



**Comments of**

**TechFreedom<sup>1</sup>**

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**In the Matter of**

*Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, and Possible Steps to Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996, as Amended by the Broadband Data Improvement Act*

GN Docket No. 14-126

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## Introduction & Summary

Today, a chill wind blows through Silicon Valley from the East. Through this inquiry,<sup>2</sup> the FCC reminds America's tech sector that it has claimed — through a preposterous re-interpretation of a previously obscure provision of the 1996 Telecommunications Act — authority to regulate any form of communications in any way that the Commission asserts will promote broadband. Instead of having to point to clear Congressional authorization, the Commission claims it need only explain why its regulations are “not inconsistent with other provisions of law.”<sup>3</sup> The Commission insists that, technically, it need not formally declare, under Section 706(b), that broadband (technically, “advanced telecommunications capability”) is not “being deployed to all Americans in a reasonable and timely fashion,”<sup>4</sup> but seems to feel that doing so will legitimize its use of Section 706 in general to regulate in ways Congress never intended.

So far, the FCC has used this newfound power to justify issuing net neutrality regulations and expanding Universal Service Funding to include broadband subsidies.<sup>5</sup> This inquiry opens the door to FCC regulation of privacy and cybersecurity by asking how concerns about these issues affect broadband adoption.<sup>6</sup> While Section 706 discusses broadband deployment and investment (not user adoption), the FCC based its Open Internet Order on the convoluted theory by which alleviating concerns about the “openness” of the Internet would ultimately increase (1) the production of content by edge providers, (2) adoption and use by consumers and thus (3) investment and deployment. This Rube-Goldberg theory of causation was dubbed a “triple-cushion shot.”<sup>7</sup>

If this attenuated logic was adequate to justify FCC regulation of net neutrality, there is no principled reason why it could not justify regulation of privacy and cybersecurity practices

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<sup>2</sup> Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, and Possible Steps to Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996, as Amended by the Broadband Data Improvement Act, *Tenth Broadband Progress Notice of Inquiry*, GN Docket No. 14-126 (Aug. 1, 2014) [“NOI”], available at [http://transition.fcc.gov/Daily\\_Releases/Daily\\_Business/2014/db0805/FCC-14-113A1.pdf](http://transition.fcc.gov/Daily_Releases/Daily_Business/2014/db0805/FCC-14-113A1.pdf).

<sup>3</sup> Preserving the Open Internet Broadband Industry Practices, *Report and Order*, GN Docket No. 09-191, ¶ 119 (Dec. 23, 2010) [“Open Internet Order”], available at [https://apps.fcc.gov/edocs\\_public/attachmatch/FCC-10-201A1.pdf](https://apps.fcc.gov/edocs_public/attachmatch/FCC-10-201A1.pdf).

<sup>4</sup> See Telecommunications Act of 1996, Pub. L. No. 104-104, § 706(b), 110 Stat. 56, 153 (1996), as amended in relevant part by the Broadband Data Improvement Act, Pub. L. No. 110-385, 122 Stat. 4096 (2008) (codified as amended at 47 U.S.C. § 1302(b)).

<sup>5</sup> *Verizon v. F.C.C.*, 740 F.3d 623 (D.C. Cir. 2014); *Direct Commc'ns Cedar Valley, LLC v. F.C.C.*, No. 11-9581, 59 (10th Cir. 2014) [Cedar Valley], available at <http://www.gpo.gov/fdsys/pkg/USCOURTS-ca10-11-09581/pdf/USCOURTS-ca10-11-09581-0.pdf>.

<sup>6</sup> See NOI, ¶ 47.

<sup>7</sup> See Open Internet Order, ¶¶ 124-32; see also *Verizon*, 740 F.3d at 643-44.

as well. In fact, it would be *easier* for the FCC to make such an argument, since the Commission could essentially skip the first step of the argument and argue simply that (1) allaying concerns about adoption will (2) drive deployment and investment. Indeed, a future FCC might use the same theory to regulate copyright enforcement, indecency, national security or any number of other potential concerns.

In short, the Commission has, by administrative fiat, transformed Section 706 from a command to use the authority specifically granted to the agency by Congress into a sweeping power to invent a new body of communications regulation. Importantly, this re-interpretation would authorize regulation not merely over traditional “telecom companies” but also over other “tech” companies as well, from Google, Twitter and Facebook to the countless startups building new apps and services. While some of the questions asked by the NOI are specifically about the practices of “broadband providers,” others are framed in more general terms.<sup>8</sup> Regardless, in explaining its re-interpretation of Section 706 in the 2010 Open Internet Order, the FCC made no distinction as to the scope of its powers under Section 706<sup>9</sup> — nor could such a distinction ever be anything other than a non-binding declaration of self-restraint: Since Section 706 is very plainly *not* written as a grant of authority, Congress had no need to specify over whom Section 706’s regulatory powers applied; Section 706 merely directed the FCC to use powers granted elsewhere in the act, each of which (to varying degrees) clarifies its scope, for the purposes of Section 706.<sup>10</sup>

