



## EXECUTIVE SUMMARY

The Internet fundamentally has changed the way Americans work and play, socialize and interact with neighbors and friends, create and consume, and shop and sell. It has empowered people around the world to change their lives. It has done so largely without government regulation (at least in the United States), in an open and free environment that fosters innovation and investment by all parties in the Internet ecosystem. As Chairman Genachowski has observed, the overarching lesson of the Internet “is that we cannot know what tomorrow holds on the Internet, except that it will be unexpected; that the genius of American innovators is unlimited; and that the fewer obstacles these innovators face in bringing their work to the world, the greater our opportunity as citizens and as a nation.”

Comcast was one of the very first companies to deliver the promise of broadband to American homes. Ever since we first started offering our High-Speed Internet (“HSI”) service in 1996, we have operated it in a manner consistent with the openness embodied by the four principles of the *Internet Policy Statement*, and the express exception for reasonable network management. Our commitment to doing so in the future is unwavering.

The Commission has initiated this proceeding with the goal of “preserving” the open Internet. It is generally understood and appreciated that Americans enjoy the benefits of an open, vibrant, and dynamic Internet, and the four principles of the *Internet Policy Statement* have played an important role in fostering this milieu. Comcast shares the Commission’s goal of preserving and encouraging the open Internet, and applauds the Commission for its commitment to a fair, fact-based, data-driven process to explore how that openness can best be preserved.

In light of the success of the policies of the last 15 years in attracting investment and encouraging innovation, the Commission should move cautiously before adopting a new Internet regulatory regime. Comcast and other cable operators have deployed broadband Internet service to over 92 percent of American households, in competition with other wireline and wireless broadband Internet Service Providers (“broadband ISPs”). As both the FTC and FCC have found, this competition has encouraged investment and innovation that ensures American consumers have access to state-of-the-art broadband Internet service at world-class speeds.

At the same time, Congress, in the Recovery Act, established the importance to the nation of promoting further broadband deployment, adoption, and innovation. The Chairman and other Commissioners, as well as many respected business leaders, have pointed out that continued private sector investment will be vital going forward if our nation is to be a broadband leader. Yet marketplace evidence and the record the Commission has developed for its National Broadband Plan raise serious concerns that the proposed regulations would put at risk the continued investment and innovation in broadband networks needed to meet those goals. The real risk to private investment, jobs, and the future upgrade and further deployment of broadband networks seems far greater than the theoretical risks of misbehavior posited by supporters of new Internet regulation.

In light of these real risks, rules should only be adopted if a record is built that includes concrete facts and data demonstrating (1) actual – not conjectural – harms that would be remedied by the proposed rules; (2) actual – not hypothetical – benefits that would be gained by

adoption of the proposed rules; and (3) that the harms and benefits outweigh the real risks to continued innovation and investment. To date there is no such record.

Moreover, the Commission can only adopt rules if it has the requisite authority to do so. Even where the Commission has subject matter jurisdiction, as is the case with services such as broadband Internet service, it does not have ultimate substantive power to regulate unless Congress directly grants it such authority or the regulation at issue is reasonably ancillary to the effective performance of a statutorily mandated responsibility. When, as here, the Commission is relying on this ancillary authority, it must tie each specific rule it adopts back to a specific statutory provision or provisions that confer such responsibility, and demonstrate with substantial record evidence how the particular rule is “reasonably ancillary to the effective performance” of its responsibilities under that provision.

To the extent the Commission builds a record that justifies new rules and explains its authority to adopt any such rules, it should adopt only those rules absolutely necessary to address actual harms. Broadband ISPs currently operate their networks in an open and neutral manner that has facilitated the development and growth of the content, applications, and services available on the Internet today. The proposed regulation in the form of new “open Internet” rules threatens to upset the status quo that has proven so successful, putting at risk future innovation and investment. Furthermore, the Commission must recognize that issues relevant to “preserving the open Internet” can occur at multiple layers of the Internet and address those issues accordingly.

First, if the Commission decides to adopt formal Internet regulations, it should limit such regulation to the first three principles of the *Internet Policy Statement*. This would address all of the hypothetical concerns that have been raised by various proponents of regulation, with minimal disruption of the status quo. The Commission, however, should not adopt the fourth principle as a rule. It is a laudable goal to state that a broadband ISP “may not deprive . . . users of the user’s entitlement to competition among network providers, application providers, service providers, and content providers,” but the concept is too vague and is ill-suited as an enforceable regulatory standard. Rather, this principle should be retained as an overarching, aspirational policy goal for the entire Internet ecosystem.

Second, although the details of how the Commission would *implement* any of these proposed regulations could differ based on the particular circumstances, any rules must apply to all players in and all layers of the Internet ecosystem. That is the only way to ensure that the potential risks to the open Internet are addressed no matter where they may occur or who causes them – otherwise, the Commission’s primary purposes will not be satisfied. If the Commission concludes that regulation is needed out of concern that potential “gatekeepers” may disrupt or interfere with the current Internet ecosystem and consumers’ access to and use of Internet content, applications, and services, this concern applies to any number of potential “gatekeepers” in the ecosystem. The Commission should not exempt any broadband Internet platforms or Internet application and service providers from any openness rules it may adopt.

Third, the Commission should revise its proposed nondiscrimination rule to prohibit only unreasonable and anticompetitive discrimination. The rule as preliminarily proposed would impede, and in some cases foreclose, what most people (including engineers and many scholars)

consider “socially beneficial discrimination.” In particular, a rigid, inflexible, and absolute prohibition on differentiation would lock in current technologies and business models, foreclosing experimentation, development, and implementation of technologies or business models that may benefit consumers and the public interest. A nondiscrimination rule that prohibits *unreasonable and anticompetitive* discrimination would better balance concerns about discrimination against the preservation of public interest benefits that will accrue from socially beneficial discrimination or differentiation that is likely to stimulate more investment and innovation.

Fourth, the Commission should adopt a holistic approach to determining what information consumers need, serving as a coordinator and repository of best information disclosure practices for all broadband ISPs and Internet application and service providers, rather than imposing solely on broadband ISPs a new, onerous duty to disclose information to parties with whom broadband ISPs have no relationship. Comcast has long recognized that clear communication with our customers is an important part of a successful business. The *NPRM*, however, proposes moving forward with formal regulations that would impose new, broad disclosure obligations, including a duty on broadband ISPs that potentially would require them to provide proprietary information to tens of millions of application or service providers or other third parties around the globe. The *NPRM* does not provide sufficient reason for imposing such an onerous duty, nor does it explain what information an application or service provider may legitimately need that would not otherwise be disclosed to consumers.

Finally, to the extent the Commission adopts any rules, engineering and policy practices related to network management should be presumed “reasonable.” The *NPRM* correctly recognizes that any rules the Commission adopts should not interfere with broadband ISPs’ reasonable network management practices, or the needs of law enforcement, public safety, or homeland security. Presumptions of this nature are necessary but not sufficient. To make this provision meaningful, the Commission should:

- (1) Confirm that the rules are intended to be flexible to allow broadband ISPs to react to marketplace and technological demands without delay;
- (2) Establish a safe harbor for network management practices that conform with standards promulgated by standards development organizations; and
- (3) Create a presumption that any management practice that utilizes “best practices” promulgated and publicized by trade associations, industry consortia or working groups, or a government advisory committee, as well as any practices that address recognized legitimate network management concerns – e.g., congestion management, security, spam, copyright protection, law enforcement needs, etc. – are reasonable.

In addition to the proposed rules for the open Internet, the *NPRM* asks a number of questions about “managed or specialized” services. “Managed or specialized” services, by definition, are new services that have *not* been previously defined and classified by the Commission or by statute. As the *NPRM* notes, a number of “managed or specialized” services are currently being developed, many of which will further national goals enumerated in the Recovery Act. In light of the potential benefits of managed or specialized services and the fact

that the marketplace for these services is nascent, the Commission should adopt the successful deregulatory approach that spurred investment and innovation in the Internet and “do no harm.”

Comcast remains committed to preserving and encouraging the continued development of the open Internet. Moreover, we are committed to working cooperatively with the Commission in this and other proceedings to ensure that broadband Internet service is better, faster, ubiquitously available, and widely adopted. And we are committed to constructive, fact-based engagement with the Commission as it pursues this rulemaking.

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BEFORE THE  
Federal Communications Commission  
WASHINGTON, D.C.

|                              |   |                      |
|------------------------------|---|----------------------|
| In the Matter of             | ) |                      |
|                              | ) |                      |
| Preserving the Open Internet | ) | GN Docket No. 09-191 |
|                              | ) |                      |
| Broadband Industry Practices | ) | WC Docket No. 07-52  |
|                              | ) |                      |

**COMMENTS OF COMCAST CORPORATION**

Comcast Corporation (“Comcast”) hereby responds to the above-captioned Notice of Proposed Rulemaking (“*NPRM*”).<sup>1</sup>

**I. INTRODUCTION**

Future historians will likely mark the development and growth of the Internet in the past decade as the critical turning point in the history of communications. They will point to the way it has empowered people – not just in the United States, but across the globe – to take control of their lives, to improve their economic standing and educational achievement, and to create and share information on an unprecedented scale. What the Commission does in this proceeding will determine whether that history in the United States continues to be one of success and consumer empowerment. It will determine whether the Internet remains open and largely free of government interference, or whether the Internet will turn into the kind of regulatory and political battleground that deters investment and innovation.

