-s-innovation-economy>.

<sup>127</sup> NPRM ¶ 4.

predictions have already proved true—and, if the Title II regime is retained, the Commission should only expect the situation to get worse.

With respect to investment, for example, one study published in May found that foregone investment in 2016 alone due to Title II amounted to well over \$5 billion.<sup>128</sup> The study followed the trend line of overall broadband capital expenditures (“capex”) from 2003 to the adoption of the *Title II Order* in 2015, and found that, in absence of regulation under Title II, the industry likely would have invested approximately \$78 billion in 2016 expanding and improving its BIAS offerings.<sup>129</sup> Instead, actual broadband capex in 2016 was only \$72.7 billion<sup>130</sup>—a staggering \$5.3 billion difference that could have gone “to a faster closing of the digital divide for rural and low-income consumers, higher speeds and more competition for all consumers, as well as more affordable prices.”<sup>131</sup> Another recent study cited in the NPRM, by Dr. Hal Singer, confirms the reasonableness of these estimates. Focusing on the 2016 broadband capex of the twelve largest BIAS providers, this study found an overall decline of 5.6% relative to 2014 levels—the last full year in which these providers were not subject to common carrier regulation by the Commission.<sup>132</sup> The results for some individual BIAS providers were much starker. AT&T’s capex, for instance, was down 16.2% in 2016 (nearly \$3.5 billion) relative to its 2014

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<sup>128</sup> Michael Horney, *Broadband Investment Slowed by \$5.6 Billion Since Open Internet Order* (May 5, 2017), available at <http://freestatefoundation.blogspot.com/2017/05/broadband-investment-slowed-by-56.html>.

<sup>129</sup> *Id.*

<sup>130</sup> *Id.*

<sup>131</sup> NPRM ¶ 49.

<sup>132</sup> See Hal Singer, *2016 Broadband Capex Survey: Tracking Investment in the Title II Era* (Mar. 1, 2017), <https://haljsinger.wordpress.com/2017/03/01/2016-broadband-capex-survey-tracking-investment-in-the-title-ii-era>.

numbers.<sup>133</sup> Cablevision’s capex declined by 33.6% over the same period.<sup>134</sup> And Sprint’s capex was down a whopping 62.7% (approximately \$2.4 billion in absolute terms).<sup>135</sup> And a further study published in June found that the decline in investment over the past two years has led to “a statistically significant decline in the rate of average broadband speed increases for the U.S.”—concluding that “but for” the *Title II Order*, “U.S. broadband speeds would have been about 10% higher—or about 1.5 Mbps faster—on average.”<sup>136</sup>

Some have attempted to cast doubt on these studies regarding recent broadband investment trends, and a handful of Title II proponents—most notably Free Press—have released preliminary reports of their own claiming that broadband capex investment somehow increased since the *Title II Order* went into effect.<sup>137</sup> The analyses contained in these reports, however, are fatally flawed. Free Press’s report, for instance, fails to exclude capex for broadband services outside the United States or non-BIAS services altogether—specifically, AT&T’s investments in its broadband offerings in Mexico and into its DirecTV services—which obviously cannot be attributed to the adoption of Title II (at least not in the manner that would commend its

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<sup>133</sup> *Id.*

<sup>134</sup> *Id.*

<sup>135</sup> *Id.*

<sup>136</sup> George S. Ford, *Broadband Speeds Post-Reclassification: An Empirical Approach*, at 1 (Jun. 27, 2017), <http://www.phoenix-center.org/perspectives/Perspective17-07Final.pdf>.

<sup>137</sup> See, e.g., S. Derek Turner, *It’s Working: How the Internet Access and Online Video Markets Are Thriving in the Title II Era*, Free Press (May 2017), <https://www.freepress.net/sites/default/files/resources/internet-access-and-online-video-markets-are-thriving-in-title-II-era.pdf>; Internet Association, *Preliminary Net Neutrality Investment Findings* (May 2017), <https://internetassociation.org/wp-content/uploads/2017/05/InternetAssociation-NetNeutrality-Facts.pdf>.

adoption).<sup>138</sup> Once those irrelevant investments are excluded, Free Press’s numbers shows similar declines in BIAS investments as the studies above.<sup>139</sup>

And in any event, an absolute increase or decrease in capex since the adoption of Title II cannot tell the full story. “[I]nvestment overall could very well be up, but not up as much as it otherwise would be without Title II (same if there was a decline).”<sup>140</sup> As one analyst found, “[t]he real investment number should be 10%-20% higher than the base” and “grow from there.”<sup>141</sup> Relatedly, efforts by Free Press and others to dredge up isolated examples where an ISP’s capex ticked higher over the past two years cannot undermine the strong evidence showing a marked decline in *industry-wide* capex, and overlook other relevant measures of Title II’s effects on investment. For example, capital *intensity* ratios measure capital expenditures as a share of revenue, and as Comcast’s David L. Cohen recently observed, “the leveling off and even reduction of capital intensity since the adoption of Title II suggests that Comcast’s capital spend alone is going to decrease more than \$2.5 billion over a three year period” relative to what it would have been.<sup>142</sup>

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<sup>138</sup> See Doug Brake, *Broadband Myth Series, Part 1: What Financial Data Shows About the Impact of Title II on ISP Investment*, ITIF (Jun. 2, 2017), <https://itif.org/publications/2017/06/02/broadband-myth-series-part-1-what-financial-data-shows-about-impact-title-ii>.

<sup>139</sup> *Id.*

<sup>140</sup> *Id.*

<sup>141</sup> Frank Louthan, Raymond James, *Title II Late; The Damage Assessment for Telecom Begins* (Feb. 27, 2015).

<sup>142</sup> Free State Found., Telecommunications Policy Conference at 40:38 (May 31, 2017), <https://www.c-span.org/video/?429299-3/telecommunications-policy-conference-part-2> (statement of David L. Cohen, Senior Executive Vice President and Chief Diversity Officer, Comcast Corporation).

Indeed, there are several reasons to think that these studies regarding broadband capex over the past two years may be *understating* the effect that the Commission’s activity in this area is having on investment. For one thing, as economist Dr. George Ford recently noted, even the *threat* of Title II reclassification had a negative effect on broadband investment dating all the way back to 2011.<sup>143</sup> Relying on data from U.S. Bureau of Economic Analysis and capital expenditures in similar markets, Ford calculates that the “overhang of reclassification”—starting with the Commission’s 2010 reclassification proposal—“reduced telecommunications investment by 20% (or more), or about \$32 to \$40 billion annually” from 2011-2015.<sup>144</sup> In other words, according to Dr. Ford’s calculations, “over th[at] five-year window, reclassification . . . cost the U.S. more than an entire year’s worth of investment.”<sup>145</sup> Notably, Ford performed the same analysis in the four years following the Commission’s 2005 release of its “Four Principles” to promote an open Internet.<sup>146</sup> And, in stark contrast with the effect of Title II, he found that the Commission’s embrace of net neutrality principles *under Title I* had no effect on broadband investment, “suggesting it is reclassification—and not neutrality principles—that is reducing investment.”<sup>147</sup> NCTA and other broadband stakeholders have been adamantly making that precise point over the last several years.

Moreover, investment data from just the first two years of the Title II regime is not likely to demonstrate the full, long-term harms if Title II were kept in place, as explained in the

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<sup>143</sup> See generally George S. Ford, *Net Neutrality, Reclassification and Investment: A Counterfactual Analysis* (Apr. 25, 2017), available at <http://www.phoenix-center.org/perspectives/Perspective17-02Final.pdf>.

<sup>144</sup> *Id.* at 2-6.

<sup>145</sup> *Id.* at 6.

<sup>146</sup> See *id.* at 7.

<sup>147</sup> *Id.* at 2.

attached paper by Dr. Owen.<sup>148</sup> For one thing, a BIAS provider’s investment plans typically are much longer than two years. “Many of the investments made in 2015 and 2016 were set in motion several years before,”<sup>149</sup> and may not have accounted fully for the realization of Title II regulation. Thus, in exercising its predictive judgment as to the likely effects on investment if Title II were to remain in place, the Commission also should look to economic literature documenting the effects of common-carrier-style regulation on the incentives of regulated parties to invest in infrastructure. As Dr. Owen explains, the notion that common carrier regulation dampens investment simply is not a controversial proposition as a pure economic matter.<sup>150</sup> Cautionary tales can be found in the chronic underinvestment in heavily regulated public utility sectors in this country,<sup>151</sup> as well as in Europe’s ill-fated experiment with regulating broadband as a public utility.<sup>152</sup> Indeed, as Dr. Owen observes, the data show that “[t]he disparity between broadband investment in the United States and the European Union has been particularly pronounced in rural areas.”<sup>153</sup> And as then-Commissioner Pai correctly pointed out in 2015,

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<sup>148</sup> Owen Paper at 9-10.

<sup>149</sup> *Id.* at 10.

<sup>150</sup> *See id.* at 13 (“[E]conomic literature is replete with empirical examples of the effects of common-carrier-style regulation on the incentives of regulated firms to invest in infrastructure and new services.”).

<sup>151</sup> *See id.* at 13 (“Prominent examples include water utilities, electricity grids, and railroads.”) (citing American Society of Civil Engineers, *Infrastructure Report Card: Drinking Water*, at 1 (Jan. 2017), available at <https://www.infrastructurereportcard.org/wp-content/uploads/2017/01/Drinking-Water-Final.pdf>; American Society of Civil Engineers, *Annual Report 2012*, at 12 (2012), available at [http://www.asce.org/uploadedFiles/About\\_ASCE/Content\\_Pieces/asce-annual-report-2012.pdf](http://www.asce.org/uploadedFiles/About_ASCE/Content_Pieces/asce-annual-report-2012.pdf)).

<sup>152</sup> *See id.* at 14 (citing Christopher S. Yoo, *U.S. vs. European Broadband Deployment: What Do the Data Say?* (Jun. 2014), available at <https://www.law.upenn.edu/live/files/3353-us-vs-european-broadband-deployment-summary> (“Yoo Study”)).

<sup>153</sup> *Id.* at 14 (citing Yoo Study).

ongoing “[u]tility-style regulation” of broadband by the Commission “will simply broaden the digital divide” in this country, because “[t]he more difficult the FCC makes the business case for deployment, . . . the less likely it is that broadband providers big and small will connect Americans with digital opportunities.”<sup>154</sup> These examples underscore the long-term harms that likely would flow from continuing to apply common-carrier regulation to broadband in this country.

Finally, it is likely that the harmful effects of the Title II framework have been somewhat dampened while appellate proceedings have been underway. During the pendency of the appeal of the *Title II Order* in the D.C. Circuit, the prior Commission seemed to refrain from enforcing the Title II mandates as aggressively as it might have. But the non-binding, staff-level report on mobile ISPs’ zero-rating practices—issued at the tail end of Chairman Wheeler’s tenure and subsequently rescinded by Chairman Pai—provided an inkling of the kinds of invasive regulatory initiatives that likely would have become commonplace if prior leadership had remained in power.<sup>155</sup> Additionally, while the *Title II Order* forbore from applying invasive tariffing requirements and other forms of *ex ante* rate regulation to broadband, the Commission could have sought to rescind its forbearance from those provisions and others in Title II in the future. Thus, in addition to the significant harms already associated with Title II, the

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<sup>154</sup> *Title II Order*, Dissenting Statement of Commissioner Ajit Pai, at 8.

<sup>155</sup> See Wireless Telecommunication Bureau, “Policy Review of Mobile Broadband Operators’ Sponsored Data Offerings for Zero Rated Content and Services” (Jan. 11, 2017), [http://transition.fcc.gov/Daily\\_Releases/Daily\\_Business/2017/db0111/DOC-342987A1.pdf](http://transition.fcc.gov/Daily_Releases/Daily_Business/2017/db0111/DOC-342987A1.pdf); see also *Wireless Telecommunications Bureau Report: Policy Review of Mobile Broadband Operators’ Sponsored Data Offerings for Zero Rated Content and Services*, Order, 32 FCC Rcd 1093 (2017) (rescinding staff-level report on zero-rating practices).



Commission should use its expert, predictive judgment to recognize that the long-term impact of Title II likely would be far more damaging to the broadband ecosystem.

With respect to innovation, Title II’s harmful effects have been just as pronounced. A particularly glaring example is the *Title II Order*’s imposition of the vague “reasonableness” standards in Sections 201 and 202 to BIAS providers. As discussed further below, the Commission developed its amorphous “General Conduct Standard” as its “interpretation of [S]ections 201 and 202 in the broadband Internet access context,”<sup>156</sup> and the standard broadly prohibits BIAS providers from “unreasonably interfer[ing] with or unreasonably disadvantage[ing]” end users’ access to edge providers or edge providers’ access to end users,<sup>157</sup> employing a case-by-case analysis based on a non-exhaustive list of at least seven factors.<sup>158</sup> Such a regulatory environment has already had—and if left in place, would continue to have—a profound chilling effect on innovation in the broadband marketplace. Again, the zero-rating investigation conducted by the prior Commission leadership is illustrative. That wide-ranging inquiry into various streaming services offered by ISPs—such as Verizon’s FreeBee, AT&T’s Sponsored Data, and T-Mobile’s BingeOn—exemplifies the kind of regulatory second-guessing of new service offerings that ISPs could expect to face under a Title II regime—and that reasonably discourages such innovation in the first place.