Under the FCC’s theory, Section 706 allows the Commission to do far more than rework the Consumer Proprietary Network Information (CPNI) rules it applies to broadband providers.<sup>11</sup> However the Commission might demur today about its future intentions, it could use this unprecedented new power to insert itself into issues of privacy and security that have long been the bailiwick of the Federal Trade Commission, using its general Section 5 enforcement powers over deception and unfairness,<sup>12</sup> as well as the specific legislative grants of rulemaking authority over children’s privacy,<sup>13</sup> credit reporting,<sup>14</sup> and so on.

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<sup>8</sup> Compare NOI, ¶¶ 27, 29, 30, 43, & 47, with NOI, ¶¶ 3-26, 33-42, & 49-51.

<sup>9</sup> Open Internet Order, ¶¶ 121-23.

<sup>10</sup> See 47 U.S.C. §§ 151, 152 (giving the FCC authority over “interstate and foreign commerce in communication by wire and radio.”).

<sup>11</sup> 47 C.F.R. § 64.2001 et seq.

<sup>12</sup> Federal Trade Commission Act, ch. 311, § 5, 38 Stat. 717 (codified at 15 U.S.C. § 45).

<sup>13</sup> Children’s Online Protection Privacy Act, Pub. L. No. 105-227, §§ 1301-08, 112 Stat. 2681 (codified at 15 U.S.C. §§ 6501-06).

<sup>14</sup> Fair Credit Reporting Act, Pub. L. No. 90-321, 84 Stat. 874 (codified at 15 U.S.C. § 1681 et seq.).

Furthermore, the Commission need not actually exercise this power to have an essentially regulatory effect. A “chill wind” is not merely an omen of things to come, but a way of “sending a message” that the Commission has cast its roving eye over how *all* Internet companies collect, process and share data to provide the services increasingly taken for granted by American consumers. “Big Data” has made Silicon Valley a boom town, but entrepreneurs and investors involved in data-driven companies must now rest uneasy, wondering when the next shoe will drop. This regulatory uncertainty will necessarily affect their behavior.<sup>15</sup> The next shoe to drop might be an enforcement action premised on Section 706, which could come at any time. This lack of formal rulemaking safeguards necessarily decreases the perceived distance of the regulatory “Sword of Damocles” that now hangs over the heads of the tech sector.

Nonetheless, the Commission is statutorily bound to conduct its broadband deployment inquiry under Section 706(b), and to report on those findings to Congress. Thus, the following brief comments are intended to guide the FCC on how it may best go about completing this process and ensuring the goals of Section 706 — promoting broadband deployment — are achieved, principally by fostering investment through reduced regulatory uncertainty.

## Section 706 Simply Is Not an Independent Grant of Authority

We urge the FCC to recant its absurd 2010 re-interpretation of Section 706 as an independent grant of authority. A Section 706(b) Report would be as appropriate a place as any to do so. However, because such re-re-interpretation would not be binding on future Commissions, we urge the FCC to ask Congress to revisit Section 706 as part of a legislative package designed to give the Commission clear, specific and limited authority over net neutrality concerns, as well as other reforms intended to promote broadband deployment and, more generally, to move beyond the restrictive regulatory silos put in place by the 1934 Communications Act and, unfortunately, perpetuated by the 1996 Telecommunications Act.<sup>16</sup>

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<sup>15</sup> Importantly, since Section 706 speaks only in the vaguest terms about “regulating methods” and “tak[ing] immediate action,” there is apparently no reason why the Commission need undergo a formal rulemaking in order to “regulate” privacy or data security (or anything else the Commission decides slows broadband adoption). *See* 47 U.S.C. § 1302.

<sup>16</sup> *See* TechFreedom & the International Center for Law & Economics (ICLE), *Letter to Chairman Upton & Chairman Walden Re: Response to White Paper #3* (June 6, 2014), available at <http://1.usa.gov/1xkZOyu>.

Section 706 transcends the regulatory silos of Titles II, III, and VI — which is somewhat obvious from its placement outside the Communications Act<sup>17</sup> — in that it applies by its terms to “*any technology*” capable of delivering and originating “high-quality voice, data, graphics, and video telecommunications[.]”<sup>18</sup> But using Section 706 as the legal basis for sweeping communications reform is fraught with peril.