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<sup>1</sup> See *In re Preserving the Open Internet; Broadband Industry Practices*, Notice of Proposed Rulemaking, 24 FCC Rcd. 13064 (2009) (“*NPRM*”).

Starting in 1996, Comcast was among the first companies to deploy broadband Internet service, helping to deliver the promise of broadband to American homes. We are innovators in Internet speed, safety, and security. We have successfully used the “triple play” to promote broadband adoption. We are committed to digital literacy and want to see every American connected and empowered by the broadband Internet. And our ongoing commitment to operate our High-Speed Internet (“HSI”) service in a manner consistent with the openness embodied by the four principles of the *Internet Policy Statement* is unwavering.

Every day, Comcast’s subscribers take full advantage of the Internet. They download or stream video from Netflix, CNN.com, iTunes, YouTube, Hulu, iReel, PBS.org, Xbox Live, PlayStation Network, Blinkx, Vuze, Veoh, Vevo, Artistdirect, Liketelevision.com, CNET-TV, Moviepro.net, Pure Video Networks, MetaCafe, and countless other Internet video services. They call family and friends all over the world using Skype, Vonage, Google Voice, Phone Power, ViaTalk, CallCentric, or any other over-the-top VoIP provider they want. They download and upload videos, pictures, music, text, or some other file, using any format, protocol, application, or service they want. In short, Comcast and other broadband Internet Service Providers (“broadband ISPs”) are delivering consumers what they demand: an open, robust, and exciting Internet.

Comcast has invested tens of billions of dollars to deploy competitive broadband networks. We are rolling out DOCSIS 3.0 technology in our systems nationwide, and at the end of 2009 the world-class speeds enabled by DOCSIS 3.0 technology were available to about 75 percent of the homes and businesses passed by our network. Our wireline and wireless competitors are constantly looking to meet or beat our offerings, and we in turn are compelled to invest and innovate to remain ahead. It was the partial deregulation of the cable industry in the

Telecommunications Act of 1996 (the “1996 Act”), and the deliberate efforts of Administrations and Commissions under both Democratic and Republican leadership, that fostered these investments. The evidence demonstrates that the Internet ecosystem continues to thrive under these deregulatory policies.

The Commission has initiated this proceeding with the goal of “preserving” an open Internet. In so doing, it has embraced the general understanding and appreciation that Americans enjoy the benefits of an open Internet and a competitive broadband marketplace. The four principles of the *Internet Policy Statement* have played an important role in fostering this milieu. Comcast shares the Commission’s goal of preserving and encouraging the vibrant, dynamic nature of the open Internet, and applauds the Commission for its stated commitment to a fair, fact-based, data-driven process to explore how that openness can best be preserved. As we recently commented:

We share and embrace the objective of preserving an open Internet, as we always have. While we may ultimately not agree on the level and extent of government involvement needed to accomplish this important objective, we appreciate and support Chairman Genachowski’s commitment to have a fair, fact-based, and data-driven process to explore these matters.<sup>2</sup>

In that regard, although it is not clear that there is a need for new regulation, the Commission should be commended for including proposed rules in the *NPRM*. This approach, which has been absent from Commission proceedings for far too long, will allow commenting parties, pursuant to proper process, to respond directly to the proposals under consideration. Also commendable are several of the Commission’s findings that balance the various objectives

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<sup>2</sup> David L. Cohen, Executive Vice President, Comcast Corp., *FCC Begins Examination of Potential Internet Regulation*, Comcast Voices, Oct. 23, 2009, at <http://blog.comcast.com/2009/10/fcc-begins-examination-of-potential-internet-regulation.html>.

of this proceeding. For example, the *NPRM* explicitly recognizes network operators' need to manage their networks and notes that network management practices such as the congestion management technique currently employed by Comcast, as well as usage-based billing by broadband ISPs, should be considered "reasonable." The challenge for the Commission as it moves forward, however, will be to determine (1) whether there is an evidentiary basis and legal foundation for adopting rules and, (2) if so, how to codify enforceable rules while continuing to provide ISPs with the necessary flexibility to make good-faith judgments on how best to manage complex and interdependent networks that are in a constant state of change and threat.

Assuming the Commission can build the requisite legal and factual record to support the adoption of rules, adopting as rules the original first three principles of the *Internet Policy Statement* – while retaining the fourth principle as an overarching policy goal rather than an enforceable rule given its generic, aspirational language – would be the most prudent course of action. The *NPRM*'s proposed modifications to the existing principles, however, and its addition of two new proposed rules, may cause more harm than good because:

- (1) The proposed rules apply only to a narrow class of Internet service providers, ignoring whether the Internet is "open" at all of its layers;
- (2) The proposed "nondiscrimination" rule would prohibit network operators from adopting a number of reasonable practices that potentially could have significant benefits for consumers and the public interest; and
- (3) The proposed "transparency" rule would create a new and burdensome legal duty for network operators while failing to impose corresponding duties on other key participants in the Internet ecosystem.

To the extent the Commission meets its burden in justifying adoption of rules, we offer a number of suggestions that can improve the focus of the rules and ameliorate the risk of unanticipated, harmful consequences. Comcast remains committed to preserving the open Internet – and to doing its part to make the broadband Internet faster, smarter, and safer – and we

are equally committed to constructive, fact-based engagement with the Commission as it pursues this rulemaking.

## **II. THE INTERNET ECOSYSTEM IS THRIVING IN THE ABSENCE OF FORMAL COMMISSION REGULATIONS.**

Before going forward with the proposed codification of Internet regulations, “[t]he first question [the Commission] should ask is: Is the Internet broken?”<sup>3</sup> Especially in light of the record of success thus far, the Commission must be sure that there is factual support that sufficiently justifies the need for the rules it proposes to adopt – factual support that goes well beyond the justifications offered in the *NPRM*.

### **A. The Record over the Last Fifteen Years Shows That Deregulatory Policies in the United States Have Promoted Investment and Innovation in the Open Internet.**

The history of the Internet’s first days is widely known and accepted: it started a little over 40 years ago as a series of networks developed by engineers and computer scientists in government, academia, and the private sector. Less well understood is the story of how the benefits of those networking innovations were delivered to American homes through a combination of risk-taking by the private sector and deregulatory, pro-competition policies on the part of the federal government.<sup>4</sup>

The deregulatory policies begun under the Clinton Administration and advanced by successor Administrations and Commissions led to over \$500 billion dollars of investment in the

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<sup>3</sup> Robert McDowell, Commissioner, FCC, *Questions To Ask Regarding Internet Regulation*, Speech at Institute for Policy Innovation Communications Summit 3 (Nov. 12, 2009), at [http://hraunfoss.fcc.gov/edocs\\_public/attachmatch/DOC-294631A1.pdf](http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-294631A1.pdf). Or, as the Washington Post put it, “the most important question of all [is]: Is this intervention necessary?” *The FCC’s Heavy Hand*, Wash. Post., Sept. 28, 2009, available at [http://www.washingtonpost.com/wp-dyn/content/article/2009/09/27/AR2009092703026\\_pf.html](http://www.washingtonpost.com/wp-dyn/content/article/2009/09/27/AR2009092703026_pf.html).

<sup>4</sup> See Brian L. Roberts, *The Greatest Story Never Told: How the 1996 Telecommunications Act Helped to Transform Cable’s Future*, 58 Fed. Comm. L.J. 571, 572-73 (2006).

last decade by all broadband providers,<sup>5</sup> with the cable industry investing over \$146 billion in America's broadband future.<sup>6</sup> Passage of the 1996 Act with strong bipartisan support, and subsequent decisions to maintain a deregulatory environment, spurred the deployment of cable high-speed Internet and responsive deployment by wireline and wireless competitors. The 1996 Act built on the deregulatory stance towards the Internet and other information services that the Commission had initiated many years earlier in its *Second Computer Inquiry*.<sup>7</sup>

Under Chairmen Hundt, Kennard, and Powell, the Commission embraced policies to promote competitive investment in facilities and resisted calls for government to dictate how these competitive networks should be operated.<sup>8</sup> Chairman Hundt recognized that government regulation “can’t necessarily make the [I]nternet succeed. But it can be an obstacle to its success – through unwise action and unwise inaction.”<sup>9</sup> In 1999, the Commission recognized the

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<sup>5</sup> See U.S. Telecomm Ass’n Comments, GN Docket 09-51, at 3 (June 8, 2009) (noting also that “[i]n 2008 alone, broadband providers invested at least \$64 billion to deploy and upgrade their networks”).

<sup>6</sup> Nat’l Cable & Telecomm. Ass’n, *Cable Industry Capital Expenditures, 1996-2009*, at <http://www.ncta.com/Stats/InfrastructureExpense.aspx> (last visited Jan. 14, 2010).