Indeed, NCTA’s members are already on record in explaining how the application of Sections 201 and 202 and the Commission’s “General Conduct Standard” has compelled them to take extra care in their legal and regulatory reviews and has had a significant negative impact on

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<sup>156</sup> *Title II Order* ¶ 137.

<sup>157</sup> *Id.* ¶ 136; *see also* 47 C.F.R. § 8.11.

<sup>158</sup> *See Title II Order* ¶¶ 139-45.

product development, deployment, and time to market. Comcast’s Senior Executive Vice President David L. Cohen recently noted the significant “impact on innovation” from these aspects of the *Title II Order*.<sup>159</sup> As Cohen explained, “Comcast’s original Stream TV, which wasn’t even an Internet service” but was an IP cable service “delivered in the home,” provoked a “year-long FCC investigation, which essentially delays the launch of [a] service that potentially could be incredibly popular with customers.”<sup>160</sup> That investigation provides “a crystalized example” of the potential for regulatory overreach and unwarranted, sprawling investigations that the *Title II Order* created for BIAS providers,<sup>161</sup> and that has prompted several of NCTA’s members to postpone or decline to offer pro-consumer and pro-competitive services.

Another of NCTA’s members, General Communication Inc. (“GCI”), likewise has reported to NCTA that the regulatory uncertainty surrounding the application of Title II and the General Conduct Standard to BIAS has frustrated its ability to innovate and launch new products and services. On multiple occasions, GCI has considered innovating market-leading products only to conclude the company cannot justify that investment given the risk that the Commission could open an expensive and distracting investigation under Title II and the General Conduct Standard because the product is unfamiliar. And in other cases, GCI has invested resources in new product development but the regulatory uncertainty created by the *Title II Order* has delayed those product offerings or features by several months. According to GCI, that uncertainty has introduced pauses in the innovation exploration process, requiring legal analyses that divert the

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<sup>159</sup> Free State Found., Telecommunications Policy Conference at 38:50 (May 31, 2017), <https://www.c-span.org/video/?429299-3/telecommunications-policy-conference-part-2> (statement of David L. Cohen, Senior Executive VP and Chief Diversity Officer, Comcast Corporation).

<sup>160</sup> *Id.*

<sup>161</sup> *Id.*

team’s attention and energy away from customer service enhancements, and spurring internal debates about the risk of enforcement action (especially where the company has explored ways to integrate wireless and wireline network capabilities). Notably, the experience of NCTA’s members has been similar to that of the 19 municipal ISPs that filed a letter with the Commission just before the NPRM was issued—which explained that the imposition of Title II has led some ISPs to “delay or hold off from rolling out a new feature or service,” depriving their consumers of “access to innovations and new capabilities.”<sup>162</sup>

These harmful effects of Title II ultimately threaten to *undermine* Internet openness rather than promote it. Indeed, the potentially crippling economic burdens under Title II could force providers to cease offering services that enable consumers to access the entire Internet. Notably, the D.C. Circuit emphasized that the *Title II Order* applies only to providers that offer access to “all or substantially all Internet endpoints,” and that this limitation on the *Order*’s scope saved it from First Amendment scrutiny.<sup>163</sup> But the panel majority in *USTelecom* also acknowledged that ISPs could avoid the application of the *Title II Order* by offering “edited services” that provide access only to “a specified field of content.”<sup>164</sup> Ironically, then, the burdens of Title II could lead to a *less* open Internet and thereby frustrate the Commission’s policy goals.

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<sup>162</sup> Letter from 19 Municipal ISPs to Chairman Ajit Pai, WC Docket No. 17-108, at 2 (filed Mar. 11, 2017); *see also* Owen Paper at 11-12 (“There can be no question that the regulatory peril and uncertainty caused by Title II—chiefly through the application of vague and roving ‘reasonableness’ standards in Sections 201 and 202 that have never been applied to Internet access services—has affected and will continue to affect ISPs’ decisions on whether and when to roll out new offerings and services.” (citation omitted)).

<sup>163</sup> *USTelecom*, 825 F.3d at 743.

<sup>164</sup> *USTelecom*, 855 F.3d at 389-90 (Srinivasan, J., joined by Tatel, J., concurring in the denial of rehearing *en banc*).

Title II also is likely to drive up consumer prices for broadband—reversing the pro-consumer trend towards cheaper and faster broadband that had prevailed under the Commission’s prior classification approach and that had helped drive widespread broadband adoption in this country. As noted above, under the prior Title I regime, per-Mbps price for broadband service fell dramatically, and a study in 2014 found that fixed wireline broadband service in the United States is more affordable than comparable services in developed nations across the world.<sup>165</sup> But the regulatory risks of Title II will impose upward pressure on broadband prices, particularly as the costs of compliance rise, and in turn would likely impede the goal of wider adoption.

In short, the evidence powerfully demonstrates that the costs associated with keeping Title II in place for BIAS would be enormous for consumers, ISPs, and the economy more broadly, whereas the asserted benefits of retaining Title II are imaginary—particularly given that the imposition of Title II is not even necessary to safeguard Internet openness, as discussed further below. Chairman Pai has correctly emphasized the need to “have [the agency’s] expert staff carefully review the evidence on investment and other variables” in evaluating costs and benefits—an undertaking that “simply wasn’t done back in 2015.”<sup>166</sup> And Commissioner O’Rielly has pointed out that, “[i]nstead of operating in an ‘economics free zone’” where the purported “benefits” of Title II are “assumed to outweigh any costs,” the Commission in this proceeding will appropriately weigh the costs and benefits of the approaches under consideration.<sup>167</sup>

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<sup>165</sup> See *supra* at 30.

<sup>166</sup> NPRM, Statement of Chairman Pai at 61.

<sup>167</sup> NPRM, Statement of Commissioner O’Rielly at 75.

In light of the evidence discussed above, the Commission thus should follow through with its proposal to eliminate the risk and uncertainty associated with Title II and to reinstate a Title I information-service classification for broadband, restoring the light-touch regulatory approach that was a boon to the Internet economy and to consumers alike.<sup>168</sup> A recent poll conducted by NCTA and Morning Consult found that such an approach continues to enjoy broad public support—with 78 percent of respondents indicating that they believe there should be “light touch” regulation of BIAS or no regulation at all, whereas only 12 percent support common-carrier-style regulation.<sup>169</sup> And this public support for a Title I approach comes from across the political spectrum.<sup>170</sup>

**D. The Commission Should Eliminate Overbroad Aspects of the *Title II Order* That Flowed from Title II Classification or Strayed Far Beyond Consensus Open Internet Principles**

Finally, no matter what type of light-touch regulatory framework the Commission determines to be most appropriate after adopting an information-service classification (*see infra* Section II), there are several discrete aspects of the *Title II Order* apart from the fundamental classification issue that the Commission should revisit.

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<sup>168</sup> See Owen Paper at 17 (“The surest way to promote the virtuous circle of innovation, demand, and investment in high-speed broadband is to eliminate the regulatory perils of Title II, as well as more specific regulations like the general conduct standard, that generate needless uncertainty for ISPs and for the Internet industries more broadly.”).

<sup>169</sup> See MORNING CONSULT, *NCTA Polling Recap* at 3 (May 2017), [https://www.ncta.com/sites/prod/files/morning\\_consult\\_poll\\_toplines\\_1.pdf](https://www.ncta.com/sites/prod/files/morning_consult_poll_toplines_1.pdf).

<sup>170</sup> See *id.* at 4 (reflecting roughly equal distribution on this issue from Republicans and Democrats).

*1. The Commission Should Eliminate the General Conduct Standard*

First, the Commission should follow through with its proposal to eliminate the General Conduct Standard adopted in the *Title II Order*.<sup>171</sup> As the Commission noted in the *Title II Order*, the General Conduct Standard “represents [its] interpretation of [S]ections 201 and 202 in the broadband Internet access context.”<sup>172</sup> Once the telecommunications service classification is reversed and the information service classification is restored, the General Conduct Standard necessarily will have to fall away. Without Title II, the Commission will lack authority to continue subjecting BIAS providers to this common-carriage standard.<sup>173</sup>

But even if the Commission were to retain the telecommunications service classification or had authority to maintain such a rule in the wake of Title I reclassification, it still should eliminate the General Conduct Standard, given the significant uncertainty it creates and its corresponding chilling effect on investment and innovation. In contrast with the Commission’s bright-line rules, such an open-ended, “totality of the circumstances” balancing test for considering whether conduct “unreasonably interfere[s] with or unreasonably disadvantage[s]” end users’ access to edge providers or edge providers’ access to end users has never been part of the consensus principles for promoting Internet openness.<sup>174</sup> Nor should it be.

As noted above, in assessing the harm that imposing such an amorphous standard causes, one need look no further than the wide-ranging inquiry undertaken by prior Commission leadership into zero-rated “free data” programs noted above, which was conducted pursuant to

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<sup>171</sup> See NPRM ¶¶ 72-73.

<sup>172</sup> *Title II Order* ¶ 137.

<sup>173</sup> See *Verizon v. FCC*, 740 F.3d 623, 652 (D.C. Cir. 2014) (reasoning that it may be impermissible for the Commission to subject information services “to the traditional common carrier ‘just and reasonable’ standard” (citing 47 U.S.C. § 201(b))).

<sup>174</sup> *Title II Order* ¶¶ 136-45; see also 47 C.F.R. § 8.11.

this standard.<sup>175</sup> As Chairman Pai has since recognized, “[t]hese free-data plans have proven to be popular among consumers, particularly low-income Americans, and have enhanced competition in the wireless marketplace.”<sup>176</sup> If such consumer-friendly practices may be condemned (or at least credibly threatened) under the General Conduct Standard, it is hard to imagine what cannot. Forcing ISPs contemplating other pro-competitive, pro-consumer service offerings to consider whether such new services, if put into practice, might be the next target of a costly federal investigation will plainly discourage innovation.

The poorly conceived “advisory opinion” procedure established by the *Title II Order* cannot prevent these harms.<sup>177</sup> ISPs cannot be expected to put any new product offerings on hold and reveal their confidential businesses plans to the Commission in exchange for an opinion from the Enforcement Bureau that (i) is not promised in any particular period of time, or even in a timely manner at all;<sup>178</sup> (ii) cannot be relied upon to protect the ISP from enforcement if the Bureau later concludes that “all of the relevant facts were [not] fully, completely, and accurately presented to the Bureau”;<sup>179</sup> (iii) is not binding on the full Commission in any event;<sup>180</sup> and

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<sup>175</sup> See *supra* at 38.

<sup>176</sup> Chairman Pai Statement on Free Data Programs (Feb. 3, 2017), [https://apps.fcc.gov/edocs\\_public/attachmatch/DOC-343345A1.pdf](https://apps.fcc.gov/edocs_public/attachmatch/DOC-343345A1.pdf); see also Statement of Commissioner Michael O’Rielly on FCC’s Zero-Rating Investigation (Dec. 2, 2016), [https://apps.fcc.gov/edocs\\_public/attachmatch/DOC-342406A1.pdf](https://apps.fcc.gov/edocs_public/attachmatch/DOC-342406A1.pdf) (condemning the investigation’s attempt to “intimidate providers in order to shut down popular offerings to consumers”).

<sup>177</sup> See *Title II Order* ¶¶ 222-39.

<sup>178</sup> See *id.* ¶ 234 (declining to “establish any firm deadlines to rule on [requests for advisory opinions] or issue response letters” and noting that, “although the Commission appreciates that if the advisory opinion process is not timely, it will be less valuable, . . . response times will likely vary”).

<sup>179</sup> *Id.*

<sup>180</sup> See *id.* ¶ 235.

(iv) is not subject to judicial review.<sup>181</sup> It is little wonder that, to the best of NCTA’s knowledge, in two years of its existence, the process has never been invoked by anyone.

2. *The Commission Should Take a Hands-Off Approach to Interconnection and Traffic Exchange*

The Commission also should revert to its prior, hands-off approach to Internet interconnection and traffic-exchange arrangements between ISPs and other network operators.<sup>182</sup> As with the General Conduct Standard, if the Title II classification of BIAS falls away, so too will the *Title II Order*’s asserted legal basis for overseeing Internet interconnection and traffic-exchange.<sup>183</sup> In any event, there is simply no policy justification for regulatory intervention in light of the well-functioning marketplace for interconnection and traffic-exchange that existed before any such one-sided regulation was in place.

From the birth of the Internet to the *Title II Order*, peering and other traffic-exchange agreements for Internet traffic were *never* subject to industry-specific regulation. They functioned instead as “the Internet’s effective free-market substitute for mandatory and regulated interconnection” of the monopoly telephone era.<sup>184</sup> And they did so brilliantly. They “ma[de] the competitive backbone ‘market’ work”<sup>185</sup> for decades with no threat to consumer welfare or

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<sup>181</sup> *See id.*

<sup>182</sup> *See* NPRM ¶ 42.

