

**Before the  
Federal Communications Commission  
Washington, DC 20554**

In the Matter of	)	
	)	
Protecting and Promoting the Open Internet	)	GN Docket No. 14-28
	)	
Framework for Broadband Internet Service	)	GN Docket No. 10-127
	)	
	)	
To: The Commission		

**COMMENTS OF CISCO SYSTEMS, INC.**

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## TABLE OF CONTENTS

SUMMARY .....	i
I. THE COMMISSION SHOULD BE WARY OF NEW PRESCRIPTIVE REGULATIONS.....	2
II. IF THE COMMISSION ELECTS TO ADOPT NEW OPEN INTERNET RULES, IT SHOULD CAREFULLY LIMIT THE OBLIGATIONS PLACED ON NETWORK PROVIDERS. ....	6
A. The Proposed Commercially Reasonable Standard Is Potentially a Valid Alternative to a Non-Discrimination Rule.....	6
1. The Commission Should Look to the Data Roaming Rules for Guidance in Implementing the Commercially Reasonable Standard. ....	6
2. Prioritization Should Not Be Prospectively Restricted or Prohibited.....	8
3. The Commission Should Decline To Impose a Non-Discrimination Rule.....	10
B. The Commission Should Not Restrict Providers’ Ability To Engage in Reasonable Network Management or Provide Specialized Services. ....	12
1. The Commission Should Maintain a Safe Harbor for Reasonable Network Management.....	12
2. The Commission Should Exclude Managed and Specialized Services From Any Open Internet Rules. ....	14
C. The Commission Should Not Mandate a Baseline Level of Service.....	16
D. Disclosure Requirements Should Focus on Ensuring That Customers, Edge Providers, and Other Stakeholders Have Adequate Information.....	18
III. MOBILE BROADBAND CONTINUES TO MERIT A MORE TAILORED REGULATORY TREATMENT. ....	20
IV. THE COMMISSION SHOULD NOT RECLASSIFY BROADBAND INTERNET ACCESS SERVICE AS A TITLE II SERVICE.....	22
CONCLUSION.....	28

## SUMMARY

Cisco Systems, Inc., the world's largest manufacturer of networking equipment and a market leader in the provision of network management solutions and applications that require appropriate network management, welcomes this opportunity to work with the Commission as it explores opportunities and options to promote and protect the Open Internet.

Cisco has long been a supporter and advocate for Open Internet principles, particularly as articulated in the Commission's 2005 *Internet Policy Statement*. Open Internet principles can help shape provider conduct and consumer expectations, thereby facilitating the organic development of the broadband market. Consumers are best served by a flexible approach that permits providers to respond to evolving needs in ways that best serve the interests of consumers. Technology, business models, and consumer demands are evolving at a pace that regulation cannot match, and prescriptive rules drafted today will rapidly become obsolete. The imposition of rigid and over-inclusive rules could well deny providers the needed flexibility, thereby inhibiting investment and innovation and ultimately harming consumers.

Should the Commission nonetheless conclude that codified Open Internet rules are warranted, it must exercise care to implement rules that will allow network providers ample flexibility to promote investment and foster competition and serve the interests of consumers even as the Internet continues to evolve. Assuming the Commission concludes that it must replace its former non-discrimination rule, the proposed commercially reasonable standard represents a potentially valid alternative framework provided that the standard as implemented is focused and flexible. To this end, the Commission should draw lessons from its data roaming rules as it implements the proposed new standard. In addition, the Commission should ensure that implementation of this standard will not prospectively restrict or prohibit prioritization.

In all events, the Commission should continue to decline to adopt a pure non-discrimination requirement, which would severely limit the ability of providers to respond to fast-changing market conditions and evolving consumer needs. Given that there have been virtually *no* instances of anticompetitive discrimination within the United States, and that the broadband marketplace is competitive and becoming more so, there is simply no reason to impose arbitrary limits on the ways in which network services and applications may be offered to consumers. These limits will do nothing to protect consumers, and would instead threaten to depress investment in networks, applications, or both.

The Commission should also ensure that network operators retain broad latitude to manage their networks to respond to ever-changing traffic patterns and other developments. The growing demands placed on broadband networks threaten the user experience and the value of the network. Enhanced network management offers viable and tailored means of addressing those demands.

The Commission should likewise preserve a wide berth for the provision of managed and specialized services outside the scope of whatever rules are applied to broadband Internet access service. Consumers have benefitted and continue to benefit from managed and specialized services, and the Commission should ensure that such services continue to thrive as the

broadband ecosystem evolves. At the very least, the Commission should exempt managed and specialized services from the Open Internet rules adopted in this proceeding and should define the class of excluded service offerings as broadly as possible.

In this regard, the Commission should decline to establish a no-blocking rule that defines a baseline level of service to which all edge providers are entitled. Establishing a minimal level of service in this way would be an extraordinarily complicated and difficult task. The Commission itself acknowledges that “a specific technical definition of minimum access could become outdated as available broadband network technologies change and available broadband speeds improve.” In light of these difficulties, the Commission should exercise care before trying to define a baseline level of service.

Reasonable and limited disclosure requirements can facilitate consumer choice, thereby enhancing market competition. In this regard, the Commission’s existing rule mandates disclosure of information regarding a wide range of topics, and there is no evidence that additional information will help consumers or other stakeholders. Nevertheless, should the Commission elect to establish additional disclosure requirements, it should ensure that additional requirements do not undercut the flexibility that providers need. In particular, network providers should not be required to disclose detailed technical, proprietary, or competitively sensitive information regarding their services.

Recognizing the dynamic nature of the wireless broadband market and the unique technical constraints faced by wireless broadband networks, the Commission previously shaped the now-vacated Open Internet rules to offer a more tailored regulatory approach for mobile broadband networks. The Commission should retain its more tailored approach for mobile broadband networks, particularly with respect to the proposed no blocking rule and commercially reasonable standard.

Finally, the Commission should not reclassify broadband Internet access service as a “telecommunications service” under Title II of the Communications Act of 1934, as amended, in whole or in part. The Commission has considered Title II classification for broadband ISP services many times before and has rejected that notion each time. The reason is simple and compelling. Classifying broadband Internet access services as “telecommunications services” would be incompatible with the statute and poor public policy. For the Commission to reverse course on this decade-long line of precedent would also be contrary to long-standing precedent. The Commission should therefore resist all calls to reclassify broadband Internet access service as a telecommunications service.

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**COMMENTS OF CISCO SYSTEMS, INC.**

Cisco Systems, Inc. (“Cisco”) respectfully submits these comments in response to the captioned Notice of Proposed Rulemaking<sup>1</sup> and the Wireline Competition Bureau’s Public Notice seeking to refresh the record in with respect to its outstanding broadband classification docket.<sup>2</sup> Cisco is the world’s largest manufacturer of networking equipment and a market leader in the provision of network management solutions and applications that require appropriate network management. It is also a leader in the development of managed internet protocol products and solutions used by individuals and enterprises throughout the world. Cisco looks forward to working with the Commission over the course of this proceeding to promote and safeguard the interests of consumers and of the American economy broadly.