<sup>7</sup> As the Commission acknowledged in the IP-Enabled Services proceeding, “Congress stated that the Internet should remain free from regulation.” *In re IP Enabled Services*, NPRM, 19 FCC Rcd. 4863 ¶ 42 (2004) (“*IP Enabled Services NPRM*”) (citing 47 U.S.C. § 230(b)(2)). This regulatory approach continued the deregulatory policies towards information services that the Commission adopted in the *Second Computer Inquiry*. *In re Amendment of Section 64.702 of the Commission’s Rules and Regulations (Second Computer Inquiry)*, Docket No. 20828, Final Decision, 77 FCC 2d 384 (1980) (“*Computer II Final Decision*”).

<sup>8</sup> Reed E. Hundt, Chairman, FCC, *From Buenos Aires to Geneva and Beyond*, Remarks Before the World Affairs Council, Philadelphia, PA 2 (Oct. 22, 1997) (as prepared for delivery) (“Few actions have done more to promote economic growth and innovation than our refusal to regulate the Internet or to force onto the Internet the outdated, cumbersome regulatory regime that has so long harnessed circuit-switched telephony.”); William E. Kennard, Chairman, FCC, Remarks Before the Summer 2000 Session of the NARUC (July 24, 2000), available at <http://www.fcc.gov/Speeches/Kennard/2000/spwek017.html> (“[P]erhaps the FCC’s most important decision – we decided to leave the Internet unregulated.”); Michael K. Powell, Chairman, FCC, Remarks at NARUC Gen. Assembly, Washington, D.C. (Mar. 10, 2004) (“We should take non-regulation of the Internet as a regulatory imperative, absent clear and compelling evidence of real harm, because limiting government intrusions – both at the federal and state level – maximizes the potential for innovation and increases opportunity for the nation as a whole.”).

<sup>9</sup> Reed Hundt, Chairman, FCC, Speech, *Unsolved Mysteries in Law, Communications, and Cyberspace*, (Sept. 10, 1997), available at <http://www.fcc.gov/Speeches/Hundt/spreh744.html>.

promise of cable Internet service, and specifically declined the path of prophylactic regulatory intervention.<sup>10</sup> And, in 2002, the Commission clarified that cable Internet service is *not* a Title II telecommunications services, but rather is an interstate information service<sup>11</sup> – a decision affirmed by the Supreme Court in 2005<sup>12</sup> and followed by similar decisions reclassifying wireline<sup>13</sup> and mobile wireless<sup>14</sup> broadband Internet services as interstate information services. As a result of these decisions, a tremendous amount of private capital flowed into the competitive broadband Internet marketplace.

The cable industry today offers broadband Internet service to 92 percent of all U.S. households.<sup>15</sup> Across the nation, cable operators are offering consumers residential high-speed connections with download speeds of up to 12, 20, 30, 50, and 100 Mbps or more.<sup>16</sup> For our part, Comcast has invested tens of billions of dollars in network infrastructure, improvements,

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<sup>10</sup> See, e.g., *In re Inquiry Concerning the Deployment of Advanced Telecomm. Capability to All Americans in a Reasonable and Timely Fashion, and Possible Steps To Accelerate Such Deployment Pursuant to Section 706 of the Telecomm. Act of 1996*, Report, 14 FCC Rcd. 2398 ¶ 105 (1999) (“We bear in mind that ‘the Internet and other interactive computer services have flourished, to the benefit of all Americans, with a minimum of government regulation’ and that it is the policy of the United States ‘to preserve the vibrant and competitive free market that presently exists for the Internet and other interactive computer services, unfettered by Federal or State regulation . . . .””).

<sup>11</sup> *In re Appropriate Regulatory Treatment for Broadband Access to the Internet over Cable Facilities*, Declaratory Ruling and NPRM, 17 FCC Rcd. 4798 ¶ 39 (2002) (“*Cable Internet Declaratory Ruling and NPRM*”), *aff’d*, *Nat’l Cable & Telecomm. Ass’n v. Brand X Internet Servs.*, 545 U.S. 967 (2005).

<sup>12</sup> *Nat’l Cable & Telecomm. Ass’n v. Brand X Internet Servs.*, 545 U.S. 967 (2005)

<sup>13</sup> *In re Appropriate Framework for Broadband Access to the Internet over Wireline Facilities*, Report & Order and NPRM, 20 FCC Rcd. 14853 ¶ 1 (2005) (“*Wireline Broadband Order*”), *aff’d* *Time Warner Telecom, Inc. v. FCC*, 507 F.3d 205 (3d Cir. 2007).

<sup>14</sup> See *In re Appropriate Regulatory Treatment for Broadband Access to the Internet over Wireless Networks*, Declaratory Ruling, 22 FCC Rcd. 5901 (2007) (“*Wireless Broadband Declaratory Ruling*”).

<sup>15</sup> Nat’l Cable & Telecomm. Ass’n, *Availability*, at <http://www.ncta.com/StatsGroup/Availability.aspx> (last visited Jan. 14, 2010) (reporting that, as of September 2009, homes passed by cable broadband Internet services totaled 121.4 million).

<sup>16</sup> See, e.g., Cablevision Communications, *Cablevision: Optimum Online Ultra*, at <http://www.aitrk.optimum.com/online/ultra.jsp> (last visited Jan. 14, 2010) (offering “speeds up to 101 Mbps downstream and up to 15 Mbps upstream”).

and upgrades; these investments enabled us to bring our HSI service to over 99.5 percent of the homes our cable systems pass, and deliver our service to nearly 16 million customers. Since introducing our HSI service in 1996, we have continuously upgraded our network to significantly increase Internet bandwidth, and on numerous occasions we have doubled the broadband speeds available to customers without increasing prices. We are currently upgrading our broadband network to DOCSIS 3.0 in order to offer consumers next-generation, world-class speeds of up to 50 Mbps or more.<sup>17</sup> We are also leaders in the transition to IPv6<sup>18</sup> and DNSSEC,<sup>19</sup> and have been commended for our innovations such as the “Constant Guard” security program, which aims to help customers deal with malicious bots and other malware.<sup>20</sup> We are also innovating in consumer transparency and disclosure, with a “network management” webpage that has been

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<sup>17</sup> See Comcast Comments, GN Docket No. 09-51, at 37-38 (June 8, 2009).

<sup>18</sup> See John Jason Brzozowski, *The Hitchhiker’s Guide to Ipv6*, Communications Tech., Sept. 1, 2009, available at <http://www.cable360.net/ct/sections/features/37356.html> (highlighting the importance of IPv6 and Comcast’s efforts to transition to IPv6); Jonathan Tombes, *Transition to IPv6 Is Taking Time*, Communications Tech., Dec. 22, 2009, available at [http://www.cable360.net/ct/news/ctreports/commentary/Transition-to-IPv6-is-Taking-Time\\_39298.html](http://www.cable360.net/ct/news/ctreports/commentary/Transition-to-IPv6-is-Taking-Time_39298.html) (noting that Comcast has been pushing the transition to IPv6 since 2004).

<sup>19</sup> Lauren Price, *The DNSSEC Groundswell*, CircleID, Feb. 28, 2009, at [http://www.circleid.com/posts/20090228\\_the\\_dnssec\\_groundswell](http://www.circleid.com/posts/20090228_the_dnssec_groundswell) (“In October of last year, Comcast made available a DNSSEC resolver for the Internet community to test against. They are also documenting best practices and case studies as they perform testing. . . . This is yet another example of industry wide collaboration in moving towards robust Internet security.”). More details regarding the evolution of Comcast’s DNSSEC work is available on the Comcast DNSSEC website at <http://www.dnssec.comcast.net>. Comcast plans new DNSSEC-related technical activities in 2010, which we expect to announce soon.

<sup>20</sup> See Quentin Jenkins, *Comcast Guarding Users Helps Protect All of Us*, spamhaus.org, Dec. 7, 2009, at <http://www.spamhaus.org/news.lasso?article=651> (“According to Jerry Upton, executive director of MAAWG, ‘The new Comcast safeguards are in line with industry best practices to help ISPs assist customers whose machines have been infected with malware. By deploying the technology to detect bots on their subscribers’ computers, Comcast is providing a service to their customers and contributing to safer messaging.’”).

commended for its clarity and openness,<sup>21</sup> and with the recent deployment of a first-in-the-industry whole-house bandwidth consumption meter.<sup>22</sup>

The public interest benefits of the Commission's Internet-related policies are not only realized by the billions invested in infrastructure, jobs, and innovation,<sup>23</sup> but also in the competitive networks these policies helped to foster. At the recent Broadband Competition Workshop, Georgetown Professor Marius Schwartz noted that, while the different broadband platforms are not perfect substitutes for each other because of their various technological attributes, there are five or six broadband providers in most parts of the country, and that there are a number of indicators of competition among these providers.<sup>24</sup> Moreover, just a little over three years ago, the Commission found "that competition among providers of broadband service is vigorous," and that "greater competition limits the ability of providers to engage in

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<sup>21</sup> The Comcast Network Management website is available at <http://networkmanagement.comcast.net>.