<sup>183</sup> *See Title II Order* ¶ 194 (purporting to “retain targeted authority” to regulate “the exchange of Internet traffic by an edge provider or an intermediary with the broadband provider’s network . . . through [S]ections 201, 202, and 208 of the Act”).

<sup>184</sup> Ev Ehrlich, Progressive Policy Institute, *A Brief History of Internet Regulation*, at 13 (Mar. 2014), available at [http://www.progressivepolicy.org/wp-content/uploads/2014/03/2014.03-Ehrlich\\_A-Brief-History-of-Internet-Regulation1.pdf](http://www.progressivepolicy.org/wp-content/uploads/2014/03/2014.03-Ehrlich_A-Brief-History-of-Internet-Regulation1.pdf).

<sup>185</sup> *Id.*



need for regulatory intervention.<sup>186</sup> Even the *Title II Order* itself recognized that the interconnection marketplace has long functioned based on “commercial negotiations” between a host of sophisticated commercial entities, including BIAS providers, third-party backbone service providers, CDNs, and edge providers “without significant Commission oversight.”<sup>187</sup>

Before the *Title II Order*, the Commission rightly saw no need to intervene in the well-functioning commercial market. In a 2000 working paper for the Office of Plans and Policy (now Office of Strategic Planning & Policy Analysis), Michael Kende observed that “in the absence of a dominant backbone, market forces encourage interconnection between backbones and thereby protect consumers from any anti-competitive behavior on the part of backbone providers.”<sup>188</sup> Accordingly, he recognized, “any calls to intervene in the Internet market would require a correspondingly high burden of proof.”<sup>189</sup> And since then, the Commission found on

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<sup>186</sup> See, e.g., Constantine Dovrolis, *The Evolution and Economics of Internet Interconnections*, at 4, attached as Exhibit 5 to Comcast Corp.’s and Time Warner Cable’s Opposition to Petitions to Deny and Response to Comments, MB Docket No. 14-57 (Sep. 23, 2014) (“Dovrolis Decl.”) (explaining that the Internet backbone “has become very competitive” and that “there is abundant connectivity at all layers and among all types of providers”); Dan Rayburn, *How Transit Works, What It Costs & Why It’s So Important*, Streaming Media, Feb. 24, 2014 (“From a business standpoint, there are many backbone and transit providers to choose from in a highly competitive market . . . . Transit pricing has and continues to get cheaper every quarter, and it is expected it will decline in price once again this year.”), available at <http://blog.streamingmedia.com/2014/02/transit-works-costs-important.html>.

<sup>187</sup> See *Title II Order* ¶¶ 196-98, 203.

<sup>188</sup> Michael Kende, FCC Office of Plans and Policy, *The Digital Handshake: Connecting Internet Backbones*, at 1 (Sep. 2000), available at [http://transition.fcc.gov/Bureaus/OPP/working\\_papers/oppwp32.pdf](http://transition.fcc.gov/Bureaus/OPP/working_papers/oppwp32.pdf).

<sup>189</sup> *Id.* at 31.

multiple occasions that “the Internet backbone is sufficiently competitive” to dispel concerns about competitive harm.<sup>190</sup>

The *Title II Order* sought to justify the Commission’s shift in policy based on the evolving nature of Internet traffic exchange,<sup>191</sup> and anecdotal evidence of disputes in the marketplace that certain edge and transit providers claimed were the result of ISPs’ “creating artificial congestion” on their broadband networks.<sup>192</sup> But far from providing a rationale for an unprecedented (and asymmetric) intrusion into the highly competitive Internet backbone marketplace, the constantly evolving and technically complicated nature of these agreements is all the more reason for the Commission to allow market forces to determine their terms. Regulation of such relationships is immensely costly and complex.<sup>193</sup> And without perfect knowledge, continued regulation would only create opportunities for more gamesmanship, diminish incentives to efficiently share and minimize costs, and (consequently) increase the price of Internet access to end users, rather than improving on the arrangements a free market produces.<sup>194</sup>

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<sup>190</sup> See *SBC Communications Inc. and AT&T Corp. Applications for Approval of Transfer of Control*, Memorandum Opinion and Order, 20 FCC Rcd 18290 ¶ 132 (2005); see also, e.g., *Global Crossing Ltd. and Level 3 Communications, Inc. Applications for Consent to Transfer Control*, Memorandum Opinion and Order and Declaratory Ruling, 26 FCC Rcd 14056 ¶ 27 (2011) (rejecting arguments that a combined company would have incentive to engage in anticompetitive transit and peering practices).

<sup>191</sup> See *Title II Order* ¶¶ 196-98.

<sup>192</sup> See *id.* ¶¶ 199-201 (noting that “[t]he record reflects competing narratives”).

<sup>193</sup> See, e.g., Stanley M. Besen & Mark A. Israel, *The Evolution of Internet Interconnection from Hierarchy to “Mesh”: Implications for Government Regulation*, at 23-26 (Jul. 2012), available at <http://ssrn.com/abstract=2104323>.

<sup>194</sup> See *id.* at 16-29.

As for the disputes on which the Commission relied, the fact of that matter is that, in general, parties have had no issue negotiating interconnection agreements on reasonable and mutually acceptable terms. That was true before the *Title II Order*.<sup>195</sup> And it remains true today.<sup>196</sup> The players in this market are sophisticated commercial entities. And the complex, ever-evolving arrangements provide edge and transit providers with multiple routes or means to route Internet traffic onto an ISP's last-mile network.<sup>197</sup> As a result, both sides are fully capable of ensuring that their needs are met and negotiating fair and reasonable terms and conditions. In fact, for most of NCTA's members, today's large edge providers and transit providers have greater negotiating leverage and invariably obtain peering arrangements on extremely favorable

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<sup>195</sup> See, e.g., David Lieberman, *Netflix and AT&T Reach Interconnection Agreement*, July 29, 2014, <http://deadline.com/2014/07/att-netflix-interconnection-peering-streaming-deal-811925/>; Drew Fitzgerald, *Netflix Reaches Interconnection Deal with Verizon*, Apr. 28, 2014, <https://www.wsj.com/articles/netflix-reaches-interconnection-deal-with-verizon-1398726571>; Press Release, Comcast Corporation, Comcast and Netflix Team Up to Provide Customers with Excellent User Experience (Feb. 23, 2014), <http://corporate.comcast.com/news-information/news-feed/comcast-and-netflix>; Press Release, Cogent Communications, Sprint and Cogent Reach Agreement on Exchange of Internet Traffic (Dec. 22, 2008), <http://www.cogentco.com/en/news/press-releases/149-sprint-and-cogent-reach-agreement-on-exchange-of-internet-traffic>; Dyn Blog, Cogent Becomes Transit-Free, June 26, 2008, <https://dyn.com/blog/cogent-becomes-transitfree/> (noting that Cogent had established a direct connection to the America Online Transit Data Network); Press Release, Cogent Communications, Level 3 and Cogent Reach Agreement on Equitable Peering Terms (Oct. 28, 2005), <http://www.cogentco.com/en/news/press-releases/225-level-3-and-cogent-reach-agreement-on-equitable-peering-terms>.

<sup>196</sup> See, e.g., Press Release, Level 3 Communications, Level 3 and Google Reach Settlement-Free Interconnection Agreement (Jan. 15, 2016), <http://investors.level3.com/investor-relations/press-releases/press-release-details/2016/Level-3-and-Google-Reach-Settlement-Free-Interconnection-Agreement/default.aspx>; Press Release, AT&T, Cogent and AT&T Enter Into Interconnection Agreement (June 10, 2015), [http://about.att.com/newsroom/cogent\\_and\\_att\\_enter\\_into\\_interconnection\\_agreement.html](http://about.att.com/newsroom/cogent_and_att_enter_into_interconnection_agreement.html); Press Release, Comcast Corporation, Comcast, Level 3 Announce Long-Term Interconnection Agreement (May 21, 2015), <http://corporate.comcast.com/news-information/news-feed/comcast-level-3>.

<sup>197</sup> See *Title II Order* ¶¶ 196-198.

terms. In the absence of any evidence of market failure (as opposed to a handful of edge and transit providers who did not get all they wanted at the bargaining table), regulatory intervention “is not only unnecessary, but would also be unfair to end-users and harmful to the evolution of the Internet ecosystem.”<sup>198</sup>

3. *The Commission Should Exclude Specialized Services from the Net Neutrality Regime*

Finally, the back door to regulating specialized services (or “non-BIAS data services”) created by the *Title II Order*—through its threat of enforcement action if the Commission “determines that these types of service offerings are undermining investment, innovation, competition, and end-user benefits”<sup>199</sup>—should be closed.<sup>200</sup> In keeping with much of the *Title II Order*, that assertion of potential regulatory intervention was unwarranted and created needless, innovation-chilling uncertainty. While it did not flow directly from the decision to classify BIAS as a Title II service, it represented a similar form of unjustified and harmful overreach beyond core open Internet principles.<sup>201</sup> For many broadband providers, the facilities they use to deliver BIAS also are used to provide a variety of other services, including multichannel video programming distribution (“MVPD”) services, voice-over-Internet-Protocol (“VoIP”) services, and potentially other new services that consumers value. The Commission has neither the authority nor the expertise to micromanage the allocation of bandwidth within the broader network for various services, whether BIAS, non-BIAS, or other services. Indeed, such

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<sup>198</sup> Dovrolis Decl. at 4.

<sup>199</sup> *Title II Order* ¶ 210.

<sup>200</sup> See NPRM ¶ 94 (requesting comments on this guidance).

<sup>201</sup> See *Title II Order* ¶ 211 (conceding that “since . . . permitted in the 2010 Open Internet Order, we have seen little resulting evidence of broadband providers using these services to undermine the 2010 [open Internet] rules”).

regulatory micromanagement of BIAS providers' networks may constitute an unconstitutional taking under the Fifth Amendment, particularly to the extent that it "interferes with [BIAS providers'] distinct investment-backed expectations."<sup>202</sup>

Additionally, regulation of any types of specialized services, non-BIAS data services, IP cable services, or other services may well present significant First Amendment concerns. As noted above, in *USTelecom*, the D.C. Circuit determined that the open Internet rules for retail BIAS did not trigger First Amendment scrutiny because BIAS providers generally offer access to "all or substantially all Internet endpoints" and thus are not "speakers" engaging in editorial discretion.<sup>203</sup> By contrast, specialized services are distinct from BIAS precisely because they do *not* offer access to all Internet endpoints, and they are often openly tailored to deliver content from a few select sources, and thus directly involve the exercise of editorial discretion.<sup>204</sup> Even under the view of the *USTelecom* majority, that exercise of editorial discretion would bring those services "within the fold of the First Amendment's protections."<sup>205</sup> Particularly in light of these potential First Amendment implications, the Commission should refrain from regulating specialized services.

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<sup>202</sup> *Penn Cent. Trans. Co. v. City of New York*, 438 U.S. 104, 124 (1978).

<sup>203</sup> *See USTelecom*, 825 F.3d at 743; *see also USTelecom*, 855 F.3d at 391 (Srinivasan, J., concurring in the denial of rehearing *en banc*) ("Whereas a cable operator draws the protections of the First Amendment when it exercises editorial discretion about which programming to carry, an ISP falling within the net neutrality rule represents that it gives subscribers indiscriminate access to internet content without any editorial intervention.").

<sup>204</sup> *See, e.g., Title II Order* ¶ 208 (identifying "services that provide schools with curriculum-approved applications and content" as one example of such services).

<sup>205</sup> *USTelecom*, 855 F.3d at 391 (Srinivasan, J., concurring in the denial of rehearing *en banc*); *see also id.* at 428 (Kavanaugh, J., dissenting from the denial of rehearing *en banc*) ("Internet service providers enjoy First Amendment protection of their rights to speak and exercise editorial discretion . . . ." (citing *Turner Broadcasting System, Inc. v. FCC*, 512 U.S. 622, 636 (1994))).

## II. THE INTERNET WILL REMAIN OPEN AND FREE UNDER A TITLE I CLASSIFICATION

Critically, reclassifying BIAS as a Title I information service will *not* undermine the goal of keeping the Internet free and open to all. Rather, market forces and BIAS providers' deeply engrained commitment to Internet freedom will ensure continued adherence to consensus principles of openness. And as discussed further below, there are multiple options for federal oversight to the extent the Commission deems it necessary.

As a threshold matter, there is no sound economic rationale or other policy basis to conclude that prescriptive mandates are necessary, given the dearth of evidence of any harmful conduct by ISPs over the years, and the strong commitments from NCTA's members and virtually all other ISPs not to engage in the kinds of harmful activities that the Commission has sought to prohibit in the past. Moreover, contrary to the view espoused in the *2010 Open Internet Order* and the *Title II Order*, ISPs do not have the economic incentive or ability to engage in such activities.

Far from having an incentive to harm their own customers, it would be irrational for ISPs to undermine the very openness that has long buoyed their businesses for some short-term gain, or to block or degrade access to Internet content that other providers make readily available. As the Commission has recognized, the very investment and innovation that the Commission seeks to promote is driven, in the first instance, by "'increased end-user demand for broadband.'"<sup>206</sup> ISPs have cited Netflix and other edge services as major drivers of consumer demand for high-speed broadband service.<sup>207</sup> Indeed, several ISPs that also offer MVPD services have recently

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<sup>206</sup> See *Title II Order* ¶ 77 (quoting *2010 Open Internet Order* ¶ 14).