The Commission should eschew static, prescriptive Open Internet rules and allow network providers ample flexibility to promote investment, foster competition, and serve the interests of consumers even as the Internet continues to evolve. If the Commission does establish a new commercially reasonable standard, it should ensure that the standard is focused

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<sup>1</sup> *Protecting and Promoting the Open Internet*, Notice of Proposed Rulemaking, 29 FCC Rcd 5561 (2014) (“*Notice*”).

<sup>2</sup> *Wireline Competition Bureau Seeks to Refresh the Record in the 2010 Proceeding on Title II and Other Potential Legal Frameworks for Broadband Internet Access*, Public Notice, DA 14-748 (rel. May 30, 2014), available at [http://transition.fcc.gov/Daily\\_Releases/Daily\\_Business/2014/db0530/DA-14-748A1.pdf](http://transition.fcc.gov/Daily_Releases/Daily_Business/2014/db0530/DA-14-748A1.pdf).

and flexible and will not prospectively restrict or prohibit prioritization. Likewise, the Commission should preserve providers' flexibility to engage in robust network management, and ensure a wide berth for the development and offering of value-creating managed and specialized services. To this end, the Commission should not mandate a baseline level of service that broadband providers must make available to all edge providers. Further, given the broad reach of its existing disclosure rule, the Commission should ensure that any additional rules do not restrict network providers' flexibility to innovate and respond to dynamic market conditions. The Commission should also continue to tailor its regulatory approach with regard to mobile broadband service. Finally, and in all events, the Commission should resist calls to reclassify broadband Internet access service, in whole or in part, as a "telecommunications service" under Title II of the Communications Act of 1934, as amended (the "Communications Act" or "Act").<sup>3</sup>

## **I. THE COMMISSION SHOULD BE WARY OF NEW PRESCRIPTIVE REGULATIONS.**

Cisco is committed to protecting and promoting an open Internet. Indeed, Cisco was involved in the discussions leading to the very concept of an open Internet from the beginning as a participant in the drafting of the High-Tech Broadband Coalition's "connectivity principles." Cisco also supported the Open Internet policies reflected in the Commission's 2005 *Internet Policy Statement*.<sup>4</sup> When the Commission decided to codify these policies in 2010,<sup>5</sup> however, Cisco argued against such prophylactic rules, urging the Commission to maintain a flexible,

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<sup>3</sup> 47 U.S.C. §§ 201 -276 ("Title II").

<sup>4</sup> *Appropriate Framework for Broadband Access to the Internet Over Wireline Facilities, Policy Statement*, 20 FCC Rcd 14986 (2005) ("*Internet Policy Statement*"). See Letter from High Tech Broadband Coalition, to Kevin J. Martin, Chairman, FCC, CS Docket No. 0252, et al., at 1 (filed Aug. 2, 2005) (citing High Tech Broadband Coalition Letter to Chairman Powell, CS Docket No. 02-52; GN Docket No. 00-185; CC Docket Nos. 02-33, et al. (Sept. 25, 2003) (urging the Commission to adopt four "connectivity principles.")).

<sup>5</sup> *Preserving the Open Internet*, Report and Order, 25 FCC Rcd 17905 (2010) ("*Open Internet Order*"), *aff'd in part, vacated and remanded in part sub nom. Verizon v. FCC*, 740 F.3d 623 (D.C. Cir. 2014).

light-handed regulatory approach such as that represented by the *Internet Policy Statement*, supplemented with a disclosure principle to ensure that consumers receive meaningful information regarding their broadband service plans.<sup>6</sup>

Maintaining a flexible regulatory approach continues to be the correct course to achieve the Commission's goal of protecting and promoting an open Internet. The U.S. broadband ecosystem is extraordinarily vibrant with network providers maintaining remarkable levels of capital investment as they upgrade and expand their networks. According to recent analyses, U.S. broadband providers invested over \$68 billion (or roughly \$590 per household) in 2012 alone. In that year, the wireline industry invested nearly \$25 billion,<sup>7</sup> the cable industry spent approximately \$13 billion,<sup>8</sup> and mobile carriers spent almost \$30 billion upgrading wireless networks.<sup>9</sup> This extraordinary level of capital investment by network providers has made the United States the world leader in broadband innovation, placing it at the epicenter of the broadband economy.

The availability of fixed broadband providers to American consumers continues to grow, with approximately 96% of total U.S. households having at least one option for a fixed broadband provider and 88% having at least two options.<sup>10</sup> The cable industry continues to

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<sup>6</sup> Comments of Cisco Systems, Inc., *Preserving the Open Internet*, GN Docket No. 09-191, WC Docket 07-52 (filed Jan. 14, 2010).

<sup>7</sup> See Patrick Brogan, *Updated Capital Spending Data Show Rising Broadband Investment in Nation's Information Infrastructure*, USTelecom (Nov. 4, 2013), <http://www.ustelecom.org/sites/default/files/documents/103113-capex-research-brief-v2.pdf>.

<sup>8</sup> See National Cable & Telecommunications Association, Public Policy, *Setting the Record Straight on Broadband Investment*, May 13, 2014, <https://www.ncta.com/platform/public-policy/setting-the-record-straight-on-broadband-investment/> (last visited July 11, 2014).

<sup>9</sup> CTIA, Annual Wireless Industry Survey, <http://www.ctia.org/your-wireless-life/how-wireless-works/annual-wireless-industry-survey> (last visited July 11, 2014).

<sup>10</sup> See USTelecom, Broadband Availability Data, *available at* <http://www.ustelecom.org/broadband-industry/broadband-industry-stats/availability>.

expand its broadband footprint with over 125 million homes passed today (roughly 93% of total U.S. households); over 85 percent of U.S. households now have access to the most advanced DOCSIS 3.0 service, which is capable of 100 Mbps or faster broadband speeds.<sup>11</sup> The Commission's most recent report on broadband indicates that the availability and adoption of higher speed broadband continues to grow.<sup>12</sup> Similarly, the Commission's most recent *Mobile Competition Report* found that 82 percent of American consumers could choose from at least four mobile broadband providers, while roughly 98 percent can choose from at least two.<sup>13</sup>

The broadband market is also characterized by fast-paced technical advances and innovation, which continue to bring exciting new products and services to consumers. As the Commission acknowledges, “[w]hole new product markets have blossomed in recent years, and the market for applications has both diversified and exploded.”<sup>14</sup> This trend can only be expected to continue. Cisco's own research finds that “[g]lobal IP traffic has increased more than fivefold in the past 5 years”<sup>15</sup> and that it “will increase threefold over the next 5 years.”<sup>16</sup> In North America alone, Cisco expects traffic to grow from 16,607 petabytes of data in 2013 to

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<sup>11</sup> See National Cable & Telecommunications Association, Industry Data, <http://www.ncta.com/industry-data> (last visited July 11, 2014).

<sup>12</sup> See generally, *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*, Ninth Broadband Progress Notice of Inquiry, 27 FCC Rcd 1523 (2012).

<sup>13</sup> *Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993*, Sixteenth Report, 28 FCC Rcd 3700, 3750, tbl. 9 (2013).