<sup>22</sup> See Sam Diaz, *Comcast Keeps Promise, Launches Data Usage Meter*, ZDNet Blogs, Dec. 1, 2009, at <http://blogs.zdnet.com/BTL/?p=27906> ("Comcast has done a good thing here, something that will help consumers take control of their usage, just as they have for voice minutes on their cell phones."); Stacey Higginbotham, *Comcast Trials Broadband Meter in Portland*, GigaOM, Dec. 1, 2009, at <http://gigaom.com/2009/12/01/comcast-trials-broadband-meter-in-portland/> ("I have to say that while I'm not excited about the cap in place here, Comcast's efforts to deliver a meter that has been certified by an independent company are a step in the right direction."). This was also announced on the Comcast Blog, see Jason Livingood, Executive Director, Internet Systems, Comcast Corp., *Comcast Data Usage Meter Launches*, Comcast Voices (Dec. 1, 2009), at <http://blog.comcast.com/2009/12/comcast-data-usage-meter-launches.html>, as well as on the Comcast Network Management website and by Comcast representatives in web forums and other online venues.

<sup>23</sup> For example, Verizon recently announced that it invested \$17 billion in its network in 2009. News Release, Verizon Communications Inc., *Verizon's \$17 Billion Network Investment in 2009 Pays Off* (Dec 29, 2009), available at <http://newscenter.verizon.com/press-releases/verizon/2009/verizons-17-billion-network.html>.

<sup>24</sup> Transcript, FCC, *National Broadband Plan Workshop: Economic Issues in Broadband Competition* 44-49 (Oct. 9, 2009) (Statement of Marius Schwartz, Professor of Economics, Georgetown University), available at [http://www.broadband.gov/docs/ws\\_28\\_economic.pdf](http://www.broadband.gov/docs/ws_28_economic.pdf).

anticompetitive conduct . . . since subscribers would have the option of switching to alternative providers if their access to content were blocked or degraded.”<sup>25</sup>

The widespread availability of broadband Internet services also has made possible the growth of broadband Internet content, applications, and services such as YouTube, Hulu, Facebook, Wikipedia, Amazon, Skype, WebMD, HealthCentral, Monster, Expedia, iTunes, Yahoo!, Blogger, Twitter, Google, eBay, Evite, eHarmony, Craigslist, Flickr, Hotmail, LinkedIn, OpenTable, My Space, Thumbcast, Snapfish, Ask.com, Peapod, Yammer, Huffington Post, Drudge Report, and thousands upon thousands of others. The relationship between broadband ISPs and other creators of Internet content, applications, and services that benefit from broadband ISPs’ networks is profoundly symbiotic. They are part of the most complex and rapidly evolving economic, social, educational, cultural, and political ecosystem in human history. As the CEOs of Google and Verizon Wireless recently noted, “[P]rivate investment is dramatically increasing broadband capacity and the intelligence of networks, creating the infrastructure to support ever more sophisticated applications. . . . [I]f you’re an entrepreneur with a big idea, you can launch your service online and instantly connect to an audience of billions. . . . Both of our businesses rely on each other.”<sup>26</sup>

In light of the success to date of the policies of the last 15 years, the Commission should move cautiously before adopting a new Internet regulatory regime. As Chairman Genachowski pointed out, “private sector investment has been very, very substantial to date, and will be vital

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<sup>25</sup> *In re Application for Consent to the Assignment and or Transfer of Control of Licenses; Adelphia Communications Corp., to Time Warner Cable Inc., and Comcast Corp.*, Memorandum Opinion & Order, 21 FCC Rcd. 8203 ¶ 217 (2006).

<sup>26</sup> Joint Statement of Eric Schmidt, Chairman & CEO, Google, and Lowell McAdam, President & CEO, Verizon Wireless (Oct. 22, 2009), available at <http://googlepublicpolicy.blogspot.com/2009/10/finding-common-ground-on-open-internet.html> (“Google-Verizon Wireless Joint Statement”).

to the country achieving its broadband goals.”<sup>27</sup> Notable business leaders have similarly explained that, “[p]olicies that continue to provide incentives for investment and innovation are a vital part of the debate we are now beginning.”<sup>28</sup> Yet the record before the Commission, much of it compiled over the last several months, raises serious concern about whether the proposed regulations would put at risk continued investment and innovation in broadband networks:

**Christopher King, Stifel Nicolaus** – “To the extent that [net neutrality] could stifle investment down the road, . . . any regulation that would limit severely [the] ability [of ISPs] to control their own networks or to manage traffic on their own networks . . . could certainly have a negative role in their investment going forward.”<sup>29</sup>

**Thomas Aust, GE Asset Management** – From an investment perspective, “[l]ess regulation is better regulation”; “if rules, intentionally or unintentionally . . . skew the balance toward one side or another, then one side may be prevented from deploying services.”<sup>30</sup>

**Craig Moffett, Sanford C. Bernstein and Co.** – “Mandated ‘Net Neutrality’ would further sour Wall Street’s taste for broadband infrastructure investments, making it increasingly difficult to sustain the necessary capital investments. It would also likely mean that consumers alone would be required to foot the bill for whatever future network investments that *do* get made. That would result in much higher end-user prices, much steeper subsidies of heavy users by occasional ones, and, in all likelihood, a much sharper ‘digital divide.’”<sup>31</sup>

**J. Gregory Sidak, Then-Visiting Professor of Law at Georgetown University Law Center** – “Private investors will fund the construction of a broadband network only if there is a reasonable expectation that the company making that investment will recover the cost of its investment, including a competitive return on capital. Sunk investment is not a one-shot deal; sunk investment is made continuously over time. Therefore, as soon

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<sup>27</sup> Julius Genachowski, Chairman, FCC, Remarks of FCC Open Commission Meeting at 35:40 (Nov. 18, 2009), at [http://www.fcc.gov/live/2009\\_11\\_18-open-meeting.html](http://www.fcc.gov/live/2009_11_18-open-meeting.html).

<sup>28</sup> *Google-Verizon Wireless Joint Statement*, *supra* note 26.

<sup>29</sup> Christopher King, Principal, Stifel Nicolaus, Remarks at FCC Hearing on Broadband Capital Formation at 69:14 (Oct. 1, 2009), at [http://www.fcc.gov/live/2009\\_10\\_01-workshop.html](http://www.fcc.gov/live/2009_10_01-workshop.html).

<sup>30</sup> Thomas Aust, Senior Analyst, GE Asset Management, Remarks at FCC Hearing on Broadband Capital Formation at 22:00 and 75:35 (Oct. 1, 2009), at [http://www.fcc.gov/live/2009\\_10\\_01-workshop.html](http://www.fcc.gov/live/2009_10_01-workshop.html).

<sup>31</sup> Testimony of Craig E. Moffett, Vice President and Senior Analyst, Sanford C. Bernstein & Co., Before the S. Commerce Comm., Subcomm. on Communications 3-4 (Mar. 14, 2006) (emphasis in original), available at <http://commerce.senate.gov/pdf/moffett-031406.pdf>.

as it is understood that a new regulatory obligation or regime like ‘net neutrality’ will jeopardize a firm’s recovery of its sunk costs, the capital markets will demand a higher risk-adjusted return. As the cost of capital rises, incremental sunk investment in the network will be more costly for its owner, and the likelihood that the network will be completed according to its originally intended scale will diminish.”<sup>32</sup>

**Professors David Farber (often referred to as one of the “Grandfathers of the Internet”) and Gerald Faulhaber** – “[A]dopting ‘reasonable’ network management as a rule introduces great uncertain[t]y into the market; exactly what behaviors will incur the wrath of the regulator? Don’t know; we’ll punish you when we see it. If ever a policy was designed to increase cost, reduce customer choice, reduce incentives to innovate and reduce incentives for carriers to invest, this would be it.”<sup>33</sup>

The concern the Commission must address before going forward is that “such rules will suppress investment that otherwise would be made, and that the differences might be substantial.”<sup>34</sup> Given these likely risks to investments that Chairman Genachowski has called “a matter of profound importance to the country,”<sup>35</sup> the Commission must seriously consider the effect of disrupting the regulatory status quo that has encouraged such significant investment and innovation *in the network and at the edge*. As Commissioner Baker has noted, “[I]t is imperative not to scare private investment away from this sector at this critical time.”<sup>36</sup>

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<sup>32</sup> Testimony of J. Gregory Sidak, Visiting Professor of Law, Georgetown University Law Center, Before the S. Comm. on Commerce, Science, and Transp. 2-3 (Feb. 7, 2006), available at <http://commerce.senate.gov/pdf/sidak-020706.pdf>.

<sup>33</sup> Gerald R. Faulhaber & David J. Farber, *Innovation in the Wireless Ecosystem: A Customer-Centric Framework* 26 (Sept. 2009), available at [http://gullfoss2.fcc.gov/prod/ecfs/retrieve.cgi?native\\_or\\_pdf=pdf&id\\_document=7020039960](http://gullfoss2.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=7020039960).

<sup>34</sup> Larry F. Darby, Am. Consumer Inst., *The Informed Policy Maker’s Guide to Regulatory Impacts on Broadband Network Investment* 6 (Nov. 11, 2009), available at <http://www.theamericanconsumer.org/wp-content/uploads/2009/11/fp-report1.pdf>.

<sup>35</sup> Julius Genachowski, Chairman, FCC, Remarks on the National Broadband Plan Process 1 (July 2, 2009), available at [http://hraunfoss.fcc.gov/edocs\\_public/attachmatch/DOC-291884A1.pdf](http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-291884A1.pdf).