For one, the empirical analysis on which FCC’s use of Section 706 rests is essentially arbitrary. In the 2010 Open Internet Order, the FCC made clear that it interprets *both* Section 706(a) *and* (b) as independent grants of authority.<sup>19</sup> Thus, the Commission apparently need not actually make a negative finding under Section 706(b) before invoking authority purportedly granted by Section 706(a). Even if the Commission had not made such a finding in 2010, it could, by the FCC’s logic, have justified its 2010 Open Internet Order simply by offering the convoluted, Rube-Goldberg “triple-cushion shot” theory of causation by which regulation of broadband will, magically, increase broadband investment.<sup>20</sup>

Nonetheless, it is surely no accident that the Commission’s Sixth Broadband Progress Report, which reversed the conclusions made by all other previous reports, was issued just five months before the FCC’s Open Internet Order. Perhaps aware of the arbitrariness of *any* use of Section 706 as the legal basis for regulation, the Commission may simply have been trying to create a veneer of analytical rigor, the illusion of deliberative process. Soliciting comments and having to issue a formal report may indeed somewhat raise the analytical bar for the Commission in justifying itself — but not by much.

## Section 706 as Political Football

In addition to the uncertainty inherent in Section 706 due to the uncertain reach of its potential scope, regulation based on Section 706 also promotes regulatory uncertainty because the regulatory process for conducting and reporting on the inquiry in Section 706(b) is largely unpredictable, with the Commission apparently able to raise or lower the regulatory bar whenever doing so suits its political agenda.

Section 706 does not define broadband (technically, “advanced telecommunications capability”), other than as a “capability that enables users to originate and receive high-

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<sup>17</sup> Section 706 of the Telecommunications Act of 1996 was added to Chapter 12 of Title 47, whereas the Communications Act and most of the Telecommunications Act is contained in Chapter 5 of Title 47 (although these provisions have not yet been codified into positive law).

<sup>18</sup> See 47 U.S.C. § 1302(d)(1) (emphasis added).

<sup>19</sup> Open Internet Order, ¶¶ 119, 123.

<sup>20</sup> See *id.*, ¶¶ 124-32; see also *Verizon v. F.C.C.*, 740 F.3d at 643-44.

quality voice, data, graphics, and video telecommunications using any technology.”<sup>21</sup> This leaves it to the Commission to set minimum thresholds for speed and performance to define that capability, and to determine what quality of service is sufficient for “high-quality” telecommunications in its 706(b) inquiries.<sup>22</sup> Section 706 also provides little guidance on any of the terms in the key phrase “being deployed to all Americans in a reasonable and timely fashion.”<sup>23</sup> Thus, the Commission has vast discretion under *Chevron v. Natural Resources Defense Council*<sup>24</sup> to define inputs and establish metrics however will best suit the agency’s policy agenda.

Throughout its previous Section 706(b) reports, the Commission has tried to establish specific analytical framework and technical metrics with which broadband deployment can be measured,<sup>25</sup> but the rapidly evolving nature of broadband and IP-based services necessitates frequent reconsideration and modification of those metrics. In theory, a Commission bent on a particular regulatory agenda could, through such modifications, manipulate the available data to draw whatever conclusion suits its predetermined political agenda.<sup>26</sup> Indeed, the coincidence in 2010 of the FCC’s first negative finding under Section 706(b) and its issuance of the Open Internet Order five months later is certainly enough to raise a few suspicious eyebrows — and signal the Commission’s willingness to reverse-engineer its Section 706(b) analysis of the market to justify preconceived regulatory objectives.

However, while various methodological modifications and statistical techniques might be used to advance the particular policy agenda of one Commission (if three commissioners approve), such political wrangling would inevitably swing both ways. The central problem with broad administrative discretion is that those gripping the sword today may find it at their necks tomorrow. For example, as we recently noted in our joint comments with the International Center for Law & Economics on the FCC’s Public Notice about preempting

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<sup>21</sup> 47 U.S.C. § 1302(a)-(d).

<sup>22</sup> 47 U.S.C. § 1302(d)(1).

<sup>23</sup> 47 U.S.C. § 1302(b).

<sup>24</sup> 467 U.S. 837 (1984).

<sup>25</sup> See, e.g., *Sixth Broadband Deployment Report*, ¶¶ 9-15 (discussing the history of the FCC’s broadband benchmarking under Section 706(b) and explaining the switch to the 4 Mbps download and 1 Mbps upload benchmark).

<sup>26</sup> For example, if the data showed that all Americans have access to multiple broadband providers at a given level of throughput (e.g., 4 mbps down and 1 mbps up), an activist Commission--intent on retaining as much legal authority as possible--could say that only 5 mbps or greater qualifies as “advanced” and thereby report a negative finding under Section 706(b). Conversely, a restrained Commission — intent on maintaining a “light touch” or simply avoiding claims of authority not clearly authorized by Congress— could say that a lower level of throughput is sufficient to qualify as “advanced” under Section 706(b), or that a given pace of deployment is “reasonable and timely” and thereby report a positive finding under Section 706(b).

state laws preempting state laws governing municipal broadband, if the FCC can justify preempting such laws today as facilitating broadband deployment, a future FCC could reach precisely the opposite conclusion under Section 706, *banning muni broadband completely* based on the general (and intuitive) conclusion that private companies are better able to operate and provide innovative upgrades to broadband networks than government agencies, and allowing government entities to compete alongside private companies may significantly deter aggregate broadband investment in the long run, ultimately resulting in harm to consumers and delayed broadband deployment.<sup>27</sup> Thus, the Commission should proceed with deliberate caution in conducting its Section 706(b) inquiry, and in trying to issue any potential rules or take other informal regulatory action based on its authority.