<sup>14</sup> *Notice*, 29 FCC Rcd at 5571 ¶ 31.

<sup>15</sup> Consistent with these findings, CTIA reports that wireless data traffic jumped from 388 billion MBs in 2010 to 1,468 billion MBs in 2012. CTIA, *Background on CTIA's Semi-Annual Wireless Industry Survey Results: December 1985 – December 2012*, at 9 (2013), available at [http://files.ctia.org/pdf/CTIA-Survey\\_YE\\_2012\\_Graphics-FINAL.pdf](http://files.ctia.org/pdf/CTIA-Survey_YE_2012_Graphics-FINAL.pdf).

<sup>16</sup> Cisco, “The Zettabyte Era: Trends and Analysis,” at 1 (June 10, 2014) (“Zettabyte White Paper”), available at [http://www.cisco.com/c/en/us/solutions/collateral/service-provider/visual-networking-index-vni/VNI\\_Hyperconnectivity\\_WP.pdf](http://www.cisco.com/c/en/us/solutions/collateral/service-provider/visual-networking-index-vni/VNI_Hyperconnectivity_WP.pdf).

40,545 petabytes of data in 2018.<sup>17</sup> Cisco expects this growth to be driven by multiple factors including online gaming, video over IP, voice over IP, and peer-to-peer (“P2P”) file-exchange services and the growth of the Internet of Things.

The sum of all forms of IP video, which includes Internet video, IP VoD, video files exchanged through file sharing, video-streamed gaming, and videoconferencing, will continue to be in the range of 80 to 90 percent of total IP traffic. Globally, IP video traffic will account for 79 percent of traffic by 2018 . . . .<sup>18</sup>

Further:

[T]he next wave of the Internet in which people, processes, data, and things connect to the Internet and each other, is showing tangible growth. Globally, [machine-to-machine (“M2M”)] connections will grow threefold from 2.3 billion in 2013 to 7.3 billion by 2018 . . . . There will be nearly one M2M connection for each member of the global population by 2018.<sup>19</sup>

In light of these facts, the Commission’s priority should be to foster the private investment necessary to meet growing consumer demand for broadband services across wireline and wireless platforms. Existing and increasing levels of ongoing investment, innovation, and competition all demonstrate that the broadband market is thriving and consumers are reaping the benefits. Promulgating rigid and over-inclusive rules in this context is unwarranted and could inhibit investment in the thriving broadband market. The fact is that inflexible rules simply cannot keep pace with the dynamic, innovative marketplace and will quickly become obsolete and sclerotic, frustrating investment and stifling innovation. The Commission should therefore be wary of promulgating new Open Internet rules, and should instead maintain the existing level of regulation, including existing transparency requirements, which aid consumer choice and competition.

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<sup>17</sup> *Id.* at 23.

<sup>18</sup> *Id.* at 16.

<sup>19</sup> *Id.* at 8.

**II. IF THE COMMISSION ELECTS TO ADOPT NEW OPEN INTERNET RULES, IT SHOULD CAREFULLY LIMIT THE OBLIGATIONS PLACED ON NETWORK PROVIDERS.**

Should the Commission decide to adopt additional rules here, it should design and implement the rules in ways that will not restrict or stifle investment and innovation.

Technology, business models, and consumer demands are evolving at a pace that regulation cannot expect to match. The Commission must therefore exercise care to ensure that its rules will serve the interests of consumers even as the Internet continues to evolve. For the Commission to do otherwise would risk chilling further broadband deployment and jeopardize the millions of jobs that depend on such investment.

**A. The Proposed Commercially Reasonable Standard Is Potentially a Valid Alternative to a Non-Discrimination Rule.**

**1. The Commission Should Look to the Data Roaming Rules for Guidance in Implementing the Commercially Reasonable Standard.**

The proposed commercially reasonable standard represents a potentially valid regulatory framework, assuming that the Commission ultimately concludes that it must replace its now invalidated non-discrimination rule. As the Commission suggests, the commercially reasonable standard should be “both more focused and more flexible than the vacated 2010 non-discrimination rule,”<sup>20</sup> provided of course that it is implemented in a manner that affords providers the flexibility they need to function in the dynamic broadband Internet marketplace.

In this regard, the Commission’s data roaming rules can serve as an example of how to afford network providers flexibility and the opportunity for individualized negotiation against a backstop requirement of commercial reasonableness “based on the totality of the

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<sup>20</sup> *Notice*, 29 FCC Rcd at 5602 ¶ 116.

circumstances.”<sup>21</sup> As with the data roaming rules, any commercial reasonableness standard must “differ materially from the kind of requirements that necessarily amount to common carriage.”<sup>22</sup> Thus, in practice, the standard should leave “substantial room for individualized bargaining and discrimination in terms”<sup>23</sup> and “considerable flexibility for providers to respond to the competitive forces” of the market.<sup>24</sup>

The Commission should also acknowledge that there are already other entities and government agencies that monitor the broadband market and stand ready to protect against and provide remedies for unreasonable practices that are shown to harm competition or consumers. The Broadband Internet Technical Advisory Group (“BITAG”), for instance, was established to “discuss and opine on technical issues pertaining to the operation of the Internet, as a means of bringing transparency and clarity to network management processes as well as the interaction among networks, applications, devices and content.”<sup>25</sup> Likewise, antitrust and state and federal consumer protection laws provide remedies for conduct that harms competition or consumers. For instance, the Federal Trade Commission stands guard against all “unfair or deceptive acts or practices in or affecting commerce.”<sup>26</sup>

There is also a strong role for the Commission. For example, based on record evidence showing that a particular practice is harmful to competition or consumers, the Commission could establish a rebuttable presumption that the individual practice is not “commercially reasonable,”

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<sup>21</sup> *Id.* at 5602 ¶ 115 (citing *Reexamination of Roaming Obligations of Commercial Mobile Radio Service Providers and Other Providers of Mobile Data Services*, Second Report and Order, 26 FCC Rcd 5411, 5452-53 ¶ 86 (2011)).

<sup>22</sup> *Cellco P’ship v. FCC*, 700 F.3d 534, 547 (D.C. Cir. 2012).

<sup>23</sup> *Cellco*, 700 F.3d at 548

<sup>24</sup> *Id.*

<sup>25</sup> See BITAG, BITAG Organization, BITAG History, [http://www.bitag.org/bitag\\_organization.-php?action=history](http://www.bitag.org/bitag_organization.-php?action=history) (last visited July 11, 2014).

<sup>26</sup> 15 U.S.C. § 45.

placing the burden on network providers to demonstrate the reasonableness of that practice. This would allow individualized arrangements to continue, while providing a regulatory backstop should some arrangements ultimately prove to be harmful.

## **2. Prioritization Should Not Be Prospectively Restricted or Prohibited.**

The Commission's apparent concern that adoption of the commercially reasonable standard is necessary because paid prioritization may result in the creation of a purported "fast lane/slow lane" dichotomy on the Internet is misplaced. Indeed, the whole notion of a "fast lane" that has been popularized in the debate on Open Internet rules is incongruous with how traffic actually moves through the network. Using packet prioritization markings to insure that time sensitive traffic is not dropped during routing does not create a "fast lane" nor does it relegate other traffic to a "slow lane." Instead, it gives consumers the opportunity to ensure that time sensitive applications – including health, education and public safety applications – operate effectively. Restricting that choice is the epitome of harming consumers.