<sup>207</sup> See, e.g., Comments of Tom Rutledge, Chairman & CEO, Charter Communications Inc., Q1 2016 Charter Communications Inc. Earnings Call (Apr. 28, 2016),

put apps for accessing Netflix and other online streaming video options on the set-top boxes they use to provide MVPD services—thus underscoring the importance ISPs place on encouraging full use of over-the-top video as an important driver of demand for their high-speed broadband offerings.<sup>208</sup> Broadband providers have no interest in diminishing that demand through the blocking or impairing of lawful Internet content. To the contrary, broadband providers have a strong incentive to fully load those networks in order to maximize their return on the \$1.5 trillion they have collectively invested in their networks. And as data usage continues to climb, it is far more rational for ISPs to expand capacity (and thereby retain satisfied customers) than to engage in harmful conduct (and thereby drive customers away). Nor do ISPs have any incentive to harm smaller edge providers; ISPs view online startups as *customers* (often purchasing mass-market BIAS early on and moving up to business-grade broadband as they grow), not as threats to ISPs’ businesses, and have no interest in harming those companies or discriminating against them.

Nor do ISPs have the economic ability to profit from such harmful conduct. The broadband marketplace is more competitive today than ever before. Nearly all Americans—99

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<https://seekingalpha.com/article/3969131-charter-communications-chtr-thomas-m-rutledge-q1-2016-results-earnings-call-transcript> (“Our go-to-market strategy . . . [is] to encourage the sale of our existing products and the development of over-the-top products. Our broadband package and the capabilities of our broadband service are realized when customers use it. They use it when they subscribe to over-the-top services. Video is the most bandwidth-intensive product there is. . . . The way that our drive into the marketplace is accelerated is by people’s perceiving the value of our broadband, and the way they perceive that value is through over-the-top.”); Alex Ben Block, *Netflix’s Ted Sarandos on Cannibalizing TV Ratings*, Hollywood Reporter, May 23, 2012, available at <http://www.hollywoodreporter.com/news/cable-show-netflix-tv-ratings-ted-sarandos-328737>.

<sup>208</sup> See, e.g., Comcast Corp., “Comcast To Launch Netflix on X1 to Customers Nationwide,” Nov. 4, 2016, <http://corporate.comcast.com/news-information/news-feed/comcast-to-launch-netflix-on-x1-to-millions-of-customers-nationwide> (announcing the launch of Netflix on Comcast’s X1 platform to “give [Comcast] customers access to all the content they love in a way that has never been done before”).

percent—have a choice of broadband providers, and even if the market were artificially defined to exclude mobile providers, the Commission’s most recent data shows that 97 *percent* of census blocks are served by at least two fixed broadband providers offering downstream speeds of 10 Mbps or greater, and 79 percent of census blocks have three or more providers offering such speeds.<sup>209</sup> In this competitive environment, an ISP would suffer significant subscriber losses if it sought to engage in conduct that undermines Internet openness. Notably, Judges Tatel and Srinivasan recognized this reality in their opinion concurring with the denial of rehearing in *USTelecom*—noting that an ISP that “filter[s] its customers’ access to web content based on its own priorities might have serious concerns about its ability to attract subscribers.”<sup>210</sup>

As NCTA has noted in the past, today’s Internet ecosystem is dominated by a number of “hyper-giants” with growing power over key aspects of the Internet experience—including Google in search, Netflix in online video, Amazon in e-commerce, and Facebook in social media.<sup>211</sup> If an ISP were to threaten to block or degrade access to these or other sites, such a strategy would be self-defeating and immediately provoke a hostile reaction from consumers. Indeed, it is more likely that these large edge providers would seek to extract payment *from ISPs* at some point in the future.<sup>212</sup> And on the issue of prioritization in particular, it remains unclear whether any possible prioritization functionality would even be desirable for edge providers.

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<sup>209</sup> See FCC, “Internet Access Services: Status as of June 30, 2016,” at 6 (Apr. 2017), available at [https://apps.fcc.gov/edocs\\_public/attachmatch/DOC-342358A1.pdf](https://apps.fcc.gov/edocs_public/attachmatch/DOC-342358A1.pdf).

<sup>210</sup> *USTelecom*, 855 F.3d at 390 (Srinivasan, J., joined by Tatel, J., concurring in the denial of rehearing *en banc*).

<sup>211</sup> See Comments of the National Cable & Telecommunications Association, GN Docket No. 14-28 and 10-127, at 15-16 (filed Jul. 15, 2014) (“NCTA 2014 Open Internet Comments”).

<sup>212</sup> *Id.*



In light of these marketplace realities, it is not analytically useful—or even accurate—to characterize ISPs as “gatekeepers” or “terminating access monopolies” warranting particularly invasive regulation, as the attached paper by Dr. Owen notes,<sup>213</sup> and as other analysts have explained in detail.<sup>214</sup> Nevertheless, if the Commission determines that some form of federal government oversight is necessary, there are multiple paths forward, as set forth below.

**A. Open Internet Principles Can Be Effectuated Through Industry Commitments Enforced by the FTC**

One approach for ensuring the enforceability of open Internet principles is to rely on industry commitments to adhere to such principles—commitments that would then be subject to enforcement by the FTC. Under this approach, NCTA’s members, along with other ISPs, could agree to abide by a code of conduct embodying these principles, and/or could include these commitments as express provisions in their publicly stated policies. A code of conduct would ensure the open Internet principles are followed, while at the same time enabling ISPs to offer their customers the opportunity to choose the type of BIAS experience that they would like to receive. ISPs already have made such commitments publicly in a variety of settings.<sup>215</sup> These commitments then would become enforceable by the FTC under Section 5 of the FTC Act, which prohibits “[u]nfair methods of competition, and unfair or deceptive acts or practices.”<sup>216</sup>

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<sup>213</sup> See Owen Paper at 7.

<sup>214</sup> See, e.g., Jonathan E. Nuechterlein and Christopher S. Yoo, *A Market-Oriented Analysis of the “Terminating Access Monopoly” Concept*, Colo. Tech. L. J. 14:21 (2015) (refuting claims that ISPs have a “terminating access monopoly”).

<sup>215</sup> See, e.g., NCTA, *Reaffirming Our Commitment to an Open Internet*, Platform (May 17, 2017), <https://www.ncta.com/platform/public-policy/reaffirming-our-commitment-to-an-open-internet/>.

<sup>216</sup> 15 U.S.C. § 45(a).

The FTC has asserted authority to enforce industry commitments under Section 5.<sup>217</sup> And the FTC’s authority is not limited to consumer disputes. Rather, the FTC also can enforce commitments in disputes between businesses in the Internet arena.<sup>218</sup> Moreover, once the Commission reclassifies BIAS as an information service, the FTC’s jurisdiction over BIAS providers will be clear and indisputable, as BIAS would no longer qualify as a “common carrier” service beyond the FTC’s purview.<sup>219</sup> While some have pointed to the decision by a panel of the Ninth Circuit in *FTC v. AT&T Mobility LLC*<sup>220</sup> as raising questions about the FTC’s jurisdiction over broadband providers that operate as common carriers in other respects, the court’s recent order granting *en banc* rehearing of that panel decision renders it a legal nullity,<sup>221</sup> as the NPRM points out.<sup>222</sup> Thus, the fact that some ISPs may operate as common carriers *in other respects* does not preclude the FTC from asserting jurisdiction to enforce ISPs’ commitments to abide by open Internet principles included in ISPs’ publicly stated policies.

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<sup>217</sup> See, e.g., Letter of Jessica L. Rich, FTC, to Marlene H. Dortch, FCC, MB Docket No. 16-42, CS Docket No. 97-80, at 3-4 (filed Apr. 22, 2016).

<sup>218</sup> See *FTC v. IFC Credit Corp.*, 543 F. Supp. 2d 925, 934 (N.D. Ill. 2008); see also FTC, *Statement of Basis and Purpose, Unfair or Deceptive Advertising and Labeling of Cigarettes in Relation to the Health Hazards of Smoking*, 29 Fed. Reg. 8324, 8355 (1964); FTC, *Policy Statement on Unfairness*, at n.8, available at <https://www.ftc.gov/public-statements/1980/12/ftc-policy-statement-unfairness>.

<sup>219</sup> Cf. 15 U.S.C. § 45(a)(2) (carving out “common carriers” from FTC’s jurisdiction).

<sup>220</sup> 835 F.3d 993 (9th Cir. 2016).

<sup>221</sup> See *FTC v. AT&T Mobility LLC*, No. 15-16585, 2017 U.S. App. LEXIS 8236 (9th Cir. May 9, 2017) (granting rehearing and clarifying that “[t]he three-judge panel disposition in this case shall not be cited as precedent”).

<sup>222</sup> See NPRM ¶ 66 n.157 (noting that, because the Ninth Circuit “set aside the earlier and erroneous panel opinion” in granting hearing, “the *Title II Order*’s reclassification of broadband Internet access service serves as the only limit on the authority of the FTC to oversee the conduct of Internet service providers”); see also Statement of FCC Chairman Ajit Pai on Ninth Circuit Decision To Rehear *FTC v. AT&T* Case (May 9, 2017), available at [http://transition.fcc.gov/Daily\\_Releases/Daily\\_Business/2017/db0509/DOC-344803A1.pdf](http://transition.fcc.gov/Daily_Releases/Daily_Business/2017/db0509/DOC-344803A1.pdf).

One important advantage of an FTC-led approach is that *all* participants in the Internet ecosystem could be subject to oversight by a single agency. Indeed, whereas the Commission has suggested that it lacks authority to engage in open Internet oversight over entities other than BIAS providers,<sup>223</sup> the FTC would be able to prevent unfair methods of competition and unfair or deceptive acts or practices by others in the Internet ecosystem as well, thus helping to ensure a level, technology-neutral playing field.

Another benefit of an FTC-led approach is that it would complement efforts to establish a unified privacy regime enforced by that agency. The classification of BIAS as a Title II service—and the resulting application of Section 222 to BIAS providers—led the Commission to adopt heightened privacy rules applicable only to ISPs and not to others in the Internet ecosystem (which remained subject to the FTC’s jurisdiction).<sup>224</sup> That approach created separate privacy regimes for similar activity, causing competitive harm to ISPs’ businesses and significant confusion for consumers. NCTA thus agrees with the proposal to “respect the jurisdictional lines drawn by Congress whereby the FTC oversees Internet service providers’ privacy practices,” given the FTC’s “decades of experience and expertise in this area.”<sup>225</sup> With jurisdiction shifted back to the FTC, all participants in the Internet ecosystem would be subject to the same privacy framework as well.

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<sup>223</sup> See, e.g., *2010 Open Internet Order* ¶ 50 (asserting that the 2010 rules applied “only to the provision of broadband Internet access service and not to edge provider activities” because, among other things, “the Communications Act particularly directs us to prevent harms related to the utilization of networks and spectrum to provide communication by wire and radio”).

<sup>224</sup> See *Protecting the Privacy of Customers of Broadband and Other Telecommunications Services*, Report and Order, 31 FCC Rcd 13911 ¶ 28 (2016).

<sup>225</sup> NPRM ¶ 67.

**B. The Commission Also Will Retain the Option To Take Targeted Action as Necessary**

While there is no demonstrated need to impose prescriptive mandates to safeguard Internet openness, the Commission will retain authority to take appropriate action in the unlikely event that threats to competition or consumers emerge. The D.C. Circuit has held that “[S]ection 706 of the 1996 Telecommunications Act . . . furnishes the Commission with the requisite affirmative authority” to protect Internet openness.<sup>226</sup> Section 706(a) directs the Commission to “encourage the deployment on a reasonable and timely basis of advanced telecommunications capability to all Americans.”<sup>227</sup> Likewise, Section 706(b) authorizes the Commission to “take immediate action to accelerate deployment of [advanced telecommunications] capability by removing barriers to infrastructure investment and by promoting competition in the telecommunications market.”<sup>228</sup>

The Commission also could consider other statutory bases of authority for enforcement in this area. Notably, the *2010 Open Internet Order* cited various provisions in Titles I, II, III, and VI as possible additional grants of authority on top of its Section 706 authority.<sup>229</sup> And Free Press, which today is one of the most vocal proponents of the notion that protecting Internet openness *requires* classifying BIAS as a Title II telecommunications service, is on record as

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<sup>226</sup> *Verizon*, 740 F.3d at 635.

<sup>227</sup> 47 U.S.C. § 1302(a).

<sup>228</sup> *Id.* § 1302(b).