<sup>36</sup> Meredith Attwell Baker, Commissioner, FCC, Keynote Remarks: 3G Americas Wireless Broadband Technology Briefing, 4 (Oct. 15, 2009), available at [http://hraunfoss.fcc.gov/edocs\\_public/attachmatch/DOC-294855A1.pdf](http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-294855A1.pdf).

In addition to potential risks to investment that may arise from these proposed regulations, the Commission should consider the harms that such regulation may cause by suppressing innovation, particularly with respect to as yet unknown business models that could open essential new opportunities for multi-billion-dollar investment, drive new innovation, and support the deployment of next-generation networks.<sup>37</sup> As commentators have noted, “platform providers will suffer if application developers use their bandwidth and offer QoS-hungry applications, but cannot be charged for guaranteeing a level of network performance. In short, prohibitions on network operations could potentially interfere with platform providers’ pursuit of legitimate business opportunities and bona fide efforts to enhance the performance of their networks.”<sup>38</sup> Reworking the proposed rules to allow different business models to evolve (as suggested and discussed in more detail below) could prevent a situation, described by Professor Christopher Yoo at the University of Pennsylvania, where strictly adhering to net neutrality principles burdens consumers with an unfair share of the fixed costs to upgrade broadband ISPs’ networks.<sup>39</sup>

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<sup>37</sup> Notably, the *NPRM* appears to portend the doom of a two-sided market as a means to support continued broadband deployment and upgrades, *see NPRM* ¶ 7, even though two-sided markets serve consumers well in many other contexts. *See* Marshall Van Alstyne & Geoffrey Parker, *Two-Sided Network Effects: A Theory of Information Product Design*, Boston U. Sch. of Mgmt. Res. Paper Series No. 2009-01, at 4-5 (Oct. 2005) (“A key contribution of a two-sided network model is determining which side receives a discount. Different firms choose different beneficiaries. In streaming video, portable documents, and advertising, for example, the industry norm is to subsidize content consumers and charge content developers. The opposite, however, holds true for operating systems and multiplayer games in which content developers receive subsidies and consumers pay to join the network.”), available at <http://ssrn.com/abstract=1177443>. “That single regulatory constraint has negative impacts on all the drivers of operator investment – risk, earnings, growth prospects and the ability to explore new and innovative business models and market strategies.” Darby, *supra* note 34, at 5. Comcast is not advocating the evolution of broadband Internet to a two-sided market, but is merely suggesting that the Commission should not prematurely foreclose the development of new business models that may have benefits for consumers and the public-at-large.

<sup>38</sup> Phil Weiser, *The Future of Internet Regulation*, 43-2 U.C. Davis L. Rev. 529, 543 (Dec. 2009).

<sup>39</sup> *See* Christopher S. Yoo, *Network Neutrality, Consumers and Innovation*, 2008 U. Chi. Legal F. 179, 182 (2008); *see also* Jayant S. Dasari, Park Assocs., *Broadband Servs.: Global Outlook* 32 (May 2009).

If the last decade has proven anything, it is that it is impossible to predict how the Internet will evolve and what business models will best serve consumers and the public interest. The rules proposed in this *NPRM* disrupt the regulatory status quo, introducing significant uncertainties into the marketplace and likely foreclosing, directly and indirectly, innovation and investment in new technologies and business models. To foreclose potential investment and innovation in technologies and business models preemptively, based solely on hypothetical concerns, precludes the possibility that such models may lead to public interest benefits and necessarily results in a net loss for consumers.<sup>40</sup> The real risk to private investment, jobs, and the future upgrade and further deployment of broadband networks seems far greater than the theoretical risks of misbehavior posited by supporters of net neutrality regulation.

**B. The Case for Regulation Must Be Built on Data, Evidence, and Facts, Not Theoretical Harms and Conjecture.**

In light of the real risks cited above, regulation of the Internet can only be pursued if a record is built that includes concrete facts and data demonstrating (1) actual – not conjectural – harms that would be remedied by the proposed rules;<sup>41</sup> (2) actual – not hypothetical – benefits that would be gained by adoption of the proposed rules;<sup>42</sup> and (3) that the harms and benefits outweigh the real risks outlined above. Although courts will normally give deference to an

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<sup>40</sup> Yoo, *supra* note 39, at 182-83, 190.

<sup>41</sup> See *HBO, Inc. v. FCC*, 567 F.2d 9, 36 (D.C. Cir. 1977). Failure to put forward record evidence of an actual problem is fatal under APA review. See, e.g., *Quincy Cable TV, Inc. v. FCC*, 768 F.2d 1434, 1457 (D.C. Cir. 1985) (“[T]he Commission has failed entirely to determine whether the evil the rules seek to correct is a real or merely a fanciful threat.”).

<sup>42</sup> In this regard, it is telling that nobody has come forth with an application or service that would be developed save for the lack of these proposed rules. In a world where anybody and everybody can have a webpage or blog, and even more closed systems such as Apple’s iPhone App Store include tens of thousands of applications and services, this is not surprising. See Adam Theiner, *Oh Farts! The Droid, the iPhone & the Lessig-Zittrain Thesis*, PFF Blog, Nov. 12, 2009, at [http://blog.pff.org/archives/2009/11/oh\\_farts\\_the\\_droid\\_the\\_iphone\\_the\\_lessig-zittrain.html](http://blog.pff.org/archives/2009/11/oh_farts_the_droid_the_iphone_the_lessig-zittrain.html).

agency's predictive judgment, that deference is not unbounded, especially where, as here, the agency is proposing to shift its regulatory posture despite significant evidence that its previous regulatory policies have been successful.<sup>43</sup> To adopt the rules proposed in the *NPRM*, the Commission must first build a record based on facts, evidence, and data.<sup>44</sup>

Practically since the birth of broadband Internet, advocates of heavy-handed regulation have persistently predicted that, without immediate regulatory action, broadband ISPs would block content, direct users to favored websites, restrict users' ability to connect Internet-enabled devices, slow down certain traffic, and so on. For example:

**1998** – Consumers Union warned that cable operators will censor content, control “[p]lacement of news, entertainment, information, hyperlinks, and commerce,” and impose “content restriction[s] or filtering on the basis of technical, social, aesthetic, and commercial factors.”<sup>45</sup>

**2001** – Professor Lawrence Lessig warned that cable operators were “attempting to wall off portions of cyberspace,” thereby destroying the Internet’s potential “to foster democracy and economic growth worldwide.”<sup>46</sup>

**2002** – Amazon.com predicted that, “without some form of limited safeguards, economic incentives likely will drive [broadband service providers] and affiliated broadband ISPs to impair access to select Internet Content, and, thereby, dramatically degrade the fundamental and distinguishing ‘pull’ characteristic of the Internet.”<sup>47</sup>

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<sup>43</sup> See *BellSouth Telecomms., Inc. v. FCC*, 469 F.3d 1052, 1060 (D.C. Cir. 2006) (noting that “the deference owed agencies’ predictive judgments gives them no license to ignore the past when the past relates directly to the question at issue”); see also *Cincinnati Bell Tel. Co. v. FCC*, 69 F.3d 752, 760 (6th Cir. 1995) (noting that the FCC must “provide at least some support for its predictive conclusions”).

<sup>44</sup> See *Motor Vehicle Mfrs. Ass’n v. State Farm Mut. Auto Ins. Co.*, 463 U.S. 29, 43 (1983) (finding that “reasoned decisionmaking” requires an agency to “examine the relevant data and articulate a satisfactory explanation for its action including a ‘rational connection between the facts found and the choice made’”).

<sup>45</sup> Consumers Union et al. Petition to Deny the Merger of AT&T and TCI, CS Docket No. 98-178, at 14-15 (Oct. 29, 1998); see MindSpring Comments, CC Docket No. 98-146, at 16 (Sept. 14, 1998) (“At the least, the Commission will need to make sure that [a] loop owner does not unilaterally block its customer’s access to particular web sites.”).

<sup>46</sup> Lawrence Lessig, *The Internet Under Siege*, 127 Foreign Policy 56, 56 (2001).

<sup>47</sup> Ex Parte Letter of Paul. E. Misener, VP, Global Public Policy, Amazon.com, WC Docket No. 02-52, at 3 (Dec. 2, 2002); see also Craig J. Mundie, Senior VP & CTO, Microsoft Corp., Testimony Before the Senate

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**2003** – Yahoo! claimed that “there is little question that [cable broadband providers] will have the incentive and absent FCC safeguards, the opportunity to [discriminate against unaffiliated content].”<sup>48</sup>

**2006** – Jeff Chester, executive director of the Center for Digital Democracy, warned that incumbent telephone and cable companies “are crafting an alarming set of strategies that would transform the free, open and nondiscriminatory Internet of today to a privately run and branded service that would charge a fee for virtually everything we do online.”<sup>49</sup>

**2006** – Free Press, Consumer Federation of America, and Consumers Union argued that without net neutrality rules, incumbents “will have a strong financial incentive to distort the free market in favor of their own content and services,” and that network owners have explicitly expressed intentions to “discriminate or degrade the content or services of their competitors who don’t pay for a spot in the fast lane.”<sup>50</sup>

**2007** – Google warned that “incumbents operating in today’s market have the incentives and the ability to discriminate against third party applications and content providers,” and that safeguards against such discrimination “may well be the only viable proxy for the broadband competition that has proven so unshakably elusive.”<sup>51</sup>

And these dire predictions continue today:

**2009** – Media Access Project argues that net neutrality rules are necessary to “prevent[] ISPs from censoring content for any reason or giving preferential treatment to any

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(...footnote continued)

Commerce Comm. (Oct. 1, 2002) (“One cannot ignore the ominous signs that network operators will frustrate consumers’ ability to go anywhere on the Internet. . . . [I]t would be a mistake for policymakers not to address these concerns.”).

