

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

In the Matter of)
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)
Protecting and Promoting the Open Internet) GN Docket No. 14-28
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COMMENTS OF THE INTERNET ASSOCIATION

The Internet Association submits the following comments in response to the Federal Communications Commission’s (“Commission” or “FCC”) May 15, 2014 Notice of Proposed Rulemaking (“NPRM” or “Notice”), GN Docket No. 14-28, in the above-captioned proceeding.

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I. INTRODUCTION

Preserving the Internet’s neutrality ensures that it remains an engine for economic growth, innovation, and democratic values. The Internet is a multi-stakeholder, layered platform built on an open and neutral architecture. These characteristics fuel its success and spin the “virtuous circle.”¹ Yet, the Internet’s continued success is not inevitable. Broadband Internet access providers continue to have the ability and the incentive to clog that virtuous circle.

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

¹ In 2010, the Commission found that the “Internet’s openness is critical to these outcomes, because it enables a ‘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.” Preserving the Open Internet, *Report and Order*, 25 FCC Rcd. 17905, 17910-911 ¶ 14 (2010) (*Open Internet Order*).

to protect an open Internet.² Our members realize that only an open and neutral Internet can create and sustain the benefits that the Internet has introduced for all stakeholders.

Broadband Internet access providers, however, have the incentive to discriminate and block Internet traffic. They have the tools carry this out. They also have the ability to hide their actions by distributing the blame to other stakeholders.

We thus urge the Commission to adopt simple, light-touch rules to ensure that the Internet remains open, dynamic, and spontaneous. Such rules will keep the Internet engine running smoothly, which in turn will fuel further economic growth, innovation, and democratic values. Accordingly, these rules should subject broadband Internet access providers to non-discrimination, no-blocking, and robust transparency requirements. Finally, the Commission should ensure that carriers are not engaged in any market abuses relating to transit and peering arrangements, and be prepared to exercise its authority to prevent any abuse that it uncovers.

The rules should apply regardless of whether a consumer accesses the Internet from a fixed wireline or a mobile wireless access provider. Applying uniform rules across platforms promotes predictability, confidence, and certainty for all stakeholders.

The adoption of such rules is timely and urgent. Today, there are no rules to protect the consumer from broadband Internet access providers discriminating among content providers.³ In

² 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.

³ In January 2014, the D.C. Circuit struck down the “non-discrimination” and “no-blocking” rules in the *Open Internet Order*, which requires broadband Internet access providers to treat all Internet traffic equally. The court held that the *Open Internet Order*'s non-discrimination and no-blocking requirements effectively impose common carrier obligations on broadband Internet access providers, which the Communications Act of 1996 forbade in light of the Commission's own prior determination that such providers were not “telecommunications services.” Accordingly, the court vacated these parts of the *Open Internet Order*. See *Verizon v. FCC*, 740

addition, new technologies have granted broadband Internet access providers an unprecedented ability to discriminate and block content in real time. This ability, in turn, gives them the financial incentive to discriminate and block content. The vertical integration of many broadband Internet access providers furthers this incentive.

The Commission must ensure that the Internet continues to be open and neutral. The non-discrimination, no-blocking, and robust transparency rules will safeguard the Internet's design, and they will allow the virtuous circle to continue spinning free of arbitrary constraints.

II. AN OPEN INTERNET IS CRITICAL TO THE CONTINUED SUCCESS OF THE INTERNET IN DRIVING ECONOMIC GROWTH, GENERATING INNOVATION, AND ADVANCING DEMOCRATIC DISCOURSE

The Internet has become an indispensable tool in today's world. Whether it is used in a professional or personal capacity, it has changed the way we work, interact, learn, and entertain. But the Commission cannot assume that the Internet will continue to be the gift that keeps on giving. The Internet faces many challenges. Such challenges include, but are not limited to, building capacity in underserved regions, threats from governments seeking to limit speech on the Internet, and proposals by governments to replace the existing multi-stakeholder approach to Internet governance with government regulation of the Internet.⁴ And yes, the Internet is

F.3d 623 (D.C. Cir. 2014). At least one broadband Internet access provider has admitted that, absent open Internet rules, it would discriminate against certain content. *Id.* at 646 (“[i]ndeed, at oral arguments Verizon’s counsel announced that ‘but for [the *Open Internet Order*] rules we would be exploring [commercial arrangements to grant prioritized access to edge providers willing to pay fees]”) (emphasis in original) (citation omitted).