<sup>229</sup> *See 2010 Open Internet Order* ¶¶ 124-37.

identifying Section 706 along with a half-dozen other provisions of the Act as grants of authority that do *not require* a Title II classification.<sup>230</sup>

As the NPRM notes, Section 230(b) of the Act represents one possible alternative source of authority for protecting an open Internet.<sup>231</sup> Among other provisions, subsection (b)(3) “encourage[s] the development of technologies which maximize user control over what information is received by individuals, families, and schools who use the Internet and other interactive computer services.”<sup>232</sup> Because an open Internet is based on “maximiz[ing] *user control* over what information is received,” protecting an open Internet falls comfortably within this language. The Commission also might be able to rely on authority in Section 256, which empowers the Commission to “promote nondiscriminatory accessibility . . . to public telecommunications networks” and to “promote access to . . . information services by subscribers of rural telephone companies.”<sup>233</sup> And, of course, the Commission may use its authority under Section 4(i) to take actions that are “reasonably ancillary to the Commission’s effective performance of its statutorily mandated responsibilities”<sup>234</sup>—including those responsibilities noted in connection with the affirmative grants of authority discussed above.<sup>235</sup> In the event the Commission chooses to rely on ancillary authority, it should ensure that such reliance is

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<sup>230</sup> See Letter of Marvin Ammori, Free Press, to Marlene Dortch, FCC, CC Docket Nos. 95-20, 98-10, 01-337, 02-33, GN Docket No. 00-185, CS Docket No. 02-52, WC Docket No. 07-52 (filed Jun. 12, 2008).

<sup>231</sup> NPRM ¶ 102.

<sup>232</sup> 47 U.S.C. § 230(b)(3).

<sup>233</sup> *Id.* § 256(a)(1), (b)(2)(C).

<sup>234</sup> *Verizon*, 740 F.3d at 632.

<sup>235</sup> See 47 U.S.C. § 154(i) (granting Commission the authority to “perform any and all acts, make such rules and regulations, and issue such orders . . . as may be necessary in the execution of its functions”).

appropriate by explaining how its action directly advances its statutory responsibilities set forth elsewhere in the Act.<sup>236</sup>

**C. The Commission Should Treat Fixed and Mobile BIAS Providers Comparably**

Any federal framework for ensuring Internet openness should apply equally to fixed and mobile BIAS providers. As NCTA has explained in the past, “[t]he fundamental goals of Internet openness do not and should not turn on the type of technology platform that consumers use to access online content and services.”<sup>237</sup> Nor is there any defensible justification for treating fixed and mobile BIAS providers differently. Because the technological capabilities of fixed and mobile broadband are increasingly similar, and consumers expect fixed and mobile BIAS offerings to provide the same access to online content, fixed and mobile BIAS providers should be subject to the same federal framework.

Mobile broadband technology and market penetration have advanced significantly since the Commission first considered whether to subject mobile broadband providers to the same obligations as fixed broadband providers. The Commission’s decision in 2010 to distinguish between fixed and mobile broadband was based on its belief that mobile broadband “speeds, capacity, and penetration” were “much lower” than fixed broadband.<sup>238</sup> Two years ago, however, the Commission acknowledged that “mobile broadband networks are faster, more broadly deployed, more widely used, and more technologically advanced than they were in

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<sup>236</sup> See *Comcast Corp. v. FCC*, 600 F.3d 642, 661 (D.C. Cir. 2010) (requiring the Commission to “tie its assertion of ancillary authority” to a “statutorily mandated responsibility”).

<sup>237</sup> See NCTA 2014 Open Internet Comments at 69.

<sup>238</sup> See *2010 Open Internet Order* ¶ 95.

2010.”<sup>239</sup> And it is all the more apparent in today’s marketplace that any distinctions between fixed and mobile broadband based on differences in technological capability, deployment, or adoption have dissipated since 2010.

For instance, 4G LTE wireless technology—which launched the era of high-speed, high-performance mobile broadband service capable of allowing users to stream high-definition video, download apps, and perform virtually any other high-bandwidth activity using smartphones and other LTE-enabled devices virtually anywhere—largely remained in the testing phase at the time of the *2010 Open Internet Order*, and service was not broadly available to the public.<sup>240</sup> Today, 4G LTE service is available to 99.7% of Americans, and astoundingly, “far more Americans currently have access to 4G LTE service” than had access to *any* “mobile data services in 2009,” just prior to the issuance of the *2010 Open Internet Order*.<sup>241</sup> Additionally, “the total number of active devices continues to outpace the number of Americans, with adoption now equal to more than 120 percent of the U.S. population.”<sup>242</sup> And providers are now preparing to begin rolling out 5G coverage—the next generation of mobile broadband.<sup>243</sup> These 5G networks are expected to be “100 times faster than 4G networks, connect 100 times the number of devices, and respond five times as quickly.”<sup>244</sup> In fact, wireless providers have touted “ultra-fast 5G wireless networks” as enabling them to “compete head-to-head with the broadband offerings of . . . cable

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<sup>239</sup> *Title II Order* ¶ 88.

<sup>240</sup> See NCTA 2014 Open Internet Comments at 73.

<sup>241</sup> CTIA Comments, WT Docket No. 17-69, at 36 (filed May 8, 2017) (“CTIA Competition Report Comments”).

<sup>242</sup> See CTIA Reply Comments, WT Docket No. 17-69, at 6 (filed June 7, 2017) (“CTIA Competition Report Reply Comments”).

<sup>243</sup> See *id.* at 3.

<sup>244</sup> CTIA Competition Report Comments at 47.

companies.”<sup>245</sup> In short, mobile broadband services are increasingly competitive *substitutes*—not merely complements—to fixed broadband services, and this continued evolution of the marketplace belies any notion that the two services should be subject to different frameworks.

Indeed, today more than ever before, consumer expectations weigh strongly in favor of treating fixed and mobile broadband alike. The ubiquity of Internet-connected mobile devices and the ever-improving quality and reliability of mobile broadband services make treating fixed and mobile broadband alike particularly vital. As of July 2015, nearly 20 percent of consumers used *only* mobile broadband services to access the Internet.<sup>246</sup> Similarly, nearly 77 percent of consumers own a smartphone.<sup>247</sup> As smartphone access and use has become ingrained in Americans’ everyday lives, mobile data traffic throughout the United States has increased exponentially, doubling during 2015 to a level 25 times higher than mobile data traffic in 2010.<sup>248</sup> This usage will only continue to grow, as mobile data usage is projected to increase another five-fold between 2016 and 2021.<sup>249</sup> In fact, “mobile data traffic is already growing 1.9

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<sup>245</sup> David McAtee, AT&T Senior Executive Vice President and General Counsel, “When Disruption Spurs Innovation and Investment,” Oct. 24, 2016, [http://about.att.com/newsroom/when\\_disruption\\_spurs\\_innovation\\_and\\_investment.html](http://about.att.com/newsroom/when_disruption_spurs_innovation_and_investment.html).

<sup>246</sup> See National Telecommunications & Information Administration, “Evolving Technologies Change the Nature of Internet Use,” <https://www.ntia.doc.gov/blog/2016/evolving-technologies-change-nature-internet-use>.

<sup>247</sup> See Pew Research Center, “Record Shares of Americans Now Own Smartphones, Have Home Broadband,” <http://www.pewresearch.org/fact-tank/2017/01/12/evolution-of-technology/>.

<sup>248</sup> See Verizon Comments, WT Docket No. 17-69, at 6 (filed May 8, 2017); *see also id.* at 11 (“Total U.S. mobile data traffic reached 1.3 exabytes per month in 2016, up an astounding 44 percent from 2015.”); *id.* at 15-16 (“In 2016 alone, the typical smartphone user in the United States generated 4,432 megabytes of data traffic per month, up from 3,333 megabytes per month in 2015.”)

<sup>249</sup> *Id.* at 6.



times as fast as U.S. fixed internet traffic.”<sup>250</sup> Mobile broadband has become so important to users’ daily lives that more consumers consider reliable wireless service an important factor in choosing a home than the quality of local education or even the cost of the housing itself.<sup>251</sup>

And consumers’ use of mobile broadband increasingly mirrors their use of fixed broadband. While video streaming was once a hallmark of fixed broadband usage, mobile video traffic is surging, with expected growth of 5.4 times from 2016 to 2021.<sup>252</sup> This increase in usage dovetails with data showing that “nearly 60 percent of all time consumers spend with digital media” is through mobile applications.<sup>253</sup>

At bottom, fixed and mobile broadband providers provide the same services to the same consumers in the same marketplace. It would make little sense in this competitive arena, where consumers repeatedly switch back and forth between fixed and mobile platforms multiple times a day, to impose different requirements on the two technologies. Furthermore, parity between fixed and mobile providers is necessary to comport with the Commission’s longstanding commitment to ensuring technological neutrality and thereby avoiding the creation of unwarranted marketplace distortions.<sup>254</sup> Accordingly, the Commission also should ensure that the same oversight of open Internet principles applies equally to mobile and fixed BIAS providers. Although technological differences between mobile and fixed networks may play a

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<sup>250</sup> CTIA Competition Report Comments at 9.

<sup>251</sup> *Id.* at 11.

<sup>252</sup> *Id.* at 21.

<sup>253</sup> *Id.* at 11.

<sup>254</sup> *See, e.g., Telecommunications Services Inside Wiring, Customer Premises Equipment; Implementation of the Cable Television Consumer Protection and Competition Act of 1992; Cable Home Wiring*, First Order on Reconsideration and Second Report & Order, 18 FCC Rcd 1342 ¶ 80 (2003) (extending the cable inside wiring rules to other video providers in order to “promote regulatory parity and enhance competition”).

role in the *application* of any framework the Commission adopts, those differences should have no impact on whether mobile broadband providers are fully subject to that framework in the first instance.

By the same token, NCTA supports the Commission’s proposal to “return [mobile BIAS] to its original classification as a private mobile service.”<sup>255</sup> The same technology-neutral considerations militate against leaving common carrier regulation in place for mobile services while eliminating common carrier regulation for fixed services. Fixed and mobile broadband providers compete for the same customers, and imposing common carrier obligations solely on mobile broadband would be inconsistent with consumer expectations. Accordingly, mobile broadband should be classified as a private mobile service, subject to the same federal framework as fixed broadband providers.

**D. However the Commission Proceeds, It Should Preempt State and Local Laws That Attempt To Regulate BIAS**

In reestablishing a uniform federal framework for BIAS that is designed to promote Internet investment and innovation, the Commission should reaffirm its ability and intention to preempt state and local laws or other regulations, in whatever form they are imposed, that would undermine or stand as an obstacle to the accomplishment of this federal policy.<sup>256</sup> Commissioner O’Rielly recently expressed concerns about the prospect that state and local actions could have the purpose or effect of constraining how ISPs provide BIAS and what ISPs do with respect to their BIAS networks.<sup>257</sup> And NCTA has consistently cautioned about the

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<sup>255</sup> NPRM ¶ 55

<sup>256</sup> *See id.* ¶ 69.

<sup>257</sup> *See* Statement of Commissioner O’Rielly, WC Docket No. 17-108, at 1 (May 18, 2017) (“If the Commission decides that [BIAS] is an interstate information service, then states

effects that failing to preempt state and local regulation would have on ISPs, which would be forced to comply with a patchwork of overlapping and potentially conflicting obligations absent federal preemption.<sup>258</sup>

These concerns are borne out by recent events. For example, as a recent petition filed by NCTA (along with USTelecom) explains, some states are seeking to establish their own broadband speed measurement regimes that directly conflict with *existing* federal transparency obligations established the Commission.<sup>259</sup> Moreover, although the Commission indicated in the *Title II Order* that it would be improper for franchising authorities to require ISPs to “obtain an additional or modified franchise” or “pay any new franchising fees in connection with the provision of [broadband] services,”<sup>260</sup> the Oregon Supreme Court recently upheld the City of Eugene’s requirement to obtain a telecom “license” to provide broadband and its 7% fee on broadband revenues as applied to Comcast (even though Comcast was already authorized to be in the rights of way and pays cable franchise fees).<sup>261</sup> Making matters worse, other jurisdictions now appear to be following the City of Eugene’s lead and attempting to impose fees related to broadband services.<sup>262</sup>

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and localities should be foreclosed from regulating it, as some states are currently attempting to do with new broadband privacy laws, fees, approval processes, and other requirements.”).

<sup>258</sup> See NCTA 2014 Open Internet Comments at 86-87; Petition for Declaratory Ruling, WC Docket No. 17-131 (filed May 15, 2017).

<sup>259</sup> See Petition for Declaratory Ruling, WC Docket No. 17-131 (filed May 15, 2017); see also Complaint, *Hart v. Charter Commc’ns*, No. 8:17-CV-00556 (C.D. Cal. Mar. 28, 2017), ECF No. 1-1 (alleging causes of action for violations of California state law).

<sup>260</sup> *Title II Order* ¶ 433 n.1285.

<sup>261</sup> See *City of Eugene v. Comcast of Oregon II*, 375 P.3d 446 (Or. 2016).