The Commission's Notice of Inquiry cites a 2010 Commission staff paper as suggesting that concerns about privacy and security may help to explain the reluctance of many Americans to adopt broadband.<sup>28</sup> In principle, this is a perfectly legitimate inquiry: Congress did

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<sup>27</sup> See Pleading Cycle Established for Comments on Electric Power Board & City of Wilson Petitions, Pursuant to Section 706 of the Telecommunications Act of 1996, Seeking Preemption of State Laws Restricting the Deployment of Certain Broadband Networks, *Comments of International Center for Law & Economics & TechFreedom*, WCB Docket Nos. 14-115 & 14-116, at 10-12 (Aug. 29, 2014), available at <http://apps.fcc.gov/ecfs/document/view?id=7521826211>; see also Remarks of Matthew Berry, Chief of Staff to FCC Comm'r Ajit Pai, at the Nat'l Conference of State Legislatures' 2014 Legislative Summit (Aug. 20, 2014), available at [http://transition.fcc.gov/Daily\\_Releases/Daily\\_Business/2014/db0820/DOC-328916A1.pdf](http://transition.fcc.gov/Daily_Releases/Daily_Business/2014/db0820/DOC-328916A1.pdf) ("It's not hard, then, to imagine a future FCC concluding that taxpayer-funded, municipal broadband projects themselves are barriers to infrastructure investment. So if the current FCC were successful in preempting state and local laws under Section 706, what would stop a future FCC from using Section 706 to forbid states and localities from constructing any future broadband projects? Nothing that I can see.").

<sup>28</sup> NOI, ¶ 47 ("A 2010 Commission staff paper found 78 percent of those that responded to a 2009 survey were already Internet users and 65 percent were broadband users and that 39 percent of broadband users expressed security concerns, while non-adopters were almost 50 percent more likely than broadband users to raise concerns about security of personal information online. The staff paper also deduced that "[t]his is one factor linked to their lower likelihood of adoption" and there was "significant positive correlation between high levels of worries about personal privacy and non-adoption" of broadband. We seek comment on the staff paper, including the use of a consumer survey as a basis for such findings and whether the work can be validated. What is the correlation between such worries and non-adoption today? Are there other more recent studies or surveys that may complement or contradict the staff paper's findings? How does the data from 2009 compare to the Commission's recent status reports on Internet Access Services? Are there differences in levels of concern in accessing the Internet in general, as compared to accessing it via broadband? If so, what would justify these differences? What is the relevance of privacy and/or security to our section 706(b) determination? Do concerns over personal privacy or security deter consumers from adopting broadband? If so, how are broadband providers addressing these concerns? What other factors or concerns about privacy and security may account for broadband adoption by consumers? Do these other factors have a greater correlation to the lower likelihood of adoption and deployment? What do consumers know about providers' current privacy or security practices and how much of their understanding is accurate?")

indeed ask the FCC, as its expert agency on communications policy, to apply its expertise to an annual study of factors that may retard broadband deployment.<sup>29</sup> And the Commission may well be correct that privacy and security concerns are real barriers to connecting, in particular, older and poorer Americans. But as a policy matter, the Commission should exercise that discretion carefully — lest even seemingly minor administrative shifts in framing of the Commission’s standards under Section 706 be used to justify major shifts in broadband policy, which could disrupt broadband investment and deployment, and thus harm consumers.

## The Commission’s Broadband Reporting Process

Since Section 706(b) was enacted, the FCC has conducted multiple inquiries and issued several reports. In the first (1999),<sup>30</sup> second (2000),<sup>31</sup> third (2002),<sup>32</sup> fourth (2004),<sup>33</sup> and fifth reports (2008),<sup>34</sup> the FCC determined that broadband was being deployed to all Americans in a reasonable and timely fashion. Then, beginning with the sixth report (2010), the Commission changed course, and found that "broadband deployment to *all* Americans [had

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What information do broadband providers voluntarily share with consumers about their privacy and security practices, including regarding their security risk management programs? If privacy and/or security statements are offered voluntarily, are there any obligations, contractual or otherwise, for broadband providers to comply with such commitments? Are there other obligations regarding privacy and/or security which broadband providers may be subject? If so, what are these, and what relevance, if any, would they have to our determination? What is the relationship, if any, between increased consumer awareness of online privacy and security practices and adoption of broadband? How, if at all, do the answers to these questions differ between urban and rural consumers, or between customers of large or small companies?").

