

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

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

Petitions Pursuant to Section 706 of the Telecommunications Act of 1996 for Removal of State Barriers to Broadband Investment and Competition

GN Docket No. 14-126

WC Docket No. 14-115 (Wilson)  
WC Docket No. 14-116 (Chattanooga)

**REPLY COMMENTS OF THE INTERNET ASSOCIATION**

**I. INTRODUCTION**

The Internet Association files these Reply Comments to emphasize the importance of focusing federal policy on broadband abundance—the expansion of truly high-speed broadband services across the country. The Internet Association represents the interests of America’s leading Internet companies and their global community of users. It is dedicated to advancing public policy solutions to strengthen and protect Internet freedom, foster innovation and economic growth, and empower users. The Internet Association’s members span a wide variety of business models that compete over a wide spectrum of markets and sometimes against each other, but they stand together here to protect an open Internet.<sup>1</sup>

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<sup>1</sup> The Internet Association represents the world’s leading Internet companies including: Airbnb, Amazon, AOL, eBay, Expedia, Facebook, Gilt, Google, IAC, LinkedIn, Lyft, Monster Worldwide, Netflix, Practice Fusion, Rackspace, reddit, Salesforce.com, SurveyMonkey, TripAdvisor, Twitter, Uber Technologies, Inc., Yelp, Yahoo!, and Zynga.

## II. THE COMMISSION IS CHARGED WITH PROMOTING BROADBAND ABUNDANCE

The Internet has become an indispensable tool. Whether used in a professional or personal capacity, the Internet has provided us with new tools that have changed the way we work, interact, learn, and entertain. Further evolution of these Internet-enabled tools hinges critically upon the Commission’s ability to fulfill its mandate under Section 706 to ensure the timely deployment of *advanced* telecommunications capability to the entire nation.<sup>2</sup> As the Commission has previously recognized, fulfillment of this duty depends critically upon the virtuous circle of innovation in which “new uses of the network—including new content, applications, services, and devices—lead to increased end-user demand for broadband, which drives network improvements, which in turn lead to further innovative network uses.”<sup>3</sup>

New and higher forms of broadband provide an avenue for the deployment of increasingly advanced edge services. For example, once wireline broadband services began providing 4 Mbps download capacity, edge providers were able to offer consumers innovative standard-definition streaming video services.<sup>4</sup> As those speeds have increased, those same video providers began providing high-definition video, starting a chain reaction of device and service development and broadband deployment. Today, in some areas, consumers can watch Ultra High-Definition 4K video from their favored online video distributor, on an Internet-connected

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<sup>2</sup> 47 U.S.C. § 1302(a).

<sup>3</sup> *Verizon v. FCC*, 740 F.3d 623, 661 n.4 (D.C. Cir. 2014).

<sup>4</sup> See Internet Connection Speed Recommendations, Netflix, <https://help.netflix.com/en/node/306> (last visited Sept. 15, 2014) (recommending 5 Mbps for HD quality streaming); Apple TV (2nd and 3rd generation): Troubleshooting Playback Performance, Apple, <http://support.apple.com/kb/TS3623> (last visited Sept. 15, 2014) (recommending 6 Mbps for HD quality streaming).

television designed specifically for the purpose.<sup>5</sup> Similarly, deployment of wireless 3G data services spawned new uses for mobile phones, leading to the development of new and innovative applications, higher-powered mobile devices, and necessitating higher-speed mobile data networks. As a consequence, 4G LTE service is today more of a necessity than a luxury.

The positive effects on the economy cannot be overstated. For example, revenues from streaming videos grew 175 percent between 2010 and 2013, from \$1.86 billion to \$5.12 billion.<sup>6</sup> In addition, the mobile application economy alone was worth \$53 billion in 2012, and was expected to reach \$68 billion in 2013.<sup>7</sup> The Internet economy is expected to reach \$4.2 trillion in the G-20 economies alone.<sup>8</sup>

### **III. THE COMMISSION'S CURRENT BROADBAND SPEED BENCHMARK IS OUTDATED**

To further the virtuous circle, the Commission is called upon to develop policies that incentivize the expansion of broadband networks to the unserved or under-served portions of the country. But just any service will not do; the service must provide “advanced” telecommunications capability. What the industry and consumers have viewed as “advanced” has changed over time. Compared to the dial-up services of the past, the introduction of U.S. Robotics’ 56K modem was truly an event. But that technology quickly became antiquated after

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<sup>5</sup> See, e.g., David Katzmaier, *Netflix Begins 4K Streams*, CNet (Apr. 8, 2014), <http://www.cnet.com/news/netflix-begins-4k-streams/>; Jill Scharr, *Amazon’s Original Programming Will Be Shot in 4K*, TomsGuide (Dec. 16, 2013), <http://www.tomsguide.com/us/amazon-filming-shows-4k,news-17991.html>.