<sup>48</sup> Progress & Freedom Found., *Net Neutrality or Net Neutering: Should Broadband Internet Services Be Regulated?*, Progress on Point, Nov. 2003, at 10 (Statement of John Scheibel, Yahoo! Inc.), available at <http://www.pff.org/issues-pubs/pops/pop10.22netneutrality.pdf>; see Paul Misener, VP, Global Public Policy, Amazon.com, Testimony Before the H. Comm. on Energy & Commerce, Subcomm. on Telecomm. and the Internet (July 21, 2003) (“It is not hard to imagine, for example, how a service provider might be pressured to obstruct access to sources of ‘hate speech’ or information about a particular religious or political viewpoint, regardless of whether their individual subscribers want access to that content but, of course, consumer-controlled filters are not problematic.”).

<sup>49</sup> Jeff Chester, *The End of the Internet?*, The Nation, Feb. 1, 2006, available at <http://www.thenation.com/doc/20060213/chester/print>. Chester warned that “[w]ithout proactive intervention, the values and issues that we care about – civil rights, economic justice, the environment and fair elections – will be further threatened by this push for corporate control.” *Id.*

<sup>50</sup> Ben Scott *et al.*, *Why Consumers Demand Internet Freedom; Network Neutrality: Fact v. Fiction 3* (“Fact #2”), 5 (“Fact #10”) (May 2006), available at [http://www.freepress.net/files/mn\\_fact\\_v\\_fiction\\_final.pdf](http://www.freepress.net/files/mn_fact_v_fiction_final.pdf).

<sup>51</sup> Google Comments, WC Docket No. 07-52, at i & 9 (June 15, 2007).

specific website, service, or application based merely on its content, message, or ownership.”<sup>52</sup>

**2009** – Free Press contends that without net neutrality protections, “ISPs have a strong incentive to exert control over the content that flows across their networks in a manner that reduces competition and consumer choice,” and that without FCC intervention, “ISPs will be free to choose whose voices are more important on the Internet.”<sup>53</sup>

**2009** – Google argues that without “a clear and legally enforceable nondiscrimination principle, the platform owner picks the winners among ‘edge’ [applications and service] providers.”<sup>54</sup>

However, despite the tens of thousands of pages of comments and other filings that the *NPRM* refers to, “there [is] not one shred of evidence adduced that shows innovation is being harmed.”<sup>55</sup>

In 2007, the Commission issued a Notice of Inquiry seeking comment on the status of the broadband marketplace, including whether “providers [are] operating consistent with the Policy Statement,” and whether “providers deprioritize or block packets for certain content when the providers or their affiliates offer similar content, or . . . prioritize packets containing their own content over packets containing similar content from unaffiliated providers.”<sup>56</sup> In response to these questions, parties pointed to less than a handful of examples that raised concerns, and only one – the *Madison River* case – that rose to a level requiring Commission action.<sup>57</sup> And in the

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<sup>52</sup> Media Access Project, Ex Parte Letter, WC Docket No. 07-52 (Dec. 14, 2009), available at <http://fjallfoss.fcc.gov/ecfs/document/view?id=7020352877> (attaching a Center for Media Justice handout titled *Network Neutrality, Universal Broadband, and Racial Justice*).

<sup>53</sup> S. Derek Turner, Free Press, *Digital Déjà vu: Old Myths in the Network Neutrality Debate* 3, 4 (Sept. 30, 2009), available at <http://freepress.net/files/dejavu.pdf>.

<sup>54</sup> Google Reply Comments, GN Docket No. 09-51, at 30 (July 21, 2009).

<sup>55</sup> Faulhaber & Farber, *supra* note 33, at 26. As Professors Faulhaber and Farber explain, in the current marketplace, “[t]he choice here is between the more ‘do-it-yourself’ model of Google/Android and the more managed model of iPhone and Blackberry; between the more open Sprint and more managed Verizon Wireless. And the answer is crystal clear: both models promote innovation.” *Id.* at 27.

<sup>56</sup> *See In re Broadband Industry Practices*, Notice of Inquiry, 22 FCC Rcd. 7894 ¶ 8 (2007).

<sup>57</sup> *See, e.g.*, Consumers Union et al. Comments, WC Docket No. 07-52, at 103 (June 18, 2007) (describing the Madison River situation as an example of potential behavior by broadband ISPs); US Telecomm Ass’n Reply (footnote continued...)

instant *NPRM*, only two examples of conduct that rose to the level of warranting Commission action are cited: the *Madison River* and *Comcast Network Management* cases.<sup>58</sup> Given that these are the only two examples provided against the backdrop of the nearly fifteen years of enormous success that the open broadband Internet has achieved, this record does not justify new intrusive rules regulating the conduct of broadband ISPs.<sup>59</sup> “Normally, an agency rule would be arbitrary and capricious if the agency has . . . offered an explanation for its decision that runs counter to the evidence before the agency.”<sup>60</sup>

Nor is the Commission the only federal agency that has looked at the current broadband Internet marketplace and found no harm to the public interest. In its extensive 2007 Broadband Connectivity Competition Policy report, the staff of the Federal Trade Commission found no evidence of any “significant market failure or demonstrated consumer harm from conduct by broadband providers.”<sup>61</sup> It concluded that “[p]olicy makers should be wary of enacting regulation solely to prevent prospective harm to consumer welfare, particularly given the indeterminate effects on such welfare of potential conduct by broadband providers and the law

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Comments, WC Docket No. 07-52, at 3 (July 16, 2007) (noting that “[o]ther than the *Madison River* case, which the Commission resolved swiftly, and an example of misconduct by a cable company in Canada, those commenting in this proceeding pointed to no other instances of restrictions imposed by broadband service providers blocking access to content or services or otherwise controlling traffic over their networks”).

<sup>58</sup> See *NPRM* ¶¶ 32, 36; see also McDowell, *supra* note 3, at 4 (“Some advocates of regulation . . . point to less than a handful of troublesome actions – some several years old – by a small number of market players as sufficient evidence to justify a new regulatory regime.”).

<sup>59</sup> See Faulhaber & Farber, *supra* note 33, at 26 (“In asserting that network neutrality in the wired and wireless ecosystems was necessary to preserve innovation, there was not one shred of evidence adduced that shows innovation is being harmed.”).

<sup>60</sup> *State Farm*, 463 U.S. at 43.

<sup>61</sup> FTC, *Broadband Connectivity Competition Policy* 160 (June 2007) (“*FTC Broadband Report*”), available at <http://www.ftc.gov/reports/broadband/v070000report.pdf>.

enforcement structures that already exist.”<sup>62</sup> The FTC’s recommendations regarding regulation of the Internet mirrors the Commission’s historical approach to regulation of the Internet – proceed very cautiously.<sup>63</sup>

That cautious approach led to the adoption of the *Internet Policy Statement*, which has served the Internet ecosystem, the Commission, and consumers well. The *NPRM*, however, contemplates a dramatic change of course. In particular, the *NPRM* seems to paper over the widely held view (borne out by the facts of the marketplace) that competition can work to discipline conduct. It hypothesizes about various scenarios that “could” occur and conduct that broadband ISPs “might” engage in,<sup>64</sup> but, as the United States Court of Appeals for the District of Columbia explained, if a federal agency “chooses to rely solely on a theoretical threat, it will need to explain how the potential danger, . . . unsupported by a record of abuse, justifies such costly prophylactic rules.”<sup>65</sup> Strangely, the *NPRM* goes so far as to disregard decades of communications competition policy by suggesting that competition among broadband ISPs is *bad* – arguing it could create a collective action problem wherein broadband ISPs charge application, service, and content providers fees for access to consumers.<sup>66</sup> To find a collective action problem with no evidence whatsoever that broadband ISPs have the incentive to charge access fees is conclusory, and gives short shrift to competing incentives. As the FTC found,

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<sup>62</sup> *See id.*

<sup>63</sup> *Id.* at 158; *see* Michael K. Powell, Chairman, FCC, Remarks at NARUC Gen. Assembly, Washington, D.C. (Mar. 10, 2004).

<sup>64</sup> *See, e.g., NPRM* ¶¶ 5-58, 68-73. The *NPRM* uses the word “could” 42 times, most often when discussing what “could” happen as opposed to what has happened. *See generally NPRM.*

<sup>65</sup> *Nat’l Fuel Gas Supply Corp. v. FERC*, 468 F.3d 831, 844 (D.C. Cir. 2006).