Additionally, consumers are all benefitting from improvements in high-speed "best-efforts" Internet offerings and will continue to do so. In fact, Cisco projects data speeds to nearly triple by 2018.<sup>27</sup> Moreover, content delivery networks, and other methods of keeping traffic local, are all taking on an increasing role in supporting broadband traffic management to improve consumer experience.<sup>28</sup>

Further, prioritization makes sense and serves to benefit consumers in many contexts when it is needed to provide the quality of service that consumers demand. American broadband

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<sup>27</sup> Zettabyte White Paper at 2.

<sup>28</sup> Cisco, "Cisco Visual Networking Index: Forecast and Methodology, 2013–2018," at 9 (June 10, 2014), available at [http://www.cisco.com/c/en/us/solutions/collateral/service-provider/ip-ngn-ip-next-generation-network/white\\_paper\\_c11-481360.pdf](http://www.cisco.com/c/en/us/solutions/collateral/service-provider/ip-ngn-ip-next-generation-network/white_paper_c11-481360.pdf).

users rely on a broad array of applications, ranging from simple web browsing and email services to VoIP and file-sharing to distance learning to telemedicine to streaming media to real-time high-definition video. These applications vary widely in their need for bandwidth, as well as in their tolerance for latency and jitter. The value of these offerings to consumers may come to depend on the ability of a provider to prioritize packets based on the type of service, the specificity of the content, or other factors.

More broadly, consumers benefit from differentiated services and flexible approaches to pricing. From virtual private networks to traffic-shaping tools to quality-of-service applications, there are a variety of technologies that ensure that the right packets reach the right destinations at the right time. The use of these packet-marking and identification techniques can allow service providers to offer better service by creating a virtual quality-of-service connection for specific traffic. Customers may well wish to expand use of these techniques to prioritize certain traffic streams. To the extent a customer wishes to access content or applications that are best optimized through prioritization and no other customer will be harmed by such optimization, there is no harm in allowing the network and content providers to provide that service.

Likewise, the premise that paid prioritization is problematic simply because providers *might* have incentives to engage in anticompetitive discrimination in the future is not tenable. Indeed, the argument turns the Commission's pro-growth, pro-competition broadband agenda on its head. As noted above, existing enforcement mechanisms allow for strong remedies against anticompetitive or anti-consumer conduct without proscribing prioritization arrangements or classes of prioritization arrangements altogether. The Commission therefore should not prescriptively restrict or prohibit prioritization.

### 3. The Commission Should Decline To Impose a Non-Discrimination Rule.

As discussed, the Commission’s proposed commercially reasonable standard is a potentially viable regulatory framework that might substitute for the vacated non-discrimination rule, provided it gives providers flexibility to innovate, compete, and respond to changing consumer demands.<sup>29</sup> The Commission nonetheless holds out the possibility of reinstating some form of a non-discrimination rule.<sup>30</sup> The Commission should decline to take this path.

Any prescriptive non-discrimination rule would necessarily limit the ability of providers to respond to fast-changing market conditions and evolving consumer needs. The enormous investments providers are making in their networks occur in a highly competitive and unforgiving marketplace and without a guaranteed return on that investment. As such, the business justification for this investment rests in large part on the expectation that providers will be free to develop innovative business plans and technological offerings that differentiate their networks from those of their competitors. This will remain true as providers continue to seek new ways to differentiate themselves, by developing – or contracting for access to – innovative content and applications that can be offered over their networks.

It is beyond dispute that all of this has redounded to the consumers’ benefit, providing them a vast array of online services offered by myriad rival providers. Furthermore, the discipline of this robust, dynamic marketplace has been effective in policing anticompetitive, anti-consumer conduct on the part of Internet providers. Indeed, the *Open Internet Order* identified only a handful of alleged instances of abuse,<sup>31</sup> and the *Notice* does not identify any

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<sup>29</sup> *Notice*, 29 FCC Rcd 5602 at ¶ 116 (The commercially reasonable standard “is both more focused and more flexible than the vacated 2010 non-discrimination rule.”).

<sup>30</sup> *Id.* at 5604 ¶ 121.

<sup>31</sup> See *Open Internet Order*, 25 FCC Rcd at 17925-27 ¶¶ 35-37; *Notice*, 29 FCC Rcd at 5580 ¶ 53.

new allegations of serious anticompetitive behavior by last-mile service providers, seriously undermining any argument that a strict non-discrimination rule is warranted.

A Commission rule barring “discrimination,” by contrast, could undermine the prospects for such differentiation, and would in turn frustrate investment and innovation. A rigidly enforced non-discrimination rule risks commoditizing broadband Internet access service, transforming the vibrant and diverse market – in which providers fight to appeal to consumers and to thereby win and retain customers – into a standardized, monotonous market characterized by undifferentiated carriage. This result would vastly increase the risks faced by providers contemplating investment in new facilities – without any opportunity for product differentiation, providers would be denied any measure of confidence in their ability to recoup such investment, potentially altering the business case for new deployment.

Given the potential costs that a non-discrimination rule could impose on future deployment, the imposition of such a requirement could be justified only by clear and compelling evidence that the market was failing, and that the injuries caused by such failure could best be avoided by the adoption of “neutrality” mandates. As noted above, however, there is no such evidence. The fact is that years of experience, both with and without a non-discrimination rule in place, have yielded virtually no complaints of anticompetitive activity.

Arguments that a non-discrimination rule is appropriate even in the absence of harm, because providers *might* engage in anticompetitive discrimination in the future, should not be credited – particularly given the costs that nondiscrimination rules would impose. As discussed above, today’s broadband marketplace is characterized by wireline, cable, and wireless providers expanding their networks, developing new and innovative technologies and service offerings, and providing consumers more and more value over time. Given this environment, the lack of

evidence demonstrating a significant market failure clearly implies that competition has been extremely effective in ensuring that providers comply with the preferences of their users – and there is no reason to doubt that it will continue to be effective in the future, provided the Commission does nothing to hamper the “‘vibrant and competitive free market’ for Internet and interactive computer services.”<sup>32</sup>

**B. The Commission Should Not Restrict Providers’ Ability To Engage in Reasonable Network Management or Provide Specialized Services.**

In order to allow flexibility for innovation, the Commission should maintain its approach of not proscribing reasonable network management practices and excluding managed and specialized services from the reach of Open Internet rules.<sup>33</sup>

**1. The Commission Should Maintain a Safe Harbor for Reasonable Network Management.**

The Commission should make every effort to ensure that network operators maintain broad latitude to manage their networks to respond to ever-changing traffic patterns and other developments. To this end, the Commission should maintain a “reasonable network management” safe harbor.<sup>34</sup> As the Commission made clear in 2010, “[a]n open, robust, and well-functioning Internet requires that broadband providers have the flexibility to reasonably manage their networks.”<sup>35</sup> This conclusion remains valid today.