⁴ In December 2012, 89 member-states of the International Telecommunications Union signed a non-binding resolution recognizing that “all governments should have an equal role and responsibility for international Internet governance and for ensuring the stability, security and continuity of the existing Internet and its future development and of the future Internet.” The United States, along with 79 other member-states, declined to sign the resolution. The non-signatory member-states disagreed with the language of the resolution, which promoted government control over the Internet. See Elise Ackerman, Forbes.com, *The U.N. Fought the Internet -- And the Internet Won; WCIT Summit in Dubai Ends*,

threatened by broadband Internet access providers who would turn the open, best-efforts Internet into a pay-for-priority platform more closely resembling cable television than today's Internet.⁵

The Commission must act to protect its open and neutral architecture, which is the force behind the Internet's success.

A. The Internet's Design Generates Innovation and Investment

There are two key design elements that promote the Internet's openness, and consequently its success: the Internet is a layered network, and it is an "end-to-end" network. Together, these elements deter discrimination, empower user choice, and foster innovation. By adopting the non-discrimination, no-blocking, and robust transparency rules, the Commission will ensure that the two key elements operate in the way they were designed.

First, the Internet is a layered network. In technical terms, it can be described using the Open Systems Interconnection (OSI) model, which is a reference tool for understanding data communications between networked systems.⁶ The Internet's layers stack on top of each other, and each layer relies on the layers below to provide it with support, while it supports the layers above it. This layered functionality is also called a "protocol suite." Protocols – *i.e.*, the network's rules – can operate in either hardware or software, or a combination of the two. "The

<http://www.forbes.com/sites/eliseackerman/2012/12/14/the-u-n-fought-the-internet-and-the-internet-won-wcit-summit-in-dubai-ends/> (last visited July 7, 2014).

⁵ Contrary to assertions that open Internet rules would regulate the Internet, The Internet Association simply urges the Commission to adopt rules that preserve the Internet's openness for all content. The Internet should be open and neutral, without interference from those in a position to block, degrade, or censor Internet content—whether it is a government or a company that provides the on-ramp to the Internet.

⁶ See Paul Simoneau, *The OSI Model: Understanding the Seven Layers of Computer Networks 3*, available at <https://www.ce.yildiz.edu.tr/personal/tevfik/file/256/OSI+Model.pdf>. See also Cisco, Open System Interconnection Protocols, http://docwiki.cisco.com/wiki/Open_System_Interconnection_Protocols (last visited July 7, 2014).

nature of these [protocols] is that the lower layers do their work in hardware or firmware (software that runs on specific hardware chips) while the higher layers work in software.”⁷ For example, the “physical” layer protocols govern the electrical transmission of data across the physical infrastructure; the “network” and “transport” layer protocols (including the Internet Protocol) route packets to their proper location; and the “application” layer protocols send and receive packets across the Internet to implement the services (*e.g.*, email, video streams) consumers use daily.⁸

The Internet requires all these layers to function properly. Because of layering, changes can be implemented in one layer without impacting other layers, “which enables application independence in that the underlying protocols allow arbitrary applications to be built and deployed without changing the Internet itself or its routers.”⁹

Layering relieves engineers from the difficult task of designing a single protocol to handle all network functions.¹⁰ Instead, the Internet relies on a division of labor. For example, the Internet was created and was used prior to the creation of the World Wide Web, which exists on the application layer, but requires all lower layers to operate. Instead of receiving permission to introduce it to the network, Tim Berners-Lee, the World Wide Web’s inventor, simply “plugged” the application into the network, which treated it as any other application running on the network at that time.

⁷ *Id.*

⁸ *Id.*

⁹ Brief of Internet Engineers and Technologists Urging that the FCC’s Order be Affirmed at 13, *Verizon v. FCC*, 740 F.3d 623 (D.C. Cir. 2014) (*Engineers’ Brief*).

¹⁰ *Id.*

Berners-Lee is a supporter of an open Internet, stating that “the alternative is a Web in which governments or large companies, or frequently a close association of the two, try to control the Internet, with packets of information delivered in a way that discriminates for commercial or political reasons.”¹¹ He has also stated that it is the Internet’s openness which creates value: “the underlying Internet and the [Web] are non-hierarchical, decentralized and radically open. The web can be made to work with any type of information, on any device, with any software, in any language. ... You don’t need to ask for permission. What you create is limited only by your imagination.”¹² Edge providers create tremendous value in the Internet. And that value is rooted in the fact that they can innovate without permission from governments or the companies that provide access to the Internet.

Well before the Web’s meteoric rise, however, one of the designers of the original Internet protocols, Dr. Vinton Cerf, also linked innovation to investment in the Internet arena. Specifically, he stated that “[i]nfrastructure development is almost always preceded by critical inventions which motivate the need for the infrastructure.”¹³ Examples include the light bulb, which “preceded and motivated the need for power generation and distribution,” and the “internal combustion engine and its application in automobiles,” which “motivated the need for better roads, service stations, gasoline refining and distribution.”¹⁴ Similar to these analogies,

¹¹ Tim Berners-Lee, *The Many Meanings of Open*, Telefonica Blog, <http://blog.digital.telefonica.com/2013/10/09/tim-berners-lee-telefonica-open-agenda/> (last visited July 7, 2014).