<sup>66</sup> *See NPRM* ¶ 69. To support this novel theory, the *NPRM* analogizes broadband to a “public good” and cites to a single general economics article that has nothing to do with the Internet. *See id.*

broadband ISPs also have an incentive to maximize the value of the network for their customers and “[i]n the abstract, it is not possible to know which of these incentives would prove stronger.”<sup>67</sup>

At the same time, the *NPRM* also appears to assert that competition among broadband ISPs is *irrelevant*, because the broadband ISP serving any particular consumer has “control” over the content that a consumer sees.<sup>68</sup> This assumes that switching costs are so high that even consumers who are aware of conduct by their ISP that they dislike will not switch to another ISP.<sup>69</sup> The facts and data do not support that assumption. Every quarter, Comcast and other ISPs report that hundreds of thousands of customers switch ISPs for reasons such as price and quality of service.<sup>70</sup> As Comcast has reported in the past, about 65% of new subscribers are switching from other Internet services.<sup>71</sup> It is undeniable that most consumers have broadband

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<sup>67</sup> *FTC Broadband Report* at 157. There is also substantial academic literature that supports the view that “contrary to some of the depictions of network neutrality advocates, broadband platform providers would not benefit generally from undermining the success of the applications that ride on their platforms.” Weiser, *supra* note 38, at 541; see also Farrell & Weiser, *Modularity, Vertical Integration, and Open Access Policies: Toward a Convergence of Antitrust and Regulation in the Internet Age*, 17 *Harv. J.L. & Tech.* 85, 97-104 (2003).

<sup>68</sup> *NPRM* ¶ 73.

<sup>69</sup> Generally speaking, “[a] product has classic switching costs if a buyer will purchase it repeatedly and will find it costly to switch from one seller to another. Switching costs also arise if a buyer will purchase follow-on products such as service and repair, and will find it costly to switch from the supplier of the original product.” Joseph Farrell & Paul Klemperer, *Coordination and Lock-In: Competition with Switching Costs and Network Effects*, 3 *Handbook of Indus. Org.*, at 1972 (Armstrong, M. and Porter, R. eds) (2007). In the instant proceeding, the behavior of consumers in the broadband Internet marketplace, as expressed by the number of customers that broadband ISPs like Comcast gain or lose in any given quarter, strongly suggests that switching costs, whatever they may be, are not so high as to impede consumers who see more value in a different product from switching to that product.

<sup>70</sup> Park Assocs., *Broadband Services: The Turning Point 2* (Aug. 2009), available at [http://multichannel.resourcecenteronline.com/resource\\_center/asset/1897-Broadband\\_Services:\\_The\\_Turning\\_Point#](http://multichannel.resourcecenteronline.com/resource_center/asset/1897-Broadband_Services:_The_Turning_Point#) (“Broadband services alone are becoming highly commoditized, and ‘speeds-and-feeds’-based marketing is changing as consumers can get the same or similar services from other providers.”).

<sup>71</sup> See, e.g., Comcast Corp., *Comcast 2008 Annual Review*, available at <http://www.comcast.com/2008annualreview/delivering/internet.html> (last visited Jan. 14, 2010). This number (footnote continued...)

choices and, if a broadband ISP undertakes any behavior that negatively affects its customers' service, it runs the risk that many of those customers will leave for a competitor. Accordingly, it is more reasonable to conclude that competition is real and relevant to consumers, and that they can and do switch and are not beholden to any one ISP.

Finally, the *NPRM* asks whether the antitrust laws could solve most, if not all, of the conjectural problems presented.<sup>72</sup> The answer is, “Yes, were they to occur” and with less likelihood of distorting the marketplace and prematurely picking winners and losers. The antitrust laws largely obviate the need for “sector-specific *ex ante* net neutrality regulation.”<sup>73</sup> As the FTC has noted, “the competitive issues relating to last-mile access to consumers that have been raised in the network neutrality debate largely can be addressed through antitrust enforcement.”<sup>74</sup> And, importantly, there is no question that the Department of Justice and FTC have the requisite authority to enforce the antitrust laws as against *any* of the participants or potential “gatekeepers” in the Internet ecosystem.<sup>75</sup>

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(...footnote continued)

includes “movers” (i.e., individuals who may have moved from one community to another and may be upgrading from DSL to cable modem or merely switching cable modem providers), and “non-movers” who likely are upgrading from DSL.

<sup>72</sup> *NPRM* ¶ 81.

<sup>73</sup> Barbara Esbin, Progress & Freedom Found., *Net Neutrality: A Further Take on the Debate*, PFF Progress on Point 5 (Dec. 2009), available at <http://www.pff.org/issues-pubs/pops/2009/pop16.26-net-neutrality-further-take-on-debate.pdf> (“We have antitrust laws and enforcement authorities capable of policing actual anticompetitive behavior in the Internet sector as they do for all other sectors of the economy.”).

<sup>74</sup> *FTC Broadband Report* at 121 (explaining further that “blocking access to the Internet by content or applications providers or discriminating in favor of a supplier with whom the broadband provider has an affiliated or contractual relationship would be analyzed, for example, under either Section 1 of the Sherman Act, as an exclusive dealing relationship, or under Section 2 of the Sherman Act, as a unilateral refusal to deal”).

<sup>75</sup> This is a particularly important consideration if the Commission finds that it does not have either the legal authority or expertise to ensure that *all* potential gatekeepers (not just broadband ISPs) are not acting anticompetitively. In that case, it should consider whether antitrust, applied equally to all parties in the Internet ecosystem, might be a better option to protect consumers and competition while providing an environment for further investment and job growth.

Comcast remains committed to preserving and encouraging the continued development of the open Internet. We are dedicated to working cooperatively with the Commission to make broadband Internet service better, faster, ubiquitously available, and widely adopted, to continue delivering what Commission Clyburn characterized as “a robust Internet that continues to drive the economy and provide countless benefits for the American consumer.”<sup>76</sup> We are committed to constructive, fact-based engagement with the Commission as it pursues this rulemaking.<sup>77</sup> But, as the D.C. Circuit has explained, “a regulation perfectly reasonable and appropriate in the face of a given problem may be highly capricious if that problem does not exist.”<sup>78</sup> Based on the available evidence, there is no problem here for the Commission to solve.

### **III. THE COMMISSION HAS NOT ADEQUATELY EXPLAINED ITS AUTHORITY TO ADOPT THE RULES PROPOSED IN THE *NPRM*.**

The *NPRM* asserts that the Commission has ancillary authority to adopt the proposed regulations.<sup>79</sup> In support of this assertion, the *NPRM* provides only the briefest of analyses of the Commission’s authority, relies on statutory provisions that do not support its assertion of ancillary authority, and simply adopts in large part the analysis in the *Comcast Network Management Order*. To survive judicial scrutiny, however, the Commission must do more than merely assert that the rules are “reasonably ancillary” to a broad set of statutory goals; it has to tie each specific rule it adopts back to a specific statutorily mandated responsibility and explain

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<sup>76</sup> *NPRM* at 104 (Statement of Commissioner Clyburn).

<sup>77</sup> To that end, we concur with the sentiment that “if there are to be rules . . . the [C]hairman is going about it the right way by promising plenty of opportunity for input and enlisting tech types to help determine what exactly is reasonable network management.” *Neutral Territory*, Broad. & Cable, Oct. 26, 2009, available at [http://www.broadcastingcable.com/article/366210-Editorial\\_Neutral\\_Territory.php](http://www.broadcastingcable.com/article/366210-Editorial_Neutral_Territory.php).

<sup>78</sup> *HBO, Inc.*, 567 F.2d at 36.

<sup>79</sup> See *NPRM* ¶¶ 83-84.

how, based on substantial evidence, the particular rule is “reasonably ancillary to the effective performance” of its responsibilities under that provision.

It is axiomatic that the Commission “literally has no power to act” absent a statutory delegation of authority.<sup>80</sup> As the *NRPM* correctly acknowledged, Congress has not granted the Commission direct statutory authority to regulate broadband ISPs or Internet services.<sup>81</sup> To the extent Congress has spoken at all to this issue, it has indicated that the Internet should be “unfettered by Federal or State regulation.”<sup>82</sup> In light of the absence of any indication of Congressional intent for the Commission to regulate in this area, the Commission would seem to face a significant challenge in identifying a source for ancillary authority to adopt the proposed rules. The *NPRM* does not meet that challenge.

As an initial matter, there is an important difference between the Commission’s general subject matter jurisdiction and its ultimate regulatory authority. Its general jurisdiction, outlined in Section 1 of the Communications Act, is “interstate or foreign commerce in communications by wire or radio.”<sup>83</sup> As Comcast has long recognized, broadband Internet services, such as cable Internet service, fall within the Commission’s general jurisdiction.<sup>84</sup> However, just because the Commission has subject matter jurisdiction does not mean it has authority to regulate. Much of

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<sup>80</sup> *La. Pub. Serv. Comm’n v. FCC*, 476 U.S. 355, 374 (1986); see *Michigan v. EPA*, 268 F.3d 1075, 1081 (D.C. Cir. 2001) (finding that government agencies “ha[ve] no constitutional or common law existence or authority, but only those authorities conferred upon [them] by Congress”).

<sup>81</sup> See *NPRM* ¶¶ 83-84.

<sup>82</sup> 47 U.S.C. § 230(b).