The growing demands placed on broadband networks threaten the user experience and the value of the network. Enhanced network management offers a viable and tailored means of

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<sup>32</sup> *Formal Complaint of Free Press and Public Knowledge Against Comcast Corporation for Secretly Degrading Peer-to-Peer Applications*; Memorandum Opinion and Order, 23 FCC Rcd 13028, 13046 ¶ 32 (2008) (citation omitted).

<sup>33</sup> *Notice*, 29 FCC Rcd at 5563 ¶ 3, 5582 ¶ 60.

<sup>34</sup> *Id.* at 5583 ¶ 61; *Open Internet Order*, 25 FCC Rcd at 17951-56 ¶¶ 80-92.

<sup>35</sup> *Open Internet Order*, 25 FCC Rcd at 17908 ¶ 6.

addressing those demands. Cisco is a leader in developing and deploying network-management technologies that enable providers to meet consumer needs and has long been involved in creating technology to make networks operate more effectively and securely. From virtual private networks to traffic-shaping tools to quality of service applications, Cisco provides technologies that ensure that the right packets reach the right destinations at the right time. The use of these packet marking and packet identification techniques can allow service providers to offer better service by limiting volumes of certain types of traffic or by creating a virtual quality of service connection for specific traffic. Without these technologies, consumers will experience more traffic congestion in general and may be unable to enjoy applications that require constant quality of service enhancement.

It cannot be reasonably disputed that there are many valid and pro-competitive reasons why a broadband Internet access provider might wish to “manage” traffic on its network. As discussed above, Internet usage continues to skyrocket. Cisco forecasts that annual global traffic will exceed the zettabyte threshold in 2016 and will reach 1.6 zettabytes by year end 2018.<sup>36</sup> High-bandwidth applications including online gaming, video over IP, voice over IP, and P2P file-exchange services will continue to be major drivers of this growth.<sup>37</sup> High-bandwidth offerings such as these involve the transfer of information in quantities that dwarf those associated with traditional e-mail, web browsing, and other applications that accounted for nearly all Internet traffic just several years ago. At the same time, the applications that users are coming to rely on are far less tolerant of network congestion; gaming, voice over IP, and video over IP are all much more sensitive than traditional applications to latency and jitter. It is thus increasingly important that packets arrive at their destination, and arrive quickly, at the very

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<sup>36</sup> Zettabyte White Paper at 1.

<sup>37</sup> *Id.* at 16.

same time that network resources are being taxed by more widespread use of bandwidth-intensive offerings. All of this means that network operators must be free to manage congestion on their networks to ensure that packets associated with latency- and jitter-sensitive applications arrive on time, and that the end user's experience is not disrupted by network congestion.

Further, network management should not be narrowly construed as simply “adding capacity,” but rather should cover all practices that are “appropriate and tailored to achieving a legitimate network management purpose.”<sup>38</sup> Solutions demanding exclusive resort to massive capacity enhancements fail to recognize that consumers only want and need *some* traffic to be subject to expedited handling, that networks are only congested during some time periods, and that consumers would wind up paying for massive – and unnecessary – capacity expansion. Email messages, web browsers, and similar applications are simply not affected by a microsecond's delay in nearly the same way that a video or gaming application might be. Moreover, even massive facilities deployment will never prepare the network for public-safety crises, pop-culture events, or similar occurrences, which draw traffic levels that are likely to overcome capacity for short time periods and necessitate management irrespective of the extent of investment.

## **2. The Commission Should Exclude Managed and Specialized Services From Any Open Internet Rules.**

Specialized services “differ from broadband Internet access service and may drive additional private investment in broadband networks and provide end users valued services, supplementing the benefits of the open Internet.”<sup>39</sup> For these reasons, in 2010, the Commission

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<sup>38</sup> *Open Internet Order*, 25 FCC Rcd at 17908 ¶ 6.

<sup>39</sup> *Id.* at 17965 ¶ 112.

decided to “closely monitor and proceed incrementally with respect to specialized services”<sup>40</sup> and “to verify that specialized services promote investment, innovation, competition, and end user benefits without undermining or threatening the open Internet.”<sup>41</sup> The Commission should maintain that posture now.<sup>42</sup>

The Commission must preserve a wide berth for the provision of specialized services outside the scope of whatever rules are applied to broadband Internet access service. Specialized services are still very much in their infancy, but consumers will benefit from the continued and expanded use of such offerings. As technology advances, dramatic and important innovations such as remote surgery, distance-learning, and the Internet of Things will become a reality. Many such services will need to be assured of minimal latency, minimal jitter, guaranteed bandwidth, and (in some cases) heightened network security – assurances that the provision of specialized services can help provide. In short, specialized services will continue to offer consumers important new services and will promote even greater investment in broadband infrastructure. Nor is there any evidence that specialized services give rise to any serious anticompetitive or anti-consumer conduct. To the contrary, the Commission’s decision in 2010 that managed and specialized services did not merit regulation has proven to be correct.

The Commission should also avoid the temptation of following the European Union and Brazil down the path of trying to define with specificity what are and are not specialized services.<sup>43</sup> As noted, these are nascent services and the Commission should allow them to

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<sup>40</sup> *Id.* at 17966-67 ¶ 113 (citation omitted).

<sup>41</sup> *Id.*

<sup>42</sup> *Notice*, 29 FCC Rcd at 5582 at ¶ 60.

<sup>43</sup> *See generally* Roslyn Layton, “The EU’s March to Digital Oblivion,” U.S. News & World Report (Apr. 17, 2014), *available at* <http://www.usnews.com/opinion/economic-intelligence/2014/04/17/european-unions-net-neutrality-rules-hurt-mobile-competitiveness>; “Brazil’s internet law: The net closes,” The

evolve without trying to cabin them with a particular definition. In this way, the Commission will best enable the industry to experiment with and explore new types of specialized services, thereby driving additional private investment in broadband networks. To this end, the Commission should retain the broad understanding of specialized services as other services provided over the same last-mile connections used to provide broadband service.<sup>44</sup>

In sum, the Commission should reiterate that Open Internet rules do not apply to specialized services. Nor should the Commission attempt to legislate what are and are not managed or specialized services. Providers must retain the ability to develop and offer innovative new managed services to customers who value these products. The Commission simply cannot envision today the range of specialized services that will arise in the future.

### **C. The Commission Should Not Mandate a Baseline Level of Service.**

Although a no-blocking principle was generally implied in the Commission's 2005 *Internet Policy Statement*,<sup>45</sup> the no-blocking *rule* adopted in 2010 was struck down by the court, primarily because it compelled broadband providers to serve edge providers indiscriminately.<sup>46</sup> Reinstating this now-vacated rule is not warranted even with the proposed modification to allow for individualized negotiation of terms of service beyond a broad baseline level.<sup>47</sup>

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Economist (Mar. 29, 2014) *available at* <http://www.economist.com/news/americas/21599781-brazils-magna-carta-web-net-closes>.

<sup>44</sup> *See Notice*, 29 FCC Rcd at 5582 n.139.