¹² Open Letter of Tim Berners-Lee, <http://www.datacenters.com/news/featured/an-open-letter-from-sir-tim-berners-lee-inventor-of-the-internet/> (last visited July 7, 2014).

¹³ *Hearing on Internet Security before the H. Comm. On Science, Space, and Technology*, 103d Cong. (Mar. 22, 1994) (written testimony of Dr. Vinton G. Cerf).

¹⁴ *Id.*

Dr. Cerf stated that “[t]he products and services which can be built atop the computer and communication infrastructure simply have no logical limits. It is this ceaselessly changing, growing, transmuting information resource which will fuel the economic engine of the information infrastructure.”¹⁵ The Internet’s design is a manifestation Dr. Cerf’s observations.

Second, the Internet is designed as an “end-to-end” network. In technical terms, end-to-end refers to the design principle that application-specific functions (*e.g.*, the ability to translate bits into a movie within a browser) should be located within the higher layers, without affecting the lower layers. This facilitates the introduction of new technologies without destabilizing the network, as the applications’ functions rest with the “ends” of the network where the applications are sent and received.¹⁶ It also increases network compatibility with a wide variety of applications, as the lower layers do not need to be optimized—instead, applications just use the lower layers to transit. Using Dr. Cerf’s automobile analogy, “[o]ptimizing the lower layers to benefit specific applications would limit the network’s generality—just as replacing roads with train tracks would limit the types of vehicles the roads can support in the future.¹⁷ Simply put, an end-to-end network “should be as general as possible in order to support a wide range of applications.”¹⁸

The Internet’s layering and end-to-end design are key elements to its success. First, they prevent discrimination against applications. The layers below work independently of the application network, and should not be able, or allowed, to interfere with it. Furthermore,

¹⁵ *Id.*

¹⁶ *Engineers’ Brief* at 14.

¹⁷ *Id.* at 15.

¹⁸ *Id.* at 14.

because of the end-to-end design, the application layer also should not be able, or allowed, to distinguish among the different applications running over it. They thus treat all applications – new and established, large and small – equally. “This ‘application-blindness’ protects applications from discrimination and blocking by network providers.”¹⁹

In addition, they empower user choice in its purest practical form. Alone, the Internet is just a collection of computers signaling to each other. Content providers create the value for using the Internet, consumers realize that value, and they add value in return (*e.g.*, paying to stream a movie, ordering food, purchasing books). “The Internet thus creates maximum value when users remain free to choose the applications they most highly value.”²⁰

This openness creates a highly dynamic environment, which in turn fosters economic growth, innovation, and democratic values. Edge innovation has always led to the largest gains in value for the Internet, and has spurred network investment. Edge providers are the reason consumers flock to the Internet. Consumers demand faster and better networks to consume content efficiently and effectively. The Commission had recognized this relationship long before the open Internet was threatened.²¹ The Commission should thus act to ensure that the Internet’s layering and end-to-end design remain free from discriminatory intrusions by broadband Internet access providers.

¹⁹ *Id.* at 15.

²⁰ *Id.*

²¹ Deployment of Advanced Telecommunications Capacity, *Third Report and Order*, 16 FCC Rcd. 2844, 2871 (2001) (“[a]nalysts predict that new and unforeseen capacity hungry applications that require advanced service platforms will drive demand, and in turn deployment, in the future.”).

B. An Open Internet Promotes Economic Growth, Innovation, and Democracy

From its inception, the Internet has been built on an open and neutral architecture. It enables a consumer to access any website, buy any product, and use any service she chooses. It is the Internet's open and neutral architecture that facilitates this freedom of choice which has made it the near-perfect engine for the global information economy. The impetus behind this freedom of choice occurs at the edges of the network, free from the centralized control of the gatekeepers—whether those gatekeepers are corporations seeking to promote their services and products, or governments seeking to control access to speech.

Despite economic downturns, political turmoil, and attempts to control it, the Internet continues to grow because of its open and neutral architecture. By 2016, there will be 3 billion users globally, and the Internet economy will reach \$4.2 trillion in the G-20 economies alone.²² In the Internet economy, sellers can reach buyers worldwide, and buyers can decide which products and services they want to use without being limited by the choices of intermediaries, or other controlling interests. The U.S. e-commerce marketplace alone boasts revenues of \$263.3 billion.²³

The Internet has also become a unique and unrivaled worldwide forum for promoting democratic values. In countries like Egypt, Libya, Tunisia, and Turkey, social media have become indispensable tools for democracy. As one democratic supporter tweeted during the

²² 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/.