<sup>262</sup> See, e.g., Final Memorandum of Decision and Order Thereon, *Time Warner Cable, Inc. v. Cty. of Los Angeles*, No. BC528475 (Cal. Super. Ct. Nov. 2, 2015) (addressing attempt by

The Commission has ample grounds to clarify that these and other state and local efforts to regulate BIAS are preempted. For one thing, the Commission has consistently found that BIAS is fundamentally an *interstate* service subject to federal oversight, regardless of its classification as a “telecommunications service” or an “information service.”<sup>263</sup> Courts similarly have confirmed the primacy of federal law over and over again with respect to jurisdictionally interstate communications services.<sup>264</sup> Accordingly, “the Commission may preempt state regulation” of such services where doing so “is necessary to further a valid federal regulatory objective.”<sup>265</sup>

Moreover, courts and the Commission have long recognized that a service’s classification as an “information service” independently warrants federal preemption of state efforts to regulate the service. Decades ago, the Commission preempted state regulation of “enhanced services”—the precursor to today’s information services.<sup>266</sup> And as the terminology changed, the

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Los Angeles County Assessor’s effort to impose fees on broadband service, under the theory that a provider’s ability to provide BIAS and voice services over the public right-of-way is a possessory interest in real property subject to taxation).

<sup>263</sup> See, e.g., *Cable Modem Declaratory Ruling* ¶ 59 (“Having concluded that cable modem service is an information service, we clarify that it is an *interstate* information service.”); see also *Title II Order* ¶ 431 (concluding that “broadband Internet access service is jurisdictionally interstate for regulatory purposes”).

<sup>264</sup> See, e.g., *Ivy Broad. Co. v. American Tel. & Tel. Co.*, 391 F.2d 486, 491 (2d Cir. 1968) (holding that interstate communications are “governed solely by federal law” and states are generally “precluded from acting in this area”); *Bell Atl. Tel. Cos. v. FCC*, 206 F.3d 1, 5 (D.C. Cir. 2000) (noting that Internet access is properly viewed as interstate and subject to federal oversight because “a substantial portion of Internet traffic involves accessing interstate or foreign websites” (internal quotation marks and citations omitted)).

<sup>265</sup> *2010 Open Internet Order* ¶ 121 n.374 (citing *Minn. Pub. Utils Comm’n v. FCC*, 483 F.3d 570, 578 (8th Cir. 2007)).

<sup>266</sup> See, e.g., *Amendment of Section 64.702 of the Commission’s Rules and Regulations (Second Computer Inquiry)*, Memorandum Opinion & Order on Further Reconsideration, 88 F.C.C.2d 512 ¶ 83 n.34 (1981) (“States, therefore, may not impose common carrier tariff regulation on a carrier’s provision of enhanced services.”); *Amendment of Sections*

Commission’s approach did not—reaffirming that “federal authority has already been recognized as preeminent in the area of information services, and particularly in the area of the Internet and other interactive computer services, which Congress has explicitly stated should remain free of regulation.”<sup>267</sup> Courts likewise have recognized that an “information service” classification, on its own, triggers federal preemption, particularly given that “any state regulation of an information service conflicts with the federal policy of nonregulation.”<sup>268</sup>

Thus, the Commission should reaffirm that state and local efforts to regulate BIAS are preempted in light of (1) the service’s inherently interstate nature, and (2) its proper classification as an information service.<sup>269</sup> The Commission should make particularly clear that the federal policy determinations made in this proceeding preempt any state and local regulation that might conflict with those determinations, and as a result, states and other local jurisdictions cannot impose additional requirements on BIAS providers.<sup>270</sup> Such preemption of state and local regulation should include any efforts to impose franchise fees, licensing obligations, network build requirements, or related requirements on BIAS, as such measures would directly

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*64.702 of the Commission’s Rules and Regulations (Third Computer Inquiry) et al.*, Report & Order, 104 F.C.C.2d 958 ¶ 343 (1986) (noting that the Commission “preemptively deregulated enhanced services, foreclosing the possibility of state regulation of such offerings”).

<sup>267</sup> *Petition for Declaratory Ruling that pulver.com’s Free World Dialup Is Neither Telecommunications Nor a Telecommunications Service*, Memorandum Opinion & Order, 19 FCC Rcd. 3307 ¶ 16 (2004);

<sup>268</sup> *Minn. Pub. Utils. Comm’n*, 483 F.3d at 580 (emphasis added, internal citations and quotations omitted).

<sup>269</sup> *See* NPRM ¶¶ 25-52; *see also supra* at 13-27 (discussing proper classification of BIAS as an “information service”).

<sup>270</sup> *See California v. FCC*, 39 F.3d 919, 933 (9th Cir. 1994) (upholding Commission’s preemption of “conflicting state rules” that would “negate” the Commission’s goal of promoting a mass market for enhanced services for small customers, and finding that the Commission “demonstrated that compliance with conflicting state and federal . . . rules would in effect be impossible”).

undermine the important national interest in encouraging increased broadband investment and deployment. The Commission has long recognized that inconsistent state regulation undermines “the efficient utilization and full exploitation” of Internet services.<sup>271</sup> And, critically, the Commission possesses the authority to preempt state and local regulation regardless of the federal framework it adopts—even if it refrains from imposing any *ex ante* open Internet rules at this time.<sup>272</sup> As the Supreme Court has squarely held, “a federal decision to forgo regulation in a given area may imply an authoritative federal determination that the area is best left *unregulated*, and in that event would have as much pre-emptive force as a decision *to* regulate.”<sup>273</sup>

Finally, the Commission should clarify that federal preemption extends to any state or local efforts to regulate Internet traffic exchange—which similarly entails the transmission of

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<sup>271</sup> See, e.g., *Amendment of Section 64.702 of the Commission’s Rule and Regulations (Second Computer Inquiry)*, Memorandum Opinion and Order on Further Reconsideration, 88 FCC 2d 512 ¶ 83 n.34 (1981) (“*Computer II Further Reconsideration Order*”) (explaining that “the efficient utilization and full exploitation of the interstate telecommunications network” for the provision of enhanced services “would be best achieved if these services are free from public utility-type regulation” by the states); cf. *Vonage Order* ¶ 32 (explaining that “the provision of tightly integrated communications capabilities greatly complicates the isolation of intrastate communication and counsels against patchwork regulation” and in favor of “preempt[ing] state regulation”).

<sup>272</sup> See, e.g., *Nw., Inc. v. Ginsberg*, 134 S. Ct. 1422 (2014) (ruling that states may not “undo federal deregulation with regulation of their own”); *Geier v. Am. Honda Motor Co.*, 529 U.S. 861, 883-84 (2000) (preempting state cause of action where more permissive federal approach reflected an affirmative determination that federal statutory objectives were best served by less regulation overall); *CCIA v. FCC*, 693 F.2d 198, 205, 214 (D.C. Cir. 1982) (upholding preemption of regulation of information services, notwithstanding that they “were not within the scope of its Title II jurisdiction,” because the Commission’s “broad authority over ‘all interstate and foreign communication by wire or radio’” authorized it to preempt state regulation that “would interfere with achievement of a federal regulatory goal”); see also *Comcast Corp. v. FCC*, 600 F.3d 642, 656 (D.C. Cir. 2010) (citing *CCIA* with approval for the proposition that the Commission may rely on ancillary authority with respect to “services otherwise beyond the Commission’s authority in order to prevent frustration of a regulatory scheme expressly authorized by statute”)

<sup>273</sup> *Ark. Elec. Coop. Corp. v. Ark. Pub. Serv. Comm’n*, 461 U.S. 375, 383 (1983).

inextricably mixed intrastate and interstate traffic and thus is just as clearly jurisdictionally interstate as retail BIAS.<sup>274</sup> Historically, these relationships have been free of any industry-specific regulation.<sup>275</sup> The Commission’s proposal to forgo the exercise of “authority over Internet traffic exchange,”<sup>276</sup> if adopted, will reflect an affirmative decision to leave these relationships unregulated. The Commission should ensure that states and localities do not undermine that policy determination by saddling the Internet traffic-exchange arrangements with unwarranted regulation.<sup>277</sup>

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<sup>274</sup> See NCTA 2014 Open Internet Comments at 78-79 (describing Internet traffic exchange); *see also supra* at 45-49.

<sup>275</sup> See NPRM ¶ 42; *see also* NCTA 2014 Open Internet Comments at 78-79.

<sup>276</sup> NPRM ¶ 42.

<sup>277</sup> *See Minn. Pub. Utils. Comm’n*, 483 F.3d at 580 (noting that “any state regulation of an information services conflicts with the federal policy of nonregulation” where the Commission adopted “a market-oriented policy” without “rules, regulations, and licensing requirements”).

## CONCLUSION

NCTA supports the fundamental openness principles that have long undergirded the Internet economy and ensured free and unimpeded access to online content for all consumers. The NPRM sensibly recognizes that the best way to safeguard these principles while promoting broadband investment and innovation is to restore the information service classification that has enjoyed bipartisan support and helped drive the Internet's dynamism for nearly two decades, and to work with stakeholders on establishing a policy framework that will maximize benefits for consumers. NCTA welcomes the opportunity to work closely with the Commission on accomplishing these important objectives.

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## **APPENDIX A**

## Internet Service Providers as Common Carriers: Economic Policy Issues

Bruce M. Owen<sup>1</sup>

### Introduction

I have been asked by NCTA to consider the economic effects and policy implications of the Commission's *Report and Order on Remand, Declaratory Ruling, and Order*, 30 FCC Rcd 5601 (2015) ("*Title II Order*"), imposing common carrier regulation on Internet service providers (ISPs).<sup>2</sup> I have previously written and testified on a range of issues related to net neutrality,<sup>3</sup> but this declaration is focused more narrowly on the consequences of common carrier regulation.

No sensible person undertakes a project for which the costs exceed the benefits. Similarly, a rational investment is one with expected returns (a) sufficient to compensate for the associated risks and (b) no less than alternative investments of similar risk. If regulation imposes costs on a business or increases risks so that ex-

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<sup>1</sup> Doyle Professor in Public Policy, *Emeritus*, Stanford University. Formerly chief economist, White House Office of Telecommunications Policy (1970-72) and chief economist, Antitrust Division, U.S. Department of Justice (1979-81).

<sup>2</sup> The Title II Order is in clear opposition to the Congressional intent expressed in the Telecommunications Act of 1996. See 47 U.S.C. §§ 230(a)(4), 230(b)(2) and 230(e)(2). Under the *Chevron* doctrine, however, regulatory agencies receive substantial deference in interpreting such statutes.

<sup>3</sup> See, for example, *Antitrust and Vertical Integration in "New Economy" Industries with Application to Broadband Access*, REVIEW OF INDUSTRIAL ORGANIZATION 38:363 (2011) <https://link.springer.com/article/10.1007/s11151-011-9291-y>; *Economists' Statement on Network Neutrality Policy* AEI-Brookings Joint Center Working Paper No. RP07-08 (March 2007). [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=976889](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=976889); *Net Neutrality: Is Antitrust Law More Effective than Regulation in Protecting Consumers and Innovation?* Testimony before the U.S. House of Representatives, Committee on the Judiciary, Subcommittee on Regulatory Reform, Commercial and Antitrust Law, June 20, 2014. <http://ssrn.com/abstract=2463823>.

pected returns become insufficient, rational companies and investors will reduce or eliminate their investment in the regulated business. In a competitive market, this often means shifting resources away from the products and services (and service enhancements) that consumers value most to products and services that they value less.

Regulation, therefore, is rational only if we believe that there is a market failure that causes providers to act in a manner that does not maximize consumer value, or if we believe that there are certain unrelated public policy goals or constraints that policymakers think should be imposed on the service offerings. In those circumstances, regulation makes sense only if the costs and marketplace distortions of the regulation itself are not so great as to outweigh whatever social goals and benefits regulation is intended to achieve.

The common carrier policy adopted by the Federal Communication Commission in its *Title II Order* fails this common-sense test of rationality. The policy appears to assume, without evidence or analysis, that competitive, unregulated ISPs cannot be counted on to ensure that their customers can access all lawful Internet content without the ISP discriminating against, foreclosing, or excluding content.

The *Title II Order* responds to asserted fears that the natural evolution of an unregulated but competitive market for Internet services will inevitably yield discrimination, foreclosure, and exclusion. Fear can make us forget to apply critical reasoning to important issues of public policy. It may lead us to *assume*, for example, that competing unregulated Internet service providers will necessarily find it profitable to exclude content they do not own or control, causing harm to users and competitors. But a moment's reflection should warn us that such an outcome is far from likely, let alone inevitable. Finally, fear may lead us to assume, despite

contrary experience, that common carrier regulation is an effective tried and true remedy for whatever ails an industry. That assumption is dead wrong.

A firm will not take steps that injure its customers unless the benefits of those steps outweigh adverse effects on demand. To the extent that blocking or foreclosing Internet content harms the ISP's customers, such conduct would reduce the ISP's profits. First, it would reduce the value of its service to customers, reducing the amount that they would be willing to pay for the service. This is true even if there are no other providers in the market. And, second, because there almost always *are* other providers in the market, it would reduce the ISP's profits because customers can switch to those alternative providers. The fact that there is virtually no evidence that ISPs have been engaging in the feared conduct – and that they have repeatedly committed not to do so – is a significant indicator that they do *not* find such conduct profitable.

Even if fears of anticompetitive conduct were warranted, it does not necessarily follow that it is appropriate in response to subject ISPs to intrusive and vague common carrier mandates. History shows that common carrier regulation has its own costs and causes injury to consumers that can and often does outweigh its intended benefits. Fear and fearful assumptions are not the same as evidence, and even if they were, that would not be sufficient to justify common carrier mandates. Such intervention requires more than inchoate fear of an unknown future, it requires a weighing of the benefits and costs of common carrier regulation. The *Title II Order* has not been subjected to, and would likely fail, such a test.