<sup>29</sup> See 47 U.S.C. § 1302.

<sup>30</sup> See Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable And Timely Fashion, and Possible Steps To Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996, *Report*, CC Docket No. 98-146 (Jan. 28, 1999), available at <http://www.fcc.gov/reports/first-broadband-progress-report>.

<sup>31</sup> See Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable And Timely Fashion, and Possible Steps To Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996, *Second Report*, CC Docket No. 98-146 (Aug. 3, 2000), available at [https://apps.fcc.gov/edocs\\_public/attachmatch/FCC-00-290A1.pdf](https://apps.fcc.gov/edocs_public/attachmatch/FCC-00-290A1.pdf).

<sup>32</sup> See Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable And Timely Fashion, and Possible Steps To Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996, *Third Report*, CC Docket No. 98-146 (Feb. 6, 2002), available at [https://apps.fcc.gov/edocs\\_public/attachmatch/FCC-02-33A1.pdf](https://apps.fcc.gov/edocs_public/attachmatch/FCC-02-33A1.pdf).

<sup>33</sup> Availability of Advanced Telecommunications Capability in the United States, *Fourth Report to Congress*, GN Docket No. 04-54 (Sept. 9, 2004), available at [https://apps.fcc.gov/edocs\\_public/attachmatch/FCC-04-208A1.pdf](https://apps.fcc.gov/edocs_public/attachmatch/FCC-04-208A1.pdf).

<sup>34</sup> See Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable And Timely Fashion, and Possible Steps To Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996, *Fifth Report*, GN Docket No. 07-45 (Mar. 19, 2008), available at [https://apps.fcc.gov/edocs\\_public/attachmatch/FCC-08-88A1.pdf](https://apps.fcc.gov/edocs_public/attachmatch/FCC-08-88A1.pdf).

not been] not reasonable and timely."<sup>35</sup> The Commission's 2011 finding was the same, in its seventh report,<sup>36</sup> and a negative finding also followed in the eighth report (2012).<sup>37</sup> Then, somewhat curiously, the ninth broadband deployment progress report was circulated amongst Commission staff, but was never adopted, so no report to Congress was ever made on it.<sup>38</sup> The obvious inference is that the Commission simply chose not to approve the report for political reasons, perhaps having to do with the D.C. Circuit's *Verizon* decision, which was expected to come down at any time.

But regardless of that aberration, the trend lines are pretty clear: Broadband deployment was going swimmingly from 1998 to 2010, but then took a sharp downturn and has yet to recover – according to the FCC. While this narrative fit the FCC's new post-2009 regulatory agenda, it did not fit the facts in the real world. In fact, there have been multiple commercial developments and technical innovations since the year 2010 that have allowed broadband providers to deliver ever better and faster services to their consumers. Most notably, cable companies completed upgrades to the DOCSIS 3.0 standard, allowing them to provide speeds up to 1.5 Gbps downloads and 150 Mbps uploads;<sup>39</sup> mobile wireless providers upgraded their networks to 4G LTE, allowing them to provide speeds up to 300 Mbps downloads and 75 Mbps uploads;<sup>40</sup> average satellite broadband speeds increased hugely as Ka-band satellites began to replace Ku-band satellites;<sup>41</sup> Verizon

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<sup>35</sup> See Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable And Timely Fashion, and Possible Steps To Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996, as Amended by the Broadband Data Improvement Act, *Sixth Broadband Deployment Report*, GN Docket No. 09-137, ¶ 2 (July 16, 2010) [*Sixth Broadband Deployment Report*] (emphasis in original), available at [https://apps.fcc.gov/edocs\\_public/attachmatch/FCC-10-129A1\\_Rcd.pdf](https://apps.fcc.gov/edocs_public/attachmatch/FCC-10-129A1_Rcd.pdf).

<sup>36</sup> See Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable And Timely Fashion, and Possible Steps To Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996, as Amended by the Broadband Data Improvement Act, *Seventh Broadband Progress Report & Order on Reconsideration*, GN Docket No. 10-159 (May 20, 2011), available at [https://apps.fcc.gov/edocs\\_public/attachmatch/FCC-11-78A1.pdf](https://apps.fcc.gov/edocs_public/attachmatch/FCC-11-78A1.pdf).

<sup>37</sup> See Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable And Timely Fashion, and Possible Steps To Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996, as Amended by the Broadband Data Improvement Act, *Eighth Broadband Progress Report*, GN Docket No. 11-121 (Aug. 14, 2012), available at [https://apps.fcc.gov/edocs\\_public/attachmatch/FCC-12-90A1.pdf](https://apps.fcc.gov/edocs_public/attachmatch/FCC-12-90A1.pdf).