²³ Promoting and Protecting the Open Internet, GN Docket No. 14-28, *Notice of Proposed Rulemaking*, FCC 14-61 ¶ 7 (rel. May 15, 2014) (*Open Internet NPRM*).

Arab Spring, “[w]e use Facebook to schedule the protests, Twitter to coordinate, and YouTube to tell the world.”²⁴ Around the world, the Internet helps foster discussion about democratic values.

In the United States, an open Internet is crucial to safeguarding and further advancing First Amendment values. It is a venue for free speech where anyone can petition the U.S. Administration for a change.²⁵

C. Maintaining an Open Internet is Critical to Incentivizing Individuals and Companies to Invest in New Products and Services

The Commission should ensure that an innovative company can succeed based on the merit of its technology and business model, not whether it is able to strike the right deals with network operators. The D.C. Circuit endorsed the Commission’s identification of a 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.”²⁶

The Commission asks commenters to “refresh the record on the importance of protecting and promoting an open Internet,” but it has already provided the answer. Since 2009, nearly “\$250 billion in private capital has been invested in U.S. wired and wireless broadband.”²⁷

²⁴ Philip N. Howard, *The Arab Spring’s Cascading Effects*, Pacific Standard Magazine, <http://www.psmag.com/navigation/politics-and-law/the-cascading-effects-of-the-arab-spring-28575/> (last visited July 7, 2014).

²⁵ In 2011, the Administration launched a platform that gave all Americans the ability to create and launch petitions on any issue. If a petition reaches certain thresholds, the Administration will issue an official response. See <https://petitions.whitehouse.gov/>. This process was used by Americans to petition the government for a position of the proposed Stop Online Piracy Act (SOPA) legislation. See Megan Slack, The White House Blog, *By the Numbers: 103,785*, <http://www.whitehouse.gov/blog/2012/01/18/numbers-103785> (last visited July 7, 2014).

²⁶ *Verizon v. FCC* at 661 n.4.

²⁷ Open Internet NPRM at 11 ¶ 30 (citation omitted).

Similarly, “broadband capital expenditures have risen steadily, from \$64 billion in 2009 to \$68 billion in 2012.”²⁸ Notably, “[a]nnual investment in U.S. wireless networks grew more than 40 percent between 2009 and 2010, from \$21 billion to \$30 billion, and exceeds investment by the major oil and gas or auto companies.”²⁹

The open and neutral Internet architecture is behind this substantial investment in broadband. It is edge providers – whether they provide content, applications, or services – that fuel Internet growth and innovation. Consumer demand for broadband comes from the applications that consumers access via their broadband service, rather than from the service itself. Companies invest in broadband networks because they expect that traffic will grow. Edge providers are generating that traffic. For example, revenues from streaming videos grew 175 percent between 2010 and 2013, from \$1.86 billion to \$5.12 billion.³⁰ In addition, the mobile application economy alone was worth \$53 billion in 2012, and was expected to reach \$68 billion in 2013.³¹ While correlation does not imply causation, the symbiotic relationship of Internet broadband access providers and content providers is indisputable. A consumer purchases a broadband Internet access service to connect to points on the Internet. She buys broadband access so that she can watch content,³² purchase products,³³ and express her opinions³⁴ using that network.

²⁸ *Id.* (citation omitted).

²⁹ *Id.* (citation omitted).

³⁰ *Id.* at 12 ¶ 32.

³¹ DeveloperEconomics, *Sizing the App Economy Report (Q3 2013)*, <http://www.developereconomics.com/report/sizing-the-app-economy/> (last visited July 7, 2014).

³² As of April 2014, Netflix had more than 48 million active users that watch more than one billion hours of TV shows and movies per month. Netflix, Investors Relations, <http://www.engadget.com/2013/10/21/netflix-q3-40-million-total/> (last visited July 7, 2014).

Maintaining an open Internet is thus critical to innovation. It ensures a level playing field for all stakeholders, and that the virtuous circle keeps spinning. As one application provider stated, potential investors have voiced their concern that broadband Internet access providers could exploit their control over the last mile of the network to put edge providers at a competitive disadvantage.³⁵ Open Internet rules can significantly mitigate investors' and innovators' concerns about broadband Internet access providers' behavior, and allow the former to concentrate on investing in and providing the maximum value for consumers.