<sup>45</sup> *See id.* at 5594 ¶ 91; *Internet Policy Statement*, 20 FCC Rcd at 14988 (stating “consumers are entitled to access the lawful Internet content of their choice,” “consumers are entitled to run applications and use services of their choice, subject to the needs of law enforcement,” “consumers are entitled to connect their choice of legal devices that do not harm the network,” and “consumers are entitled to competition among network providers, application and service providers, and content providers”)(citations omitted).

<sup>46</sup> *Cellco*, 700 F.3d at 551.

<sup>47</sup> *Notice*, 29 FCC Rcd at 5596 ¶ 97.

The fundamental problem with the Commission’s approach is that it is premised on establishing a baseline level of service to which all edge providers are entitled.<sup>48</sup> Establishing a minimal level of service in this way would be an extraordinarily complicated and difficult task, as demonstrated by the numerous questions the Commission poses on this issue. As the Commission itself acknowledges, “a specific technical definition of minimum access could become outdated as available broadband network technologies change and available broadband speeds improve.”<sup>49</sup>

In light of these difficulties, the Commission should carefully evaluate whether it actually needs to undertake this task. Broadband service providers are in the business of delivering legal content to their customers and, thus, have every business incentive not to block lawful content, applications, or services, or any non-harmful devices on their networks. Providers are well aware that consumers have choices and will switch if they are dissatisfied with their broadband service – which many consumers can do easily given the wide spread availability of both wireline and wireless broadband options.

If, however, the Commission finds, based on substantial record evidence, that some rule is warranted, that rule should be carefully limited to ensure that it does not impair providers’ ability to offer managed and specialized services. For instance, the rule could be structured so that providers are prohibited from blocking or degrading traffic delivered to the last-mile network based exclusively on the source of that traffic. A no-blocking rule limited in this fashion would hew more closely to the principles established in the 2005 *Internet Policy*

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<sup>48</sup> See generally *id.* at 5596-97 ¶¶ 97-101.

<sup>49</sup> *Id.* at 5598 ¶ 103.

*Statement*,<sup>50</sup> while leaving providers free to continue innovating and experimenting with managed and specialized services.

**D. Disclosure Requirements Should Focus on Ensuring That Customers, Edge Providers, and Other Stakeholders Have Adequate Information.**

Reasonable disclosure requirements with regard to all material terms of service for broadband Internet access services and other Internet services facilitate consumer choice and market competition. With appropriate limitations, disclosure requirements ensure that consumers understand the comparative benefits and drawbacks of competing offerings and can choose the ones best suited to their needs. The broad reach of the Commission’s existing disclosure rule, which the D.C. Circuit left intact,<sup>51</sup> coupled with the absence of evidence demonstrating a need for new disclosure requirements, clearly suggest that the Commission’s existing rule meets these goals.

The existing rule requires network providers to supply consumers, edge providers, and other stakeholders with specific and meaningful information on “the following topics: (1) network practices, including congestion management, application-specific behavior, device attachment rules, and security measures; (2) performance characteristics, including a general description of system performance (such as speed and latency) and the effects of specialized services on available capacity; and (3) commercial terms, including pricing, privacy policies, and redress options.”<sup>52</sup> Also, the Commission’s Enforcement Bureau and Office of General Counsel have issued detailed advisory guidance regarding point-of-sale disclosures, service descriptions,

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<sup>50</sup> *See supra* note 45.

<sup>51</sup> *Verizon*, 740 F.3d at 659 (affirming the transparency rule).

<sup>52</sup> *Notice*, 29 FCC Rcd at 5584 at ¶ 64 (citation omitted).

security measures, and the extent of required disclosures.<sup>53</sup> These disclosure requirements are far-reaching yet targeted to matters that will support consumer choice and promote competition.

Nevertheless, the *Notice* suggests that additional disclosure requirements may be warranted. In doing so, however, the *Notice* fails to offer evidence demonstrating that additional disclosure will further promote consumer choice and competition.<sup>54</sup> Rather, it merely references “hundreds of complaints from consumers” indicating that the consumers are not receiving “the accurate information they need and have a right to receive.”<sup>55</sup> Concerns regarding the accuracy of information some consumers are receiving, however, do not imply that *additional* disclosures are called for, but rather that the Commission may need to enforce the existing requirements instead.

Given this background, the Commission should take steps to ensure that any additional obligations will not undercut the flexibility that broadband providers need to operate their networks amidst burgeoning usage and constantly evolving threats. The Commission’s tentative conclusion “that [it] should require that broadband providers disclose meaningful information regarding the source, location, timing, speed, packet loss, and duration of network congestion”<sup>56</sup> is particularly troubling. Such a requirement could require network providers to disclose detailed information regarding innovative new network-management and security protocols before implementation. Doing so would provide the information not only to consumers but also to the provider’s competitors – not to mention hackers, spammers, and others who might wish to unfairly exploit the network. Given each provider’s reasonable reluctance to expose innovative,

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<sup>53</sup> See “FCC Enforcement Bureau and Office of General Counsel Issue Advisory Guidance for Compliance with Open Internet Transparency Rule,” Public Notice, 26 FCC 9411 (2011).

<sup>54</sup> *Notice*, 29 FCC Rcd at 5586-87 ¶ 69.

<sup>55</sup> *Id.*

<sup>56</sup> *Id.* at 5591 ¶ 83.

proprietary information and practices to competitors and others, the new disclosures proposed by the Commission might well deter providers from developing new tools designed to help consumers, thereby stifling innovation that would otherwise benefit consumers.

Further, the additional disclosures contemplated by the Commission might have the perverse effect of misleading consumers and edge providers. With regard to network congestion, for instance, the “sources of congestion that impact end users may originate beyond the broadband provider’s network or in the exchange of traffic between that network and others.”<sup>57</sup> Thus, imposing congestion disclosure requirements upon network providers could create the impression that the network provider is the cause for congestion, even if other providers are responsible for the problem. This problem cannot be resolved by directing network providers to identify alternative sources of congestion. Such an obligation would require network providers to investigate each instance of congestion to determine which of the numerous networks is causing the problem and would be wholly unsustainable.

### **III. MOBILE BROADBAND CONTINUES TO MERIT A MORE TAILORED REGULATORY TREATMENT.**

In 2010, the Commission recognized the significant differences between fixed and mobile broadband technologies by tailoring its Open Internet rules for the unique nature of each service. While there have been significant changes in the mobile marketplace since 2010, these changes do not warrant reassessment of the Commission’s treatment of mobile broadband service here.<sup>58</sup> The Commission got it right in 2010 and should continue that approach now.<sup>59</sup>

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<sup>57</sup> *Id.* at 5591 ¶ 82.

<sup>58</sup> *See id.* at 5583-84 ¶ 62.