<sup>38</sup> See NOI, ¶ 2, n. 5.

<sup>39</sup> Ryan Whitwam, *DOCSIS 3.1 Could Let Cable Companies Compete with Google Fiber*, GEEK (Oct. 31, 2013), available at <http://www.geek.com/news/docsis-3-1-could-let-cable-companies-compete-with-google-fiber-1575770/>.

<sup>40</sup> Sonia Rathi, et al. *Throughput for TDD & FDD 4G LTE Systems*, 3 INT'L J. OF INNOVATIVE TECH. & EXPLORING ENGINEERING 73 (May 2014), available at <http://www.ijitee.org/attachments/File/v3i12/L16590531214.pdf>.

<sup>41</sup> See, e.g., ViaSat, *High-Capacity Satellite System* (last visited Sept. 4, 2014), available at <https://www.viasat.com/broadband-satellite-networks/high-capacity-satellite-system> (discussing the various

completed most of its deployment of FiOS,<sup>42</sup> while other telcos have upgraded or have begun upgrading their twisted-copper infrastructure to VDSL, which delivers download speeds of up to 52 Mbps and upload speeds up to 16 Mbps;<sup>43</sup> fiber companies like Google Fiber and Sonic.net deployed a third fiber pipe, prompting telcos to begin deploying fiber to the home as Verizon had done;<sup>44</sup> and finally, increased fiber deployment across the board forced cable companies to increase speeds in many urban markets.<sup>45</sup> However, despite those tremendous advances in deployment, investment and competition (the three clear criteria of Section 706(b)), the Commission has yet to issue a positive finding under Section 706(b) since, in 2010, it adopted the new speed test of 4 Mbps download and 1 Mbps upload as the benchmark for testing the level of broadband deployment.<sup>46</sup> The Commission now proposes to increase that benchmark to a 10 Mbps download speed.<sup>47</sup> As in 2010, the Commission now proposes to increase the 706(b) benchmark as a way of updating it to reflect consumers' changed usage habits.<sup>48</sup> Thus, the Commission now proposes to use a 10 Mbps benchmark because that is enough throughput to accommodate the broadband needs of a "Moderate Use Household."<sup>49</sup> This new benchmark may be a better threshold for determining the degree of broadband deployment, but as IP-based services continue to increase in quality, they will demand increasing throughput in order to maintain a high quality of experience for end-users, meaning that the benchmark threshold will have to be continually adjusted upward, which potentially raises a number of problems.

## Enduring Metrics for the Future

The problem with the FCC's *Sixth Broadband Progress Report* was not its conclusion: "Reasonable and timely deployment" is obviously a moving target that will necessarily depend on consumer demands. As consumers' expectations of speed grow, it might well be

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benefits of the recently implemented Ka-band satellite system, capable of delivering 100 times the capacity of the Ku-band system, with 134 Gbps total throughput).

<sup>42</sup> Peter Svensson, *Verizon Winds Down Expensive FiOS Expansion*, USA TODAY (Mar. 26, 2010), available at [http://usatoday30.usatoday.com/money/industries/telecom/2010-03-26-verizon-fios\\_N.htm](http://usatoday30.usatoday.com/money/industries/telecom/2010-03-26-verizon-fios_N.htm).

<sup>43</sup> Jeff Tyson, *How VDSL Works*, HOWSTUFFWORKS? (last visited Sept. 4, 2014), available at <http://computer.howstuffworks.com/vdsl2.htm>.

<sup>44</sup> Jess Bolluyt, *AT&T Beats Google to Expand Fiber Internet to North Carolina*, TECHCHEATSHEET (June 20, 2014), available at <http://wallstcheatsheet.com/technology/att-beats-google-to-expand-fiber-internet-to-north-carolina.html/?a=viewall>.

<sup>45</sup> Jeff Baumgartner, *Cox Kicks Off Speed Upgrades*, MultiChannelNews (July 17, 2014), available at <http://www.multichannel.com/news/technology/cox-kicks-speed-upgrades/382578>.

<sup>46</sup> *Sixth Broadband Deployment Report*, ¶ 5.

<sup>47</sup> NOI, ¶ 14.

<sup>48</sup> See *id.*, ¶ 14-15.

<sup>49</sup> *Id.*, ¶ 14.

reasonable, at some point, for the Commission to conclude that broadband supply has essentially failed to keep pace with demand.<sup>50</sup>

The problem — besides claiming that Section 706 is itself a grant of authority — is that the Commission has lost sight of what its analytical focus is supposed to be under Section 706. Section 706 does not even mention “adoption” or any equivalent concept — only broadband deployment, investment and competition. Yet the Commission in the NOI, as it did in the Open Internet Order, seems ready to rush into the contentious (and already heavily regulated — by the FTC and other agencies) issues of privacy and security, rather than focusing on clear, objective measures of the things Section 706 actually talks about: How much investment is taking place? Is the market growing more or less concentrated (such as measured by summing the squares of percentage market shares to produce an HHI index)? Is competition succeeding in driving up speeds and other measures of quality relative to price?