III. BROADBAND INTERNET ACCESS PROVIDERS CONTINUE TO POSSESS THE INCENTIVE AND THE ABILITY TO DISCRIMINATE AMONG INTERNET CONTENT PROVIDERS

The D.C. Circuit has affirmed the Commission's determination that broadband Internet access providers "may be motivated to discriminate against and among edge providers."³⁶ It has also concluded that they have both the "technological ability to distinguish between and discriminate against certain types of traffic," and a monopoly "economic power" that incents them to "restrict edge-provider traffic" and discriminate against unaffiliated traffic.³⁷ Permitting

³³ As of May 2014, Amazon reportedly has 244 million users. Daniel Kline, *How Many Customers Does Amazon Have?*, <http://www.fool.com/investing/general/2014/05/24/how-many-customers-does-amazon-have.aspx> (last visited July 7, 2014).

³⁴ As of June 2014, reddit unique visitors top 1.3 million per week, with over 5 million page views during the same time. *See* reddit traffic stats, <http://www.reddit.com/r/AskReddit/about/traffic> (last visited July 7, 2014).

³⁵ Letter from Venky Srinivasan, Zediva, to Chairman Julius Genachowski, FCC, at 2, <http://apps.fcc.gov/ecfs/document/view?id=7020923207>.

³⁶ *Verizon v. FCC* at 645.

³⁷ *Id.* at 646 (citing *Open Internet Order* at 17923 ¶ 31).

broadband Internet access providers to take advantage of their position will thus jeopardize the Internet as a robust platform for economic growth, innovation, and democratic values.³⁸

A. Broadband Internet Access Providers Can Discriminate Among Sources and Types of Internet Traffic in Real Time

Broadband Internet access providers have long had the ability to engineer choke points into their networks in order to slow traffic from certain sources. Advances in network technologies, however, have provided them with an unprecedented ability to discriminate among sources and types of Internet traffic in real time and with little cost.

Among these technologies, the most effective and widely available technology is “deep packet inspection” (DPI) technology.³⁹ DPI allows broadband Internet access providers to examine an information packet during its end-to-end transmission process in record time. Essentially, it allows them to view the contents of the traffic that their customers send and receive.⁴⁰ It also allows them to arbitrarily create, modify, or delete packets to delay, redirect, copy, or block content.

Use of this technology is not unprecedented. Indeed, “[m]any governments have invested heavily in packet inspection and related technologies, which allow them to build a picture of

³⁸ *Id.*

³⁹ Sean Gallagher, *Big Brother on a budget: How Internet surveillance got so cheap*, ArsTechnica, <http://arstechnica.com/information-technology/2012/09/big-brother-meets-big-data-the-next-wave-in-net-surveillance-tech/2/> (last visited July 7, 2014).

⁴⁰ A cursory look at DPI vendors quickly reveals how invasive DPI technology can become. One vendor claims that its products can enable network providers to “see your network in High Definition with our Insight solutions. We provide more context to our data than any other solution on the market – subscriber, application, content, peering, services plan, location, device, and even Quality of Experience.” See ProCera Intelligence Insights, <http://www.proceranetworks.com/solutions/internet-intelligence-insights> (last visited July 7, 2014).

what passes through their networks and what comes in from beyond their borders.”⁴¹ In the U.S. private sector, Comcast has used DPI technology to target particular customer communications to disrupt by inserting reset packets.⁴²

While DPI has certain legitimate uses, it clearly can be used to intrude on Internet traffic. It can censor information packets. It can limit access to specific Internet applications. It can insert code into Internet traffic, and direct certain packets to be prioritized over others. Or it can direct the network to block certain content altogether.

B. Broadband Internet Access Providers Continue to Have an Incentive to Block or Degrade Unaffiliated Traffic

Apart from the technical means, broadband Internet access providers also have the financial incentive to block applications and services that compete with their own services. Application providers depend on broadband Internet access providers to get their content or services to consumers. The latter can degrade a certain application’s traffic packets. They can then ask the application provider to pay for investments to their network to mitigate traffic congestion. As the Commission found in 2010, “broadband providers may have economic incentives to block or otherwise disadvantage specific edge providers or classes of edge providers, for example by controlling the transmission of network traffic over a broadband connection, including the price and quality of access to end users.”⁴³ They can, for example, “act

⁴¹ See *supra* note 39.

⁴² Formal Complaint of Free Press and Public Knowledge Against Comcast Corporation for Secretly Degrading Peer-to-Peer Applications Broadband Industry Practices and Petition of Free Press et al, for Declaration Ruling that Degrading an Internet Application Violates the FCC’s Internet Policy Statement and Does Not Meet an Exception for “Reasonable Network Management,” WC Docket No. 07-52, 23 FCC Rcd. 13028 ¶¶ 41, 46 n.217 (rel. August 20, 2008) (*Comcast Order*).