In a nutshell, the benefits to the public, if any, of classifying Internet Service Providers (ISPs) as public utilities under Title II of the Communications Act derive entirely from one version of the many possible futures of the industry. The Commis-

sion does not know the precise nature of the problem that some fear, because none of the feared abuses now exist. The “remedy” for these speculative abuses is therefore defined in the broadest possible way, potentially bringing into play the most extreme statutory powers of the Commission – the common carrier regime of Title II of the Communications Act. That regulatory framework will surely do more harm than good because it will be applied willy-nilly to *all* future paths of the industry, most of which are benign—that is, competitively efficient.

When considering a policy change it is important to remember that, as in quantum mechanics, the future of an industry consists of many paths, each in some way different from the others. Forecasting the future means assigning some subjective probability to each path. A policy change of general applicability aimed at constraining one or more undesirable paths will also distort the remaining, presumptively efficient, paths. And given the absence of evidence of anticompetitive behavior in the past under Title I regulation, there is no reason to anticipate net expected benefits from Title II.

Title II of the Communications Act of 1934 was designed to limit the pricing power of monopoly telephone companies and to prevent exclusion of local telephone competitors by refusals to interconnect with AT&T’s long-distance network. Title II was designed long after the AT&T telephone monopoly was established, under the leadership of Theodore Vail. Vail operated precisely by refusing to interconnect with local competitors. The telephone industry by 1934 was far along a path of monopolization and exclusionary behavior. Unlike the situation with ISPs and the Internet, where evidence of anticompetitive behavior is scarce and isolated, Congress and the Commission by 1934 had decades-long real-world evidence of

abusive behavior in the telephone industry upon which to base the provisions of Title II.

Ultimately, despite the availability of a long history of abusive behavior for use in policy design, the Commission's telephone common carrier regime was a failure, bringing harm to consumers. FCC regulation itself was complicit in creating new barriers to entry by carriers and equipment manufacturers. Despite common carrier regulation, the old Bell system charged high prices and was very slow to adopt new technology. When the telephone industry eventually was disintegrated and deregulated, prices fell and innovation flourished.<sup>4</sup> A similar pattern was seen in the deregulation of transportation, energy and banking.<sup>5</sup> To put the point modestly, there is no evidence to support any expectation that the application of common carrier regulation to ISPs will benefit consumers. The historical evidence supports the opposite view.<sup>6</sup>

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<sup>4</sup> While Bell Labs was at the forefront of scientific discovery in many fields, AT&T was slow to *adopt* its inventions, compared to the post-break-up market. AT&T also was thought to invest far more capital in its facilities than any increase in reliability or capacity warranted, keeping costs and thus prices inefficiently high. The post-break-up marketplace is marked by capital investment in new technologies and capacity at a much faster rate. See James E. Prieger, Regulation, Innovation, and the Introduction of New Telecommunications Services, 84(4) REVIEW OF ECONOMICS AND STATISTICS 704-15 (2002).

<sup>5</sup> See Roger G. Noll and Bruce M. Owen, *United States v. AT&T: The Economic Issues*, in Kwoka and White, eds., *THE ANTITRUST REVOLUTION*, Scott Foresman, 1988; 2<sup>nd</sup> ed. 1994; Clifford Winston, *Economic Deregulation: Days of Reckoning for Microeconomists*, 31 J. ECON. LITERATURE 1263 (1993). (Assessing the consumer welfare impact of deregulation of common carrier industries.)

<sup>6</sup> Luke A. Stewart, *The Impact of Regulation on Innovation in the United States: A Cross-Industry Literature Review*, Info. Tech. & Innovation Found. (June 2010), available at <http://www.itif.org/files/2011-impact-regulation-innovation.pdf>, and Bruce M. Owen and Ronald Braeutigam, *THE REGULATION GAME: STRATEGIC USE OF THE ADMINISTRATIVE PROCESS*, Ballinger, 1978.

The likely long run failure of common carrier regulation to benefit consumers is not the only cost of the *Title II Order*. In contrast to the likelihood of no or negative benefits, the Commission's policy necessarily imposes immediate costs on the industry and the public. These costs arise from the risks created by the mere prospect of new and ill-defined future regulations. These include, in addition to the vague "reasonableness" mandates contained in Sections 201 and 202 of the Communications Act, the broad and open-ended "General Conduct" rule designed to implement Sections 201 and 202 in the broadband context.

The construction and constant upgrading of wired and wireless physical infrastructure to support growing mobile broadband traffic, especially traffic associated with video entertainment, requires billions of dollars of new investment each year.<sup>7</sup> The financial sector of the economy is the ultimate source of the needed funds. Investors have preferences about investment projects, chiefly determined by risk and expected return. At the level of individual projects (as opposed to portfolio management), funding greater risk requires an increased expected return.

Many projects that compete for finance are not funded because they pose too much risk for their expected return, given competing investment opportunities. Hence, a hypothetical project with a given expected return and risk profile that would be funded at a given level, other things equal, will be less generously funded, or not funded at all, if its risk profile worsens. It is difficult to imagine a more effective way to decrease infrastructure investment funding than the uncertain

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<sup>7</sup> For traffic growth forecasts see CISCO VISUAL NETWORK INDEX white papers and updates available at <http://www.cisco.com/c/en/us/solutions/service-provider/visual-networking-index-vni/index.html>

prospect of a new, undefined regulatory expropriation, especially one unconstrained by economic analysis, evidence or rationality.

## Discussion

For purposes of its imposition of Title II status, the FCC did not assert or assume that Internet service providers are monopolists or in possession of market power. This necessarily implies that providers face competition, as indeed they do.<sup>8</sup> However, a conflicting supposition in the *Title II Order* is its unsupported conclusion that ISPs are “gatekeepers” or “terminating access monopolies” warranting particularly invasive regulation.<sup>9</sup>

Every magazine, newspaper, TV station and Hollywood studio is a “gatekeeper” in that each chooses its own content. That role does not equate to market power or a need for common carrier regulation. There is simply no evidence of pervasive market power in today’s broadband marketplace—thus further undermining the rationale for subjecting ISPs to broad common carrier mandates.

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<sup>8</sup> Broadband Internet service is provided in urban areas by at least two local wireline operators and at least three wireless carriers, or by combinations of wired carriers and local WIFI facilities. As more spectrum and new modulation methods (5G) become available, wireless carriers will become increasingly formidable competitors in local broadband markets. In my experience, customer switching costs from one Internet access provider to another are no more onerous than the costs of switching from one brand of personal computer, tablet, or cell phone to another. For related analysis see [https://apps.fcc.gov/edocs\\_public/attachmatch/DOC-344499A1.pdf](https://apps.fcc.gov/edocs_public/attachmatch/DOC-344499A1.pdf) and [https://transition.fcc.gov/Daily\\_Releases/Daily\\_Business/2014/db1016/DOC-329973A1.pdf](https://transition.fcc.gov/Daily_Releases/Daily_Business/2014/db1016/DOC-329973A1.pdf); CTIA WIRELESS INDUSTRY INDICES REPORT, YEAR-END 2016, May 2017; Michael L. Katz “Wither U.S. Net Neutrality Regulation,” REVIEW OF INDUSTRIAL ORGANIZATION, June 2017, pp. 441-468 at p. 451, and Timothy Brennan, “The Post-Internet Order Broadband Sector: Lessons from the Pre-Open Internet Order Experience,” REVIEW OF INDUSTRIAL ORGANIZATION, June 2017, pp. 469-486 at 475.

<sup>9</sup> See Jonathan E. Nuechterlein and Christopher S. Yoo, *A Market-Oriented Analysis of the “Terminating Access Monopoly” Concept*, COLO. TECH. L. J. 14:21 (2015) (rebutting the notion that ISPs have a “terminating access monopoly”).



The most elementary economic analysis of free markets teaches that competitive providers are forced to adopt, if they can, the most efficient means of producing the services that consumers value most highly. As Adam Smith explained more than 240 years ago, this profit-motivated incentive tends, paradoxically, to promote social well-being. It follows that any external constraint that prevents the use of the most efficient means of producing the services with the highest consumer value will reduce efficiency and social well-being, by shrinking the economic pie. For example, too many resources will be employed to produce the service and the service will have a higher price and fewer buyers, or consumer welfare will be lost because suppliers are constrained from offering the most highly-valued products.

The Commission contends that Title II authority is needed, not to reduce monopolistic profits and prices, but to prevent the adoption of production or marketing practices that are harmful to users or competitors. The definitions or characteristics of such practices are left open ended, so that a suitable regulatory constraint may be imposed whenever, in the future, the Commission is concerned that some production or marketing practice may be harmful. The imposition of Title II authority, by itself and even without further action by the Commission, imposes a looming business risk that tends to deter investment and distort both production and marketing competition.

The creation of an open-ended right to impose common carrier regulations on production and marketing practices necessarily has negative effects on investment incentives. The possibility of a future profit-reducing additional regulation is a new business peril facing Internet service providers. As noted, it is rational to take account of all significant risks and returns in making investment decisions.

Other things equal, the introduction of a new peril, particularly one that is uncertain and open-ended, reduces the attractiveness of any investment project when compared to alternative uses of financial resources. In the present context, fewer investments will be made in the provision of Internet services and capacity than would otherwise be the case.

The *Title II Order* provides, without implying any limitation, a few examples of the practices feared. Each of these is hypothetical since there is little or no evidence that any significant abuses have occurred. Exclusionary behavior is a low probability *a priori* concern because it has a *certain* cost to the excluder—the lost revenue and profit it would otherwise have gained from dealing with the competitor, supplier, or customer—and only a speculative benefit. The speculative benefit is the possible elimination of the excluded entity. The benefit may easily be less than the cost, in the short run, and in the longer run requires barriers to entry by other entities or re-entry by the excluded entity. Thus, any benefit must be discounted by the risk that it may never come about and by the time preference for earlier rather than later returns.

### **Measuring the investment impact of the *Title II Order***

The direction of the effect of added risk on associated broadband investment incentives is unambiguously negative. Nevertheless, quantifying the impact of the *Title II Order* at this early date is challenging. One difficulty is specifying the “counterfactual”—that is, the world as it would have been but for the imposition of Title II status. Using the world as it was prior to the regulatory change as a proxy for the counterfactual (the common practice) is especially challenging in this case because the industry has so many possible futures.

The Internet marketplace routinely changes from year to year in ways that are unpredictable, due to rapid advances in technology and evolving competitive marketing strategies. Further, the period leading up to the adoption of the *Title II Order* was one in which the likely outcome of the Title II policy debate was in flux, increasing the volatility of related equities as investors and speculators made bets on the nature and timing of the outcome. The actual adoption of the Order and results of the subsequent litigation were not “news” to investors in ways that facilitate so-called event studies.<sup>10</sup>

Measurement difficulties also arise because we have data only for the two years since the adoption of the *Title II Order*. Many of the investments made in 2015 and 2016 were set in motion several years before, and could not have reflected a general belief that common carrier regulation was inevitable. Moreover, the long-term viability of the *Order* has been in serious doubt throughout this two-year period, as it has been under judicial review,<sup>11</sup> and subject to legislative repeal efforts.<sup>12</sup>

Aside from the effects of increased regulatory perils facing investors, there are increased costs (equivalent to expropriation of profits in a competitive industry) at-

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<sup>10</sup> An event study seeks to measure the effects of a sudden and unforeseen change on the future profits of a firm or industry by comparing stock valuations before and after the event, relative to the market.

<sup>11</sup> See *USTelecom v. FCC*, 825 F.3d 674 (D.C. Cir. 2016), pet. for reh’g denied, 2017 U.S. App. LEXIS 7712 (D.C. Cir., May 1, 2017)

<sup>12</sup> See, e.g., *Restoring Internet Freedom Act of 2017*, S. 993, 115th Cong. (2017); *Restoring Internet Freedom Act of 2016*, S. 2602, 114th Cong. (2016).

tributable to the details of interventions permitted under Title II authority.<sup>13</sup> Such interventions generally act by intruding upon the production and marketing practices of Internet service managers and constrain Internet providers from utilization of the most efficient production processes or the most valuable (to consumers) service characteristics, or both.

Recall that the Commission does not assert for purposes of the *Title II Order* that ISPs have market power.<sup>14</sup> Competing firms have strong incentives to adopt the most efficient available internal production and marketing strategies. If a regulatory intervention influences behavior, it is necessarily costly to society because it forestalls what would otherwise be the most efficient (or at least a more efficient) means of production or the provision of the most highly-valued services. Alternatively, of course, an intervention may simply have no effect on any behavior, which implies that the intervention is useless because it could not remediate any harm.

Perhaps more troubling, the lack of an articulated, rational, evidence-based set of conditions to trigger intervention means that the classification of ISPs as common carriers by itself and without further action by the Commission reduces the incentive to invest. There can be no question that the regulatory peril and uncertainty caused by Title II—chiefly through the application of vague and roving “reasona-

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<sup>13</sup> “Expropriation” occurs when a government regulation prevents a firm from maximizing profits. In a competitive market setting, absent externalities or other market failures, such expropriation typically reduces consumer welfare by forcing firms to raise prices and reduce output. Although they reduce the value of property, regulatory expropriations generally are not compensable “takings.”