There is good reason for optimism that deployment has actually flourished. The FCC’s own Measuring Broadband America Report on Fixed Broadband, based on June 2013 data notes that:

those ISPs using DSL technology show little or no improvement in maximum speeds, with the sole exception of Qwest/Centurylink, which this past year doubled its highest download speed within specific market areas. The reason for this may be that DSL, unlike cable and fiber technologies, is strongly dependent upon the length of the copper wire (or “loop”) from the residence to the service provider’s terminating electronic equipment, such that obtaining higher data speeds would require companies to make significant capital investments across a market area to shorten the copper loops.<sup>51</sup>

The Commission missed the critical point: CenturyLink was merely the first big telco to upgrade its network from offering ADSL (1-6 Mbps) to VDSL2 (20-100 Mbps).<sup>52</sup> AT&T has

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<sup>50</sup> See *Sixth Broadband Deployment Report*, ¶ 4.

<sup>51</sup> FCC Office of Eng’g & Tech. & Consumer & Governmental Affairs Bureau, *A Report on Consumer Wireline Broadband Performance in the U.S.* (June 2014), available at <http://www.fcc.gov/reports/measuring-broadband-america-2014 - Chart19>.

<sup>52</sup> See, e.g., Sean Buckley, *Report: CenturyLink to Deliver 100 Mbps VDSL2 Service*, FIERCETELECOM (Apr. 10, 2012), available at <http://www.fiercetelecom.com/story/report-centurylink-deliver-100-mbps-vdsl2-service/2012-04-10> (describing CenturyLink’s planned upgrades).

already begun upgrading its own network<sup>53</sup> and other telcos are following suit.<sup>54</sup> These upgrades help to explain why DSL providers have actually been adding subscribers at far higher rates than cable operators. Even in 2Q2013, AT&T added more DSL subscribers than Comcast, Time Warner Cable and Charter combined (731,000 v 663,000).<sup>55</sup> These are the kind of metrics the Commission should be focused on. What clearer evidence could there be that broadband is “being deployed to all Americans in a reasonable and timely fashion” than that telco, third-pipe fiber companies and wireless broadband are gaining market share relative to cable, the market leader, by offering higher speeds, and that cable providers are responding in kind by raising their own speed offerings? Would not the continued annual investment among all these providers indicate a reasonable level of success?

If, instead, the Commission is to focus on speed numbers, it must take care to avoid setting arbitrary goals based on its assertions as to what Americans *should* be doing with broadband, and instead focus on what they are *actually* doing with broadband. The “all Americans” language in Section 706 could reasonably be interpreted to imply a Congressional concern for some degree of equality of opportunity across geographic and socioeconomic lines to access broadband at affordable prices — although, again, Section 706 does not actually refer to adoption, and since 2/3 of non-broadband-adopters say they will not adopt broadband at any price, it would be hugely over-simplistic to suggest that broadband simply is not being deployed at a low enough price. In fact, the FCC has already identified a host of other factors around perceived relevance and digital literacy that must be addressed.<sup>56</sup> These are indeed problems, but they are not properly within the scope of Section 706’s focus: broadband deployment, investment and competition. For example, instead of simply deciding that “advanced telecommunications capability” must include the ability to stream Netflix, the Commission could focus on actual broadband usage patterns among an adequately large percentage of households in areas that have already received the benefit of “reasonable and timely” broadband deployment — and then ask

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<sup>53</sup> Jeff Baumgartner, *AT&T's to Bring 'GigaPower' to St. Louis*, MULTICHANNELNEWS (Sept. 9, 2014), available at <http://www.multichannel.com/news/technology/att-s-bring-gigapower-st-louis/383511>.

<sup>54</sup> Jeff Baumgartner, *Charter Bumps Entry-Level Speed to 100-Meg in St. Louis*, MULTICHANNELNEWS (JUNE 16, 2014), available at <http://www.multichannel.com/news/technology/charter-bumps-entry-level-speed-100-meg-st-louis/375177>.

<sup>55</sup> Bernie Arnason, *AT&T is Crushing Cable: Is Super Fast Broadband Really Necessary*, TELECOMPETITOR (July 24, 2013), available at <http://www.telecompetitor.com/att-is-crushing-cable-is-super-fast-broadband-really-necessary/>.