⁴³ *Open Internet Order* at 17915 ¶ 21.

to benefit edge providers that have paid [them] to exclude rivals.”⁴⁴ They can also increase revenues by charging edge providers two fees: to connect to the Internet, and to access or receive prioritized access to consumers.⁴⁵ These opportunities to increase profits will incentivize them to degrade, block, or simply fail to make needed investments to carry traffic from non-paying content providers.⁴⁶

Vertically integrated broadband Internet access providers further have a particularly perverse incentive to protect their affiliated content from competition from third parties. Indeed, as they have admitted, they view certain content providers “as a potential threat to their core video subscription service.”⁴⁷ Consumers have also seen “significant situations where broadband [Internet access] providers have degraded the data streams of popular lawful services and blocked consumer access to lawful applications.”⁴⁸ The Department of Justice has also recognized that vertically integrated broadband Internet access providers have an incentive to discriminate against certain applications.⁴⁹

Finally, broadband Internet access providers increasingly provide broadband service in “bundles.” A bundle includes consumers purchasing telephone, television, and Internet access

⁴⁴ *Id.* at 17918 ¶ 23.

⁴⁵ *Id.* at 17919 ¶ 24.

⁴⁶ *Id.* at 17922 ¶ 29.

⁴⁷ *Id.* at 17917 ¶ 22.

⁴⁸ Preserving the Open Internet Broadband Industry Practices, *Notice of Proposed Rulemaking*, 24 FCC Rcd. 13064, 13154 (2009) (separate Statement of Chairman Julius Genachowski).

⁴⁹ *U.S. v. Comcast*, Proposed Final Judgment and Competitive Impact Statement, 76 Fed. Reg. 5440, 5456 (2011) (“Comcast would have the ability, for instance, to give priority to non-OVD traffic on its network, thus adversely affecting the quality of OVD services that compete with Comcast’s own [video] or OVD services. Comcast also would be able to favor its own services by not subjecting them to the network management practices imposed on other services.”)

services together, at a lower cost than separately purchasing these services. They thus have an incentive to degrade or block applications and services that compete with their own on the telephone and television services. And such applications have become increasingly popular.

IV. THE COMMISSION SHOULD ADOPT SIMPLE, LIGHT-TOUCH RULES THAT PROTECT THE OPEN INTERNET BY ENSURING EQUAL ACCESS

The adoption of simple, light-touch rules addressing these dangers serves 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. Unfortunately, the "commercially reasonable" standard proposed in the *Open Internet NPRM* would not achieve these goals.⁵⁰ Instead, it proposes a difficult to enforce, multi-factor framework that is not focused on the goals of broadband deployment and adoption; that provides insufficient business certainty for broadband Internet access providers or online applications and services; and that could lead to overreaching regulatory intervention by the Commission. Consumers and the online ecosystem would be far better served by clearer and more straightforward prohibitions against blocking and paid-prioritization.

A. The Rules Should Prohibit Broadband Internet Access Providers from Charging For Enhanced or Prioritized Access

The Internet Association encourages the Commission to pursue a sound, targeted strategy to ensure an open and neutral Internet. Simple, light-touch rules would best serve that strategy. Such rules should prohibit broadband Internet access providers from charging a content, application, or service provider for enhanced or prioritized access to the subscribers of the broadband Internet access providers. Internet users, including edge providers, use and develop

⁵⁰ *Open Internet NPRM* at ¶¶ 116-135.

products designed to work on the open, best-efforts Internet. Allowing for prioritization will introduce artificial barriers to entry, distort the market, and discourage innovation.

Charging for enhanced or prioritized access – essentially, charging to discriminate against or degrade competing content – undermines the Internet’s level playing field. It shifts the balance from the consumers’ freedom of choice to the broadband Internet access providers’ gatekeeping decisions. It thus prevents the Internet from creating maximum value. Unlike consumers, broadband Internet access providers have a horse in the race – whether it is their affiliated content or which content provider will pay the most for the enhanced or prioritized access.

Non-discrimination and no-blocking rules will help alleviate these issues. The broadband Internet access providers’ incentive to discriminate and block content will remain. But these rules will ensure that, subject to reasonable network management, as outlined in the next section, broadband Internet access providers will not choose winners or losers among stakeholders in the Internet ecosystem. This will maximize the Internet’s value for all stakeholders, including broadband Internet access providers.

B. Prioritization of Certain Traffic in a Non-Congested Network Can Happen Only At the Expense of Other Content Providers

In a non-congested network, broadband Internet access providers can prioritize one person’s content only by degrading or blocking another’s content. In a best-efforts Internet, absent congestion, there is no need for a broadband Internet access provider to offer prioritization services. The reason is simple: if there is no congestion, all packets will travel at the same speed to their destination without impediment.