<sup>14</sup> As noted above, the Commission’s “gatekeeper” assumption does not support a market power conclusion.

bleness” standards in Sections 201 and 202 that have never been applied to Internet access services (“*Title II Order*” at ¶¶ 137, 446)—has affected and will continue to affect ISPs’ decisions on whether and when to roll out new offerings and services.

Some of these investment- and output-reducing effects already have been documented, perhaps most notably in a letter filed by 19 municipal ISPs shortly before the issuance of the NPRM. As that letter explains, the overhang of Title II not only has forced ISPs to undertake costly and highly uncertain risk analyses every time they are considering new service offerings, but also has led certain ISPs to “delay or hold off from rolling out a new feature or service,” causing consumers to “lose out on having access to innovations and new capabilities.”<sup>15</sup>

Again, and notwithstanding the measurement difficulties noted above, there is mounting evidence consistent with the conceptual prediction of the harmful effects of the *Title II Order* on broadband infrastructure investment. Several of the studies released so far make valiant efforts to quantify the harms posed by Title II to broadband investment in recent years.<sup>16</sup>

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<sup>15</sup> Letter from 19 Municipal ISPs to Chairman Ajit Pai, WC Docket No. 17-108, at 2 (filed Mar. 11, 2017).

<sup>16</sup> See Thomas W. Hazlett and Joshua D. Wright “The Effects of Regulation on Broadband Markets: Evaluating the Empirical Evidence in the FCC’s 2015 ‘Open Internet’ Order,” *REVIEW OF INDUSTRIAL ORGANIZATION*, Volume 50, June 2017, pp. 487-508; and Thomas W. Hazlett and A. Caliskan “Natural Experiments in Broadband Regulation,” *REVIEW OF NETWORK ECONOMICS*, Volume 7, December 2008, pp. 460-480. Another recent study found that “capital expenditure from the nation’s twelve largest Internet service providers has fallen by \$3.6 billion, a 5.6% decline relative to 2014 levels.” Hal Singer, *2016 Broadband Capex Survey: Tracking Investment in the Title II Era* (Mar. 1, 2017), <https://halsinger.wordpress.com/2017/03/01/2016-broadband-capex-survey-tracking-investment-in-the-title-ii-era>. Another concluded that “foregone investment in 2015 and 2016” due to Title II was approximately “\$5.6 billion.” Michael Horney, *Broadband*

One study found that even the *threat* of Title II reclassification between 2011 and 2015 “reduced telecommunications investment by 20% (or more), or about \$32 to \$40 billion annually.” That reduction amounts to “about \$160-\$200 billion in total over the five-year period,” equal to “an entire year’s worth of telecommunications investment.”<sup>17</sup>

Even setting aside the debate over how best to interpret investment data over the past two years, economic literature is replete with empirical examples of the effects of common-carrier-style regulation on the incentives of regulated firms to invest in infrastructure and new services. The telephone example has already been mentioned, and a similar picture emerges from regulation of railroads and other transport industries.<sup>18</sup>

The massive and sustained private-sector investment in broadband under the prior Title I regime stands in stark contrast to the chronic underinvestment in heavily regulated public utility sectors in this country. Prominent examples include water utilities, electricity grids, and railroads.<sup>19</sup>

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*Investment Slowed by \$5.6 Billion Since Open Internet Order* (May 5, 2017), available at <http://freestatefoundation.blogspot.com/2017/05/broadband-investment-slowed-by-56.html> .

<sup>17</sup> See George S. Ford, *Net Neutrality, Reclassification and Investment: A Counterfactual Analysis* (Apr. 25, 2017), available at <http://www.phoenix-center.org/perspectives/Perspective17-02Final.pdf> ; see also CTIA, *Annual Year-End 2016 Top-Line Survey Results* at 5, available at <https://www.ctia.org/docs/default-source/default-document-library/annual-year-end-2016-top-line-survey-results.pdf?sfvrsn=2> (reflecting a 17.4 percent capital expenditure decline for wireless providers between 2014 and 2016).

<sup>18</sup> Winston, *supra*.

<sup>19</sup> American Society of Civil Engineers, *Infrastructure Report Card: Drinking Water*, at 1 (Jan. 2017), available at <https://www.infrastructurereportcard.org/wp-content/uploads/2017/01/Drinking-Water-Final.pdf>, and American Society of Civil Engineers, *Annual Report 2012*, at 12 (2012), available at

The European example of regulating broadband as a public utility is instructive as well. Under a Title I regime, broadband providers in the United States invested more than twice as much as their counterparts in the European Union on a per-household basis. As a result, while 85 percent of the U.S. population had access to broadband networks capable of providing 100 Mbps speeds by the end of 2014 (shortly before the *Title II Order* was adopted), just over half of European homes could access speeds of 30 Mbps or greater. The disparity between broadband investment in the United States and the European Union has been particularly pronounced in rural areas.<sup>20</sup>

The 1992 Cable Act subjected cable operators to rate regulations modeled in part on common carrier principles. There followed a sharp decline in the growth of new programming and channel offerings. While investment in the unregulated broadband side of the business flourished, investment in the cable television business plummeted. The sector began to rebound after Congress eliminated rate regulation of cable operators.<sup>21</sup> A similar effect was seen in the telephone industry when the FCC relaxed its ILEC unbundling regulations.<sup>22</sup>

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[http://www.asce.org/uploadedFiles/About\\_ASCE/Content\\_Pieces/asce-annual-report-2012.pdf](http://www.asce.org/uploadedFiles/About_ASCE/Content_Pieces/asce-annual-report-2012.pdf).

<sup>20</sup> Christopher S. Yoo, *U.S. vs. European Broadband Deployment: What Do the Data Say?* (Jun. 2014), available at <https://www.law.upenn.edu/live/files/3353-us-vs-european-broadband-deployment-summary>.

<sup>21</sup> See Thomas W. Hazlett & Matthew L. Spitzer, *Public Policy Toward Cable Television: The Economics of Rate Controls* (1997); Thomas W. Hazlett, *Economic and Political Consequences of the 1996 Telecommunications Act*, REGULATION 23:36 (Fall 2000), available at <http://object.cato.org/sites/cato.org/files/serials/files/regulation/2000/10/hazlett.pdf>.

<sup>22</sup> Anna-Maria Kovacs, *Regulation in Financial Translation: Investment Implications of the FCC's Open Internet Proceeding* at 21 (Oct. 2014) ("It was only after the courts affirmed the FCC's 2005 Triennial Review Remand order (TRRO), which greatly reduced the ILEC's unbundling obli-

To be fair, not all regulation, and especially regulation less extreme than that offered by the *Title II Order*, is harmful to the public. The costs to society of an intervention, even an intervention that expropriates profits from or imposes special taxes on a competitive industry, could well be justified if those costs are less than the value of the benefits provided. In the context of air pollution, for example, a hypothetical state regulation phasing out the sale or use of internal combustion engines in transportation would have considerable up front and ongoing costs, compared to doing nothing. To justify the regulation, it would be necessary to show that the benefits are greater than the costs. Air pollution is well-known to have adverse effects on human health and productivity.<sup>23</sup> Reducing or eliminating these effects would have benefits in terms of reduced health care costs and increased quality-life-years for citizens. These costs and benefits can be estimated. If the benefits exceed the costs by more than a reasonable allowance for errors in measurement, the regulation is rational. Otherwise, it is not. There is a remarkable contrast between the extensive empirical evidence on the health effects of air pollution and the lack of empirical evidence supporting the *Title II Order*.

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gations, especially with respect to fiber, hybrid-fiber, and packetized switching, and UNEP, that ILEC investment finally began to grow again.”).

<sup>23</sup> Jos Lelieveld, et al. The Contribution of Outdoor Air Pollution Sources to Premature Mortality on A Global Scale. *Nature* 525.7569 (2015): 367-371. Adem Isen, Maya Rossin-Slater, and W. Reed Walker, Every Breath You Take—Every Dollar You’ll Make: The Long-Term Consequences of the Clean Air Act of 1970, *JOURNAL OF POLITICAL ECONOMY* 125, no.3 (June 2017): 848-902. (Examining the long-term impact of early childhood exposure to air pollution on adult outcomes.) See also, Qian Di, et al., Air Pollution and Mortality in the Medicare Population, *THE NEW ENGLAND JOURNAL OF MEDICINE*, 376:26, 2513-2522 (2017); Rebecca E. Berger, et al., Air Pollution Still Kills, *Id.* at 2591-92; Giles, Luisa V., and Michael S. Koehle. The Health Effects of Exercising in Air Pollution. *SPORTS MEDICINE* 44.2 (2014): 223; Loomis, Dana, et al. The Carcinogenicity of Outdoor Air Pollution. *LANCET ONCOLOGY* 14.13 (2013): 1262.



## The nature and history of common carrier regulation

The Commission, when it adopted the *Title II Order*, disavowed the intention to engage in rate of return-rate base price limitations, a standard feature of common carrier regulation. But it is difficult to see how this can be avoided. The chief concern motivating the *Title II Order* may have been to legitimize the Commission's original access and non-discrimination policies, but common carrier status carries with it a set of traditional remedies. The remedies are there partly because Title II was focused initially on monopoly pricing of telephone rates. But the remedies are also there to resolve disputes about discrimination, and were applied to the much more recent issues involving bundling or bundled pricing of ILEC facilities.

It may be helpful to note here that, while the Commission refrained from applying Sections 201 and 202 to adopt new “*ex ante* rate regulation of broadband Internet access service,” it expressly declined to refrain from applying those provisions in “*ex post*” review of providers’ rates. *Title II Order* ¶ 451. In fact, this was hardly a concession; most common carrier rate regulation is applied *ex post* because of the requirement that rates be compensatory and the *ex post* cost findings required to evaluate whether that requirement has been met.

Additionally, while former Chairman Wheeler pledged that there would be “no rate regulation” of broadband services when the Commission adopted the *Title II Order*,<sup>24</sup> just a year later he proposed to subject *business* broadband services to

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<sup>24</sup> See Tom Wheeler, *This Is How We Will Ensure Net Neutrality*, WIRED.COM (Feb. 4, 2015), available at <http://www.wired.com/2015/02/fcc-chairman-wheeler-net-neutrality/>.

new forms of rate regulation<sup>25</sup>—thus underscoring how little comfort such pledges provide.

The central administrative problem with common carrier remedies in discrimination and access cases is that they require the Commission to engage in comparisons of prices and costs. This problem obviously contributes to the increased risk and uncertainty discussed above. Further, an important issue in such cases is whether the common carrier is charging prices that are too high or too low relative to its costs, and hence discriminatory. The determination of costs in the ILEC cases focused on whether and how to recover sunk costs. In the case of ISPs, that issue may also arise. But there is also the problem of shared and common costs. How should the costs of providing the local “plant” of an MVPD or mobile provider be allocated among its various services or users? Most of the local plant is used in common by all services and all users. Allocating costs that do not vary with services provided or users, for purposes of examining allegations of discrimination or foreclosure, is a quagmire that will strain the resources of the Commission and be unlikely to contribute to the welfare of users.

## **Conclusions**

The surest way to promote the virtuous circle of innovation, demand, and investment in high-speed broadband is to eliminate the regulatory perils of Title II, as well as more specific regulations like the general conduct standard, that generate needless uncertainty for ISPs and for the Internet industries more broadly.

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<sup>25</sup> See *Business Data Services in an Internet Protocol Environment et al.*, Tariff Investigation Order and Further Notice of Proposed Rulemaking, 31 FCC Rcd 4723 ¶¶ 308-09, 420 (2016).

In the long run, the Commission can be confident that, absent agency or legislative action to reclassify broadband Internet access service under Title I, the uncertain regulatory environment created by Title II will depress broadband investment and innovation for years to come, *whether or not any pattern of discrimination or exclusion emerges*.

In economic terms, as noted, the possibility of continuing and additional future output- and profit-reducing regulatory interventions, made possible by the *Title II Order*, is a new business risk facing ISPs. Because it is rational to take account of all significant risks and returns in making investment decisions, the creation of a new risk, particularly one that is open-ended, reduces the attractiveness of investment projects compared to alternative uses of financial resources. This regulatory peril constrains ISPs from utilizing the most efficient production processes or deploying the most valuable (to consumers) services, or simply from providing as much capacity and service as otherwise, or all three.

Here, the Commission gave itself the freedom to impose regulatory constraints whenever it, or an influential pressure group, conceives of a practice thought to be harmful that providers *may* adopt in the future. The Commission lacks the information and resources to make such judgments. It is in no position to predict accurately the future path of the technologies, consumer preferences and marketing strategies that help determine the structure and future conduct of industry participants. The looming overhang of common carrier regulation indiscriminately and adversely affects *every* future path of the industry with no assurance that it will successfully deter whatever bad outcome the Commission feared. The Commission decided that its fundamentally political concerns trumped promotion of

the public welfare. This approach was irrational. It is essential to try to determine whether policy enhances or reduces the public's well-being, and here, the adoption of Title II plainly falls in the latter category.