<sup>56</sup> See Josh Gottheimer & Jordan Usdan, Chairman's Office, *FCC & Connect To Compete Tackle Broadband Adoption Challenge* (Oct. 13, 2011), available at <http://www.fcc.gov/blog/fcc-and-connect-compete-tackle-broadband-adoption-challenge>.

whether the rest of the country is catching up in a “reasonable and timely” fashion. If properly applied, this methodology would reflect the basic reality that broadband deployment will always proceed faster in some markets than in others, and that policies designed to ensure equal deployment everywhere would slow broadband deployment overall, thus harming consumers in the name of perfect equality.<sup>57</sup>

What minimum speed threshold might such a methodology suggest today? As a first approximation of an answer, consider just Google Fiber subscribers. This would be far too narrow a sample for a Section 706(b) inquiry, but since Google Fiber is the fastest service on the U.S. market today, it is illustrative. What speed levels do Google Fiber subscribers actually use? Since the Commission is obsessively focused on streaming Netflix, it is worth noting that, even on Google Fiber’s 1,000 gbps service, Netflix still streams, on average, at between 3.5 and 3.65 mbps<sup>58</sup> — not significantly higher than some cable companies, and only 25% faster than, say, Comcast (2.82 mbps in July 2014).<sup>59</sup> These are, of course, average streaming speeds and it is possible that they reflect a mix of Standard Definition (SD) and High Definition (HD) streaming. But if, even on Google Fiber, where presumably there would be no reason to stream anything other than HD, users are still streaming only 3.5-3.65 mbps on average, should this number not give us some sense of the outer boundary of current actual bandwidth needs?

The Chairman, in a speech delivered on the day comments in this proceeding were due, asserted that “Four megabits per second isn’t adequate when a single HD video delivered to home or classroom requires 5 Mbps of capacity.”<sup>60</sup> Tell that to Google Fiber — or Netflix, whose online “Internet Connection Speed Recommendations” page clearly specifies:

3.0 Megabits per second - Recommended for SD quality

5.0 Megabits per second - Recommended for HD quality<sup>61</sup>

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<sup>57</sup> It is worth noting that, as approved by the 10th Circuit Court of Appeals in Cedar Valley, *supra* note 5, broadband is now included under the Commission’s Universal service principles, but even those principles recognize that access in rural and high cost areas need only be reasonably comparable to the quality and cost of access in urban areas. 47 U.S.C. § 254(b)(3).

<sup>58</sup> See Netflix, *USA ISP Speed Index Results Graph* (April 2014 – July 2014) (last visited Sept. 4, 2014), available at <http://ispspeedindex.netflix.com/results/usa/graph>.

<sup>59</sup> *Id.*

<sup>60</sup> Prepared Remarks of FCC Chairman Tom Wheeler at 1776 Headquarters, Washington, DC, *The Facts & Future of Broadband Competition* (Sept. 4, 2014), available at [http://transition.fcc.gov/Daily\\_Releases/Daily\\_Business/2014/db0904/DOC-329161A1.pdf](http://transition.fcc.gov/Daily_Releases/Daily_Business/2014/db0904/DOC-329161A1.pdf).

<sup>61</sup> Netflix, *Internet Connection Speed Recommendations* (last visited Sept. 4, 2014), available at <https://help.netflix.com/en/node/306>.

This strange error simply highlights the dangers of relying on assertions about what is “required” rather than looking at *actual* use. If the Commission persists in inventing minimum standards of use rather than distilling them from actual use patterns, this kind of problem will persist in the future, with the Commission perpetually revising its threshold according to arbitrary criteria that do not reflect actual usage. Instead, the Commission should develop a methodology that can remain constant as the data changes, such as by sampling *actual* peak bandwidth *usage* (not purchased speeds) among all users in a the top, say, 25% fastest broadband markets, and asking how speeds in the rest of the country compare with those speeds. Measuring broadband deployment using a metric such as this, which relies more on standard deviation than upon any arbitrary minimum baseline level of throughput, would be a much more enduring way to measure whether the level and degree of broadband deployment overall, since it would be less subject to the skewing effect of outlying super-users<sup>62</sup> and more representative of the average and typical broadband usage and need. Additionally, such a metric would be less manipulable by future Commissions of differing political views, because such a metric would not need periodic adjustments to keep up with increasing bandwidth usages and needs since those would automatically be incorporated into any calculation of standard deviation, as it is based on both the mean and spread of a given data set. We strongly encourage the Commission to consider this, or another similar metric to replace the speed benchmarking it has been using in its Section 706(b) inquiries to date.

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<sup>62</sup> For example, Netflix now offers Ultra HD 4K video streaming to some of its customers — the ones able to afford an Ultra HD 4K capable television — which purportedly takes up 25 Mbps of throughput. *Id.* That activity, perhaps on multiple different devices at once along with other IP-based activities, could push the upward limits of many ISPs’ service offerings, but the proportion of consumers able to afford and adopt these activities will surely remain a small minority for the immediate future, and that subgroup may never outgrow the subgroup of users who consumer little if any broadband and have no interest in subscribing to higher speeds than a few Mbps up or down.