Consequently, the Commission should adopt a presumption that, absent congestion, a broadband Internet access provider cannot offer prioritized services, because doing so would

result in the degrading (*i.e.*, blocking) of another’s content, which would violate the no-blocking rule.⁵¹

C. Reasonable Network Management Provides Adequate Flexibility in a Congested Network

In a congested network, the “reasonable network management” provision affords sufficient flexibility to broadband Internet access providers to manage their networks and to provide consumers with the service that they choose.

The reasonable network management provision should be narrowly tailored to permit deviations from the non-discrimination and no-blocking rules only if a network management problem cannot be addressed in “application agnostic” ways.⁵² Reasonable network management should ensure that broadband Internet access providers expeditiously resolve network congestion issues by employing measures to maintain and protect the efficient operation of their network.

D. Robust Disclosure Requirements Will Mitigate Congestion-by-Design Tactics

Requiring broadband Internet access providers to reveal their network management practices will further support investment and innovation. Broadband Internet access providers have an incentive to keep their network management practices opaque. The Internet Association supports robust transparency rules that would require broadband Internet access providers to disclose network management practices so that content providers and consumers know what is

⁵¹ Of course, the Commission does not want to incentivize an ISP to congest its network for the purpose of selling prioritized services. Our point here is simply to underscore the problem that when there is no congestion, a broadband Internet access provider would violate the no-blocking rule by degrading one content provider’s traffic in order to prioritize another’s.

⁵² Barbara van Schewick, *Network Neutrality and Quality of Service: What a Non-Discrimination Rule Should Look Like* 53 (The Center for Internet and Society 2012), available at http://cyberlaw.stanford.edu/files/publication/files/20120611-NetworkNeutrality_0.pdf.

happening with their Internet experience. As the Commission has stated, transparency will “increase[] the chances that harmful practices will not occur in the first place and that, if they do, they will be quickly remedied, whether privately or through Commission oversight.”⁵³ Without such rules, broadband Internet access providers can engage in “congestion-by-design” tactics.

Broadband Internet access providers have demonstrated their ability to engage in such tactics. In 2008, the Commission determined that Comcast disrupted traffic from a file-sharing application.⁵⁴ In 2009, AT&T restricted “the types of lawful applications that could be accessed over its 3G mobile wireless network.”⁵⁵ The Commission has also stated that “[t]here have been additional allegations of blocking, slowing, or degrading P2P traffic.”⁵⁶

More recently, Chairman Wheeler expressed concern that broadband Internet access providers may arbitrarily advantage or disadvantage content providers, and therefore consumers.⁵⁷ And much ink has been spilled over which stakeholder is to blame for traffic congestion.⁵⁸ The Internet ecosystem will benefit through greater transparency of the broadband Internet access providers’ network management practices.

⁵³ *Open Internet Order* at 17936 ¶ 53.

⁵⁴ Comcast Network Management Practices, *Order*, 23 FCC Rcd. 13028, 13055-56 ¶¶ 1, 47-48 (2008).

⁵⁵ *Open Internet Order* at 17925 ¶ 35.

⁵⁶ *Id.* at 17926 ¶ 36.

⁵⁷ Statement by FCC Chairman Tom Wheeler on Broadband Consumers and Internet Congestion (rel. June 13, 2014), <http://www.fcc.gov/document/chairman-statement-broadband-consumers-and-internet-congestion>.

⁵⁸ See e.g., Drew Fitzgerald and Shalini Ramachandran, *Netflix-Traffic Feud Leads to Video Slowdown*, Wall Street Journal, <http://online.wsj.com/news/articles/SB10001424052702304899704579391223249896550> (last visited July 7, 2014); Reuters, *Netflix to stop messages that blame Verizon for slow streaming*, <http://www.reuters.com/article/2014/06/09/netflix-verizon-idUSL2N0OQ1IY20140609> (last

The Internet Association believes that robust disclosure requirements will help alleviate some of these issues. They will certainly mitigate unsubstantiated accusations between stakeholders. A robust disclosure rule should require broadband Internet access providers to provide information regarding their network management practices and their network performance. Accordingly, the Commission should require broadband Internet access providers to reveal to consumers their peak-time end-to-end performance and whether their broadband connections can support the content that they want to consume. It should also require them to reveal to edge providers detailed technical information that they need to create and maintain their products and services, as well as to assess the risks and benefits of embarking on new projects.