<sup>6</sup> Promoting and Protecting the Open Internet, GN Docket No. 14-28, Notice of Proposed Rulemaking, FCC 14-61 ¶ 32 (rel. May 15, 2014).

<sup>7</sup> DeveloperEconomics, *Sizing the App Economy Report (Q3 2013)*, available at <http://www.developereconomics.com/report/sizing-the-app-economy/>.

<sup>8</sup> Boston Consulting Group, *The Internet Economy in the G-20* (Mar. 19, 2012), available at [https://www.bcgperspectives.com/content/articles/media\\_entertainment\\_strategic\\_planning\\_4\\_2\\_trillion\\_opportunity\\_internet\\_economy\\_g20/](https://www.bcgperspectives.com/content/articles/media_entertainment_strategic_planning_4_2_trillion_opportunity_internet_economy_g20/).

deployment of 1.5 Mbps DSL and cable broadband services began. Nearly two decades later, 4 Mbps service now also seems too slow to be worthy of the name “broadband.”

The Internet Association agrees with the Chairman that consumers and content providers have moved well beyond the current benchmark.<sup>9</sup> It is an increasingly common occurrence for multiple devices to be using a single household’s broadband connection.<sup>10</sup> The market for Internet-connected devices has exploded over the last few years, and consumers are increasingly using multiple devices to access different services at the same time—e.g., streaming video onto a television while surfing the web or checking email. The services being accessed are also increasingly media rich, requiring significantly greater bandwidth than in the past, including the deployment of 4K video, advanced gaming systems, and high-definition video conferencing services. While the ISPs argue that the current 4 Mbps benchmark is sufficient for consumers’ needs,<sup>11</sup> they advertise speeds in excess of 25 Mbps as necessary for now common Internet activities such as gaming or streaming video, and for homes with multiple users. For example,

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<sup>9</sup> See Prepared Remarks of Tom Wheeler, Chairman, FCC, The Facts and Future of Broadband Competition at 2 (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) (“[T]he FCC’s current broadband definition of 4 Mbps ... is ‘yesterday’s broadband.’”).

<sup>10</sup> See *id.* (“It’s not uncommon for a U.S. Internet-connected household to have six or more connected devices.”).

<sup>11</sup> See Comments of AT&T, MB Docket No. 14-126, at 9 (filed Sept. 4, 2014) (“Consumer behavior strongly reinforces the conclusion that a 10 Mbps service exceeds what many Americans need today to enable basic, high-quality transmissions.”); Comments of Verizon, MB Docket No. 14-126, at 30 (filed Sept. 4, 2014) (“[T]he data confirm that services providing 4 Mbps/1 Mbps are still popular and meaningful to consumers.”); Comments of the National Cable & Telecommunications Association, MB Docket No. 14-126, at 5 (filed Sept. 4, 2014) (“[T]he Commission should not change the baseline broadband speed threshold from 4Mbps downstream and 1Mbps upstream because a 4/1 Mbps connection is still sufficient to perform the primary functions identified in section 706—high-quality voice, video, and data.”).

Comcast advertises speeds of 105 Mbps for teleconferencing, HD video, and online gaming;<sup>12</sup> Verizon advertises speeds of 50 Mbps for online gaming and streaming multiple HD videos simultaneously;<sup>13</sup> and TWC advertises speeds of at least 20 Mbps for online gaming and steaming without interruptions, and 100 Mbps for households with multiple users.<sup>14</sup>

### Advertised Broadband Offerings from FiOS, TWC, and Comcast

Internet Plan	Speed Explained
<b>Ultimate</b> Up to 100 Mbps download Up to 5 Mbps upload	TWC's fastest available speed. Up to 50 Mbps in most locations, but up to 100 Mbps and up to 75 Mbps in some areas*. Great for telecommuters, busy households and multiple users. <a href="#">Order or upgrade &gt;</a>
<b>Extreme</b> Up to 30 Mbps download Up to 5 Mbps upload	For homes with multiple users who upload huge files, stream videos, play games online and need to work from home. <a href="#">Order or upgrade &gt;</a>
<b>Turbo</b> Up to 20 Mbps download Up to 2 Mbps upload	Turbo is for you if you want to download large files, play online games and watch streaming video without buffering. <a href="#">Order or upgrade &gt;</a>

**Best for 3-5 devices at the same time**

- Share photos and files in a flash
- Enjoy online gaming
- Stream up to 5 HD videos simultaneously\*

**xfinity**

**Blast!® Plus**  
\$59.99 per month for 12 months  
No term contract

Internet up to 105 Mbps  
TV 45 Channels  
Extras HBO GO

**Add to Cart**

- Fastest, most reliable in-home WiFi
- Game, download HD movies, connect devices
- HBO®, Streampix® & popular channels

[Details and Restrictions](#)

To reflect “advanced” broadband capability, the benchmark must provide sufficient room for the development of future, media-rich services. The introduction of gigabit services by traditional telephony providers and (soon) cable providers suggests that services providing 25 Mbps, which may be “table stakes” today, will soon no longer serve the basic needs of most consumers.