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

The distinction in regulatory treatment was necessitated by the unique characteristics of mobile wireless services, which continue to warrant a more tailored approach.<sup>60</sup> The mobile broadband market is especially innovative and is continuing to evolve at breathtaking speed. Since the 2010 *Order*, the wireless industry has widely deployed 4G service with a corresponding increase in data consumption.<sup>61</sup> Verizon Wireless' LTE network covers approximately 303 million POPs,<sup>62</sup> or approximately 95 percent of the total U.S. population. AT&T's network covers almost 280 million POPs,<sup>63</sup> Sprint expects its LTE network to cover 250 million POPs by the middle of 2014,<sup>64</sup> and T-Mobile expects to cover 250 million POPs by year end.<sup>65</sup> The growth of the "Internet of Things" is also contributing to the demand for mobile data, and will continue to do so.<sup>66</sup>

Despite this extraordinary rate of evolution, mobile wireless broadband services continue to face technical and operational constraints distinct from fixed broadband services. Wireless operators function in a mobile environment with finite spectrum resources, potential interference, and other factors that change rapidly and quickly. Further, the fact that spectrum must be shared

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<sup>60</sup> See *Open Internet Order*, 25 FCC Rcd at 17956-59 ¶¶ 93-98.

<sup>61</sup> See Letter from Scott K. Bergmann, Vice President, Regulatory Affairs, CTIA, to Hon. Thomas E. Wheeler, Chairman, et al., FCC, GN Docket No. 09-51, WT Docket No. 13-135, at 2 (filed Nov. 13, 2013).

<sup>62</sup> See Verizon, news Center, "The Verizon Wireless 4G LTE Network," available at <http://www.verizonwireless.com/news/LTE/Overview.html> (last visited July 11, 2014).

<sup>63</sup> See AT&T, "Building you a better network," available at <http://www.att.com/network/en/index.html?WT.srch=1&wtPaidSearchTerm=what+is+%2Blte#fbid=zB5ZRmiM0zt> (last visited July 11, 2014).

<sup>64</sup> See Dan Meyer, "Sprint expands LTE, Spark," RCRWireless (Apr. 29, 2014) available at <http://www.rcrwireless.com/article/20140429/carriers/sprint-expands-lte-spark-hd-audio-update-expected-later-today>.

<sup>65</sup> See Phil Goldstein, "T-Mobile's Ray knocks RootMetrics report, lays out LTE vision," RCRWireless (Mar. 6, 2014) available at <http://www.fiercewireless.com/story/t-mobiles-ray-knocks-rootmetrics-report-lays-out-lte-vision/2014-03-06>.

<sup>66</sup> See Zettabyte White Paper at 8.

among each operator’s customers leads to a greater potential for network congestion than is found with a wireline broadband network. The number of customers sharing a network, and the nature of each customer’s data demands, can vary from location to location and from one instant to the next. The continued rise in network sharing further exacerbates the need for proactive network management to accommodate competing demands for network resources and provide high quality service to all users. These factors – identified by the Commission in 2010<sup>67</sup> – remain true today, and have become more pronounced as mobile broadband usage and the data demands of customers have grown.

Thus, if the Commission opts to promulgate new Open Internet rules, it should retain the flexible approach reflected in the *Open Internet Order* and the *Notice*. For example, consistent with its tentative conclusion, it should decline to apply the proposed commercial reasonableness standard to mobile broadband providers.<sup>68</sup> The Commission should likewise maintain the 2010 framework with regard to any no-blocking rule it adopts, i.e., it should only prohibit mobile broadband providers from blocking access to lawful websites or competing voice and video telephony applications.<sup>69</sup>

#### **IV. THE COMMISSION SHOULD NOT RECLASSIFY BROADBAND INTERNET ACCESS SERVICE AS A TITLE II SERVICE.**

The D.C. Circuit has concluded that the Commission has authority to regulate broadband Internet access service under Section 706 of the Communications Act,<sup>70</sup> and the Chairman has acknowledged that this authority is sufficient for the Commission “to adopt and implement

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<sup>67</sup> *Open Internet Order*, 25 FCC Rcd at 17961, ¶ 103 (“[C]onditions in mobile broadband networks may necessitate network management practices that would not be necessary in most fixed networks.”).

<sup>68</sup> *Notice*, 29 FCC Rcd at 5609 ¶ 140.

<sup>69</sup> *Id.* at 5595 ¶ 94.

<sup>70</sup> *Verizon*, 740 F.3d at 628 (“The Commission . . . has reasonably interpreted section 706 to empower it to promulgate rules governing broadband providers’ treatment of Internet traffic. . .”).

robust and enforceable Open Internet rules.”<sup>71</sup> Nevertheless, the Commission continues to hold out the potential for reclassifying broadband Internet access as a “telecommunications service” under Title II, in whole or in part.<sup>72</sup> The Commission should not take this path. The Commission, the industry, consumers, and other stakeholders have now been through years of litigation on the reclassification question and there is no reason for the Commission to risk yet more litigation over this same issue. The D.C. Circuit has set out clear guidance for the exercise of Section 706 authority over broadband Internet access and the Commission should heed the court’s directive and end the reclassification debate now.

The Commission has considered Title II classification for broadband ISP services many times over the last dozen years and has rejected that notion each time.<sup>73</sup> The reason is obvious and compelling -- classifying broadband Internet access services as “telecommunications services” would be incompatible with the statutory text and poor public policy. For the Commission to reverse course at this late date would also be contrary to long-standing precedent.

As discussed above, private investment has been, and will continue to be, the key to broadband deployment in the United States. The Commission, therefore, should act in ways that will assure that private actors remain free to innovate, invest, and deploy facilities to meet the

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<sup>71</sup> Letter from Thomas E. Wheeler, Chairman, FCC, to John Boehner, Speaker of the House, U.S. House of Representatives, at 1 (June 17, 2014).

<sup>72</sup> *Notice*, 29 FCC Rcd at 5612-13 ¶ 148.

<sup>73</sup> *See Inquiry Concerning High-Speed Access to the Internet Over Cable & Other Facilities; Internet Over Cable Declaratory Ruling; Appropriate Regulatory Treatment for Broadband Access to the Internet Over Cable Facilities*, Declaratory Ruling and Notice of Proposed Rulemaking, 17 FCC Rcd 4798, 4824 ¶ 41 (2002), *aff’d sub nom. Nat’l Cable & Telecomms. Ass’n v. Brand X Internet Servs.*, 545 U.S. 967 (2005); *Appropriate Framework for Broadband Access to the Internet Over Wireline Facilities et al.*, Report and Order and Notice of Proposed Rulemaking, 20 FCC Rcd 14853, 14863-65 ¶¶ 14-17, 14909-12 ¶¶ 103-06 (2005); *Appropriate Regulatory Treatment for Broadband Access to the Internet Over Wireless Networks*, Declaratory Ruling, 22 FCC Rcd 5901, 5909-11 ¶¶ 19-26, 5912-14 ¶¶ 29-33 (2007); *United Power Line Council’s Petition for Declaratory Ruling Regarding the Classification of Broadband over Power Line Internet Access Service as an Information Service*, Memorandum Opinion and Order, 21 FCC Rcd 13281 (2006).

tremendous anticipated growth in demand. Classifying broadband Internet access service as a Title II common carrier service would necessarily cripple that freedom by exposing providers of cutting-edge broadband services to an archaic regulatory regime, enforced by a time consuming and uncertain administrative adjudication process.<sup>74</sup> Further, there are many provisions of Title II, such as rate regulation and the requirement to secure advance permission before offering or discontinuing services, that make no sense when applied to broadband providers.<sup>75</sup> Other Title II requirements have no application whatsoever to Internet services, much less Internet openness. For instance, Section 226 contains detailed requirements governing the provision of telephone operator services and Section 227 restricts the use of automated telephone equipment.<sup>76</sup> Simply put, application of Title II prohibitions, enforced by the common carrier Section 208 complaint process, will add layers of uncertainty regarding the range of permissible activities, without significant benefits to the consumer or other stakeholders. The result will be to alter the calculus governing providers' investment decisions and mute broadband deployment at a time when demand is skyrocketing. The Commission must remain cognizant of the fact that capital investment can readily flow outside of the broadband sector and even outside of the United States.