V. THE SCOPE OF THE 2010 RULES SHOULD ELIMINATE THE DISTINCTION BETWEEN FIXED WIRELINE AND MOBILE BROADBAND INTERNET ACCESS SERVICES

In 2010, the Commission concluded that mobile broadband was an “earlier-stage platform than fixed broadband.”⁵⁹ It thus applied different rules.⁶⁰ Specifically, the Commission applied a different no-blocking standard to wireless broadband providers.⁶¹ It also excluded them from the unreasonable discrimination rule.⁶² The mobile broadband platform, however, has

visited July 7, 2014); Paul Szoldra, *Netflix Slams Verizon Over Slow Video Streams: You ‘Decided to Leave Three Lanes Closed During Rush Hour’*, Business Insider, <http://www.businessinsider.com/netflix-verizon-letter-2014-6> (last visited July 7, 2014).

⁵⁹ *Open Internet Order* at 17956 ¶ 93.

⁶⁰ *Id.* at 17958 ¶ 96.

⁶¹ The *Open Internet Order* prohibited mobile broadband providers from blocking or degrading access to “applications that compete with their other primary service offering—voice and video telephony.” *Open Internet Order* at 17959 ¶ 99.

⁶² The Commission similarly declined to apply the no unreasonable discrimination rule to mobile broadband providers. See *Open Internet Order* at 17962 ¶ 104. It thus left open the door for mobile broadband providers to discriminate against applications that do not compete against their other primary services, finding that “conditions in mobile broadband networks may necessitate

matured since then and the reasonable network management exception sufficiently accounts for any technical differences in the network. It is time for the Commission to apply the same non-discrimination, no-blocking, and robust transparency rules to the *wireline* and *wireless* platforms.

The Commission recognizes that “there have been substantial mobile marketplace changes and developments since 2010.”⁶³ Indeed, wireless broadband has matured as a platform, with 58 percent of adults in the United States owning a smartphone.⁶⁴ More than 50 percent of consumers “multiscreen”—*i.e.*, access retail sites from wireline and wireless connections.⁶⁵ In addition, 34 percent of cellphone users access the Internet mostly using their phones.⁶⁶ The Commission should apply uniform non-discrimination, no-blocking, and transparency rules to wireline and wireless Internet access providers. There is no further reason to differentiate between the two platforms in applying the rules.

To the extent wireless networks are constrained by bandwidth, the Commission’s existing exception for reasonable network management provides sufficient flexibility. The crucial difference between wired and wireless access for this issue is how providers manage their networks. The same fundamental principles and rules, however, need to apply to both wireline and wireless access. The Commission now has the opportunity to set the stage for parity.

network management practices that would not be necessary in most fixed networks.” *Id.* at 17961 ¶ 103.

⁶³ *Open Internet NPRM* at 108 ¶ 39.

⁶⁴ Pew Research Internet Project, *Mobile Technology Fact Sheet*, <http://www.pewinternet.org/fact-sheets/mobile-technology-fact-sheet/> (last visited July 7, 2014).

⁶⁵ David Bosonmworth, *Mobile Marketing Statistics 2014*, Smart Insights, <http://www.smartinsights.com/mobile-marketing/mobile-marketing-analytics/mobile-marketing-statistics/> (last visited July 7, 2014).

⁶⁶ *Id.*

VI. APPLICATION OF OPEN INTERNET PRINCIPLES TO POINTS OF INTERCONNECTION WITH THE BROADBAND INTERNET ACCESS PROVIDER

The Internet Association believes that consumers should have a comparable web experience, without regard to which service they access or which broadband (or mobile) platform they use. To that end, interconnection should not be used as a choke point to artificially slow traffic or extract unreasonable tolls from over-the-top providers. If this were to occur, interconnection fees could create the same consumer harms as paid prioritization in the last mile. This could be accelerated if broadband Internet access providers were to let transit links degrade over time, forcing more companies to pay more money to interconnect directly. Consumers could effectively end up with a ‘fast’ lane and a ‘slow’ lane, despite the fact they are paying for the same quality and speed of broadband service, based on whether companies are willing and able to pay such additional interconnection fees.

We note that the Commission has recently begun separately investigating these practices and we commend its efforts.⁶⁷ We believe the Commission should ensure that carriers are not engaged in any market abuses through peering arrangements and be prepared to exercise its authority to prevent any abuse that it uncovers.

⁶⁷ Statement by FCC Chairman Tom Wheeler on Broadband Consumers and Internet Congestion (rel. June 13, 2014), <http://www.fcc.gov/document/chairman-statement-broadband-consumers-and-internet-congestion>.

VII. CONCLUSION

For the foregoing reason, The Internet Association respectfully requests the Commission adopt rules consistent with the recommendations made in this filing.

Respectfully Submitted,

/s/ _____

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