<sup>12</sup> See Comcast, New Customer Offers in Washington, DC, <http://www.comcast.com/internet-service.html> (last visited Sept. 15, 2014).

<sup>13</sup> See Verizon, Most Popular Internet Plans, <http://www.verizon.com/home/fios-fastest-internet/> (last visited Sept. 15, 2014).

<sup>14</sup> See TWC, Test Your Internet Speed from Home, <http://www.timewarnercable.com/en/support/speed-test.html> (last visited Sept. 15, 2014).

#### **IV. PART OF THE COMMISSION'S MANDATE IS TO IDENTIFY IMPEDIMENTS TO BROADBAND ABUNDANCE**

Increasing the broadband benchmark alone will not result in the timely deployment of advanced communications. The Commission also must act to ensure adequate protections for the virtuous circle of investment, or else risk future investment by edge providers (particularly by new entrants), and create an immense impediment to future broadband deployment.

One of the keys to protecting the circle of innovation is simple, light-touch open Internet rules designed to serve a three-fold purpose: maintain an open Internet; mitigate broadband Internet access providers' incentives to discriminate against and block content; and avoid disrupting the delicate balance that stakeholders have already established.

The Commission also should take a close look at how broadband providers employ data caps and interconnection policies. Restrictive data caps effectively ration consumer use of broadband;<sup>15</sup> restrictive interconnection requirements and network arrangements similarly ration edge providers' abilities to provide consumers with the data they have requested—directly undermining the virtuous circle. When used discriminatorily, both data caps and interconnection can undermine the future ability of independent services and voices to reach the public. Such policies have no place in a free and open Internet.

The Commission should also take a careful look at restrictions on competitive supply of set-top equipment. Broadband providers are increasingly vertically integrated with multichannel video programming distributors ("MVPDs"). The Commission and the Department of Justice have recognized that MVPDs have a vested interest in protecting their own video services and, as a consequence, often restrict competitive set-top equipment from operating on or through their

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<sup>15</sup> Leslie Horn, *You Can Burn Through Your Entire Broadband Data Cap in One Long Weekend*, Gizmodo (Feb. 18, 2014), <http://gizmodo.com/you-can-burn-through-your-entirebroadband-data-cap-in-1524579598>.

systems, while often closing to third-party applications the few devices that are operable.<sup>16</sup> These practices inhibit consumer uptake of third-party devices and services, which in turn limits deployment of third-party content. For example, Comcast does not allow its subscribers to access HBO Go through the popular Roku device.<sup>17</sup> Access to OVD content, however, has been a key driver of consumer demand for increased broadband speeds. Any activity that limits the deployment of edge services necessarily suppresses the virtuous circle and should be carefully examined by the Commission.

Finally, the Commission should use the full weight of its authority to prevent any private or public entity from inhibiting the deployment of broadband networks or standing in the way of increased competition in providing those services. The Commission is right to carefully examine state laws adopted to prevent a local government from creating a high speed broadband service, especially in municipalities that are underserved. As stated above, in conducting its assessment, the Commission should carefully examine not only whether these state laws are standing in the way of deployment of broadband into new areas, but whether they are impeding the deployment of truly advanced services.

Respectfully submitted,

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<sup>16</sup> Applications of Comcast Corp., General Electric Co. and NBC Universal, Inc. for Consent to Assign Licenses and Transfer Control of Licensees, *Memorandum Opinion and Order*, 26 FCC Rcd. 4238, 4263 ¶¶ 60-62, 4277 ¶ 97 (2011); Complaint, *United States v. AT&T*, No. 1:00-cv-01176, at 10 ¶ 25 (D.D.C. May 25, 2000).

<sup>17</sup> Jeff Baumgartner, *Next TV: Comcast Testing TV Everywhere Authentication On Apple TV, Roku Devices*, Multichannel News (Mar. 19, 2014), <http://www.multichannel.com/news/content/next-tv-comcast-testing-tv-everywhere-authentication-apple-tv-roku-devices/355885>.