Assurances by the Commission that it will exercise Title II authority sparingly and/or to use its forbearance authority in an effort to rationalize its regime would provide little comfort.<sup>77</sup> Even if a majority of the Commissioners could agree on what provisions should and should not apply to broadband services, a reviewing court might disagree, striking some or all aspects of the

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<sup>74</sup> 47 U.S.C. § 208.

<sup>75</sup> *See, e.g., id.* §§ 201, 214.

<sup>76</sup> *See, e.g., id.* §§ 226, 227.

<sup>77</sup> *See generally, Framework for Broadband Internet Service*, Notice of Inquiry, 25 FCC Rcd 7866 (2010).

forbearance that the FCC had granted. Moreover, providers would always face the potential that a future Commission might try to “unforbear” or try to utilize its Title II authority more aggressively.

In addition, a Commission decision to reclassify would not likely survive on appeal. It is well established that an agency’s reversal of a prior decision requires “a more detailed justification than what would suffice for a new policy created on a blank slate” when (i) “its new policy rests upon factual findings that contradict those which underlay its prior policy,” or (ii) “its prior policy has engendered serious reliance interests that must be taken into account.”<sup>78</sup> As the Supreme Court put it, “a reasoned explanation is needed for disregarding facts and circumstances that underlay or were engendered by the prior policy.”<sup>79</sup> Reclassification would involve both aspects of Supreme Court’s test; it would require reversing long-standing factual determinations that broadband Internet service is a single integrated offering, and would upset providers’ reliance on the existing regime – reliance that led directly to the massive investment discussed above. A decision to reclassify Internet access services could not satisfy the Supreme Court’s test under these circumstances and would likely be deemed to be arbitrary and capricious on review.<sup>80</sup>

First, there is no substantial evidentiary basis upon which the Commission could reverse its prior judgment that broadband Internet access service is a single, integrated offering. The rationale for classifying Internet access services as “information services” is more apt today than ever before. It remains an integrated offering that intertwines transmission with protocol conversion, storage and retrieval of information, DNS resolution, caching, network security, and

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<sup>78</sup> *FCC v. Fox Television Stations, Inc.*, 556 U.S. 502, 515 (2009).

<sup>79</sup> *Id.* at 516.

<sup>80</sup> *Id.* at 515-16.

other functions to enable access to email, web browsing, file-sharing, and other offerings. In fact, network providers are increasingly integrating processing functionality and last-mile data transmission to improve the security, reliability, and performance of their services. More and more providers are offering complex cloud-based services for storing and retrieving information and new filters and other systems for securing customers against intrusion from spam and harmful viruses.

The fact that information services involve transmission as well as information processing is not a sound basis for concluding that the Commission can separate these functions into separately identifiable “telecommunications” and “information” services. The transmission and data processing technologies of broadband Internet access service are so intertwined that no piece-part can easily be segregated out and identified separately as a “telecommunications” as opposed to an “information” service. Likewise, from the user’s perspective, broadband Internet access service remains a unified service that does not comfortably comport with the Act’s definition of “telecommunications,” i.e., “the transmission, between or among points specified by the user, of information of the user’s choosing, without change in the form or content of the information as sent and received.”<sup>81</sup> Broadband Internet access users certainly don’t choose the specific points of transmission – the information they are requesting may be delivered from any number of different servers in different locations using different routes. Similarly, the information both sent and received is routinely changed in form and content without the user’s knowledge.

In an attempt to avoid this problem, the Commission requested comment on whether it can identify and reclassify as a separate piece-part the remote delivery of content from the edge

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<sup>81</sup> 47 U.S.C. § 153(50).

provider to an end user across terminating access facilities.<sup>82</sup> Even assuming this service provided to edge providers can be separated from the Internet access services offered to end-users in this way, that service would still involve the intertwined transmission and data processing technologies that constitute information services. Attempting to segregate and reclassify this remote delivery service, in other words, would necessarily open the door to classifying almost all Internet-based services. The Commission should not pursue this notion.

Second, reclassification would clearly disrupt the reliance interests of network providers, who have invested billions in building networks based on the expectation that broadband Internet access service is subject to light-handed regulation as an information service. As discussed above, this regulatory framework has supported the business rationale underlying remarkable levels of capital investment in broadband infrastructure and broadband Internet services in the United States have flourished. Reclassification would engender regulatory uncertainty, discouraging investment in facilities and stifling the innovation and dynamism that characterizes the broadband Internet market today.

Further, increased investment and innovation on the part of edge providers would not compensate for the suppressing effect that Title II reclassification would have on investment and innovation at the network level. Investment and innovation at the edge and on the network are symbiotic: as networks continue to expand and innovate, they provide a greater range for innovation by edge providers, who in turn create additional incentives for network providers to continue expanding and innovating. Thus, suppressing network investment through reclassification would likely have adverse consequences on investment and innovation at the edge as well.

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<sup>82</sup> *Notice*, 29 FCC Rcd at 5615 ¶ 152.

For these reasons, the Commission should maintain its current approach to fostering competition among advanced broadband networks, resist calls to reclassify broadband Internet access services, and avoid subjecting the service to an outdated Title II regulatory scheme that is not adaptable to the dynamic Internet environment.

### **CONCLUSION**

For the foregoing reasons, the Commission should tread lightly when considering binding Open Internet rules as proposed in this docket. Imposing rigid, prescriptive rules would risk chilling further broadband deployment, jeopardizing some of the millions of jobs that depend on such investment. To the extent the Commission does adopt rules, it should ensure that the rules are narrowly tailored and offer network providers the flexibility they need to function in the dynamic broadband Internet marketplace.

In particular, if it adopts the proposed commercially reasonable standard, it should do so in a way that does not prospectively restrict or prohibit prioritization. Likewise, the Commission should (1) decline to adopt a pure nondiscrimination rule, (2) ensure that providers retain broad discretion to employ necessary network management techniques, (3) preserve a broad exemption for managed and specialized services, and (4) ensure that any no-blocking rule does not restrict providers' ability to offer managed and specialized services. Further, the Commission should continue to tailor its proposed prohibitions on blocking and commercially unreasonable practices to recognize the characteristics of the wireless broadband market and the unique technical

constraints faced by wireless providers. Finally, the Commission should continue to resist calls to reclassify broadband Internet access service as a telecommunications service subject to Title II of the Communications Act.

Respectfully submitted,

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