<sup>83</sup> 47 U.S.C. § 151.

<sup>84</sup> See, e.g., Comcast Comments, WC Docket No. 07-52, at 52 (Feb 12, 2008) (noting that “Comcast has previously observed . . . the Commission has subject matter jurisdiction over the Internet”); Comcast Comments, WC Docket No. 05-271, at 9-12 (Jan. 17, 2006); Comcast Reply Comments WC Docket No. 05-271, at 7-9 (Mar. 1, 2006).

the rest of the Communications Act is dedicated to outlining the Commission’s authority to regulate those services that fall within its jurisdiction. Assuming proper jurisdiction, the Commission can regulate only: (1) where Congress has granted direct authority to regulate; or (2) where the regulation is reasonably ancillary to some direct grant of authority, i.e., ancillary authority. Here, the Commission does not cite any direct grant of authority from Congress to adopt the proposed regulations, and instead relies on ancillary authority.<sup>85</sup>

The exercise of ancillary authority is only appropriate when: “(1) the Commission’s general jurisdictional grant under Title I covers the subject of the regulations; and (2) the regulations are reasonably ancillary to the Commission’s effective performance of its statutorily mandated responsibilities.”<sup>86</sup> Although broadband Internet services are part of the Commission’s “general jurisdictional grant,” as noted above, there are substantial doubts regarding whether the proposed rules satisfy the second part of the test and, thus, whether the Commission has authority to adopt them. To satisfy the test for ancillary authority, the Commission must demonstrate with substantial evidence how each particular rule it has proposed is “reasonably ancillary” to a statutorily mandated responsibility.<sup>87</sup> The *NPRM* fails to meet this test.

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<sup>85</sup> See *NPRM* ¶¶ 83-87. The *NPRM* seems to use the terms “ancillary jurisdiction” and “ancillary authority” interchangeably. Compare *id.* ¶ 83 (“We have *ancillary jurisdiction* over matters not directly addressed in the Act. . .”) (emphasis added), with *id.* ¶ 84 (“[W]e believe that exercising *ancillary authority* over facilities-based Internet access . . . .”) (emphasis added). Although some courts have also engaged in this practice, it is confusing, incorrectly blurs the distinction between “jurisdiction” and “authority,” and muddies the important legal questions that must be addressed by the Commission. As the *NPRM* elsewhere correctly notes, there are two questions that must be answered in the affirmative before the Commission may regulate – whether the Commission has jurisdiction and whether the Commission has authority. See *id.* ¶ 83. Here, the Commission has jurisdiction, but it is not clear that the Commission has ultimate regulatory authority, either direct or ancillary.

<sup>86</sup> *Am. Library Ass’n v. FCC*, 406 F.3d 689, 700 (D.C. Cir. 2005). The *NPRM* recognized that the Commission must establish that the adoption of these rules must be “reasonably ancillary to the [Commission’s] effective performance of [its] statutorily mandated responsibilities” to satisfy the ancillary authority test. *NPRM* ¶ 83 (quoting *Midwest Video I*, 406 U.S. 649, 667 (1972)).

<sup>87</sup> See *United States v. Sw. Cable Co.*, 392 U.S. 157, 176-77 (1968) (upholding the exercise of ancillary authority over CATV where “there is *substantial evidence* that the Commission cannot ‘discharge its overall

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The Commission has included actual proposed *rules* in the *NPRM*, which is helpful. However, in addressing the question of statutory authority, the *NPRM* says nothing more than that the Commission has general ancillary authority to “advance the federal Internet policy set forth by Congress in section 230(b) as well as broadband goals that section 706(a) of the Telecommunications Act of 1996 charges the Commission with achieving.”<sup>88</sup> The *NPRM* nowhere explains how the proposed regulations – either individually or collectively – are “reasonably ancillary” to achieving any of these goals. More importantly, the statutory provisions that the Commission cites as the basis of its ancillary authority are only Congressional statements of purpose or policy. They set forth no “statutorily mandated *responsibilities*.” As courts have held, preambles and statutory statements of policy (which have come to replace preambles in modern federal legislation) are “not an operative part of the statute, and [do] not enlarge or confer powers on administrative agencies.”<sup>89</sup> The Commission cannot rely upon such statutory statements of policy to justify the exercise of ancillary authority. Insofar as the Commission is to be guided by statutory policy statements, it bears emphasis that Congress has

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responsibilities without authority over this important aspect of television service”) (emphasis added); *NARUC v. FCC*, 533 F.2d 601, 613-14 (D.C. Cir. 1976) (rejecting the Commission’s assertion of ancillary authority because “we find no substantial support in the record for the Commission’s view that its long term communications goals will be impaired” without the exercise of ancillary authority”); *GTE Serv. Corp. v. FCC*, 474 F.2d 724, 734 (2d Cir. 1973) (rejecting the Commission’s assertion of authority because, unlike *Southwestern Cable*, there was no claim, let alone “*substantial evidence* that [unregulated data processing] would threaten an industry whose growth and development Congress had entrusted to the Commission”) (emphasis added); see also *CCIA v. FCC*, 693 F.2d 198, 213 (D.C. Cir. 1984) (upholding the Commission’s assertion of ancillary authority over CPE based on evidence of “direct effect” of CPE on “rates for interstate transmission services” regulated under Title II).

<sup>88</sup> *NPRM* ¶ 84.

<sup>89</sup> *Ass’n of Am. RRs. v. Costle*, 562 F.2d 1310, 1316 (D.C. Cir. 1977).

stated that: “It is the policy of the United States . . . to preserve the vibrant and competitive free market that presently exists for the Internet . . . *unfettered by Federal or State regulation.*”<sup>90</sup>

The *NPRM* also asserts that the proposed rules are reasonably ancillary to its general authority over voice, video, and wireless services.<sup>91</sup> Again, however, the *NPRM* fails to explain why the proposed rules are necessary for the Commission to accomplish any of its *statutory duties* relating to these services. Perhaps more problematic, this theory would largely render the specific provisions and mandates of Titles II, III, and VI of the Communications Act superfluous.<sup>92</sup>

Even putting aside these fundamental problems, the Commission also would have to point to *substantial record evidence* supporting the conclusion that any regulation was actually necessitated by the “effective performance” of the statutory provisions on which the Commission relies.<sup>93</sup> This would require a showing that the Commission is unable to discharge duties under those provisions without exercising authority over broadband ISPs’ network management practices. There is no such evidence before the Commission.

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<sup>90</sup> 47 U.S.C. § 230(b)(2) (emphasis added).

<sup>91</sup> *NPRM* ¶¶ 85-86 (stating that the “growing interrelationship with voice and video services that the Commission has traditionally regulated pursuant to express statutory obligations and its general public interest mandate” and the Commission’s “additional authority pursuant to Title III” further supports its ancillary authority).

<sup>92</sup> The *NPRM* also cites in passing – although not in its discussion of ancillary authority – various other statutory provisions, including Section 254(b)(2) and 1305(k)(2) of the Communications Act. *See NPRM* ¶ 5 & n.1. Section 254(b), however, requires consideration of certain “principles” in setting “policies” and applies to the actions of the Federal-State Joint Board on Universal Service, not the Commission. The *NPRM* also fails to explain how, and there is no evidence that, any of the proposed rules are actually necessary for the Commission to do its job under Section 254(b)(2). Similarly, Section 1305(k)(2) does not set forth “responsibilities” of the Commission sufficient to support the exercise of ancillary authority. Rather, it merely requires submission of a “report,” 47 U.S.C. § 1305(k)(1), and the D.C. Circuit has made clear that such provisions cannot support the exercise of ancillary authority. *MPAA v. FCC*, 309 F.3d 796, 807 (D.C. Cir. 2002).

<sup>93</sup> *Sw. Cable Co.*, 392 U.S. at 176-77.

**IV. THE COMMISSION SHOULD BE CAUTIOUS ABOUT ADOPTING RULES THAT DISRUPT THE STATUS QUO – WHICH HAS BENEFITED THE PUBLIC INTEREST IN COUNTLESS WAYS – AND MAY HARM CONSUMERS.**

While the foregoing indicates that the Commission has an uphill climb to establish the statutory authority and evidentiary basis that would support adoption of rules in this proceeding, we reiterate our commitment to work with the agency to examine what kind of rules could reasonably be adopted if those legal thresholds are crossed.

To that end, we begin by observing that broadband ISPs today operate their networks in an open and neutral manner that facilitates the development and growth of the plethora of content, applications, and services available on the Internet today, and allows consumers to access all the Internet has to offer. The principles in the *Internet Policy Statement* embody policies embraced by Comcast and other participants in the Internet ecosystem, and have played a supportive, deregulatory role in the development of the Internet. These policies have fostered investment throughout the Internet, resulting in the rapid deployment of near-ubiquitous broadband throughout the country and promoting the development of innovative applications and services that set the pace for the world.

The “open Internet” rules as proposed threaten to upset this current ecosystem that has proven so successful, putting at risk future innovation and investment – particularly the massive investments the Commission recognizes will be needed to deploy broadband networks to unserved areas and to continue upgrading to next-generation networks. Accordingly, to the extent the Commission builds a record that justifies disrupting the deregulatory status quo by introducing new regulations, it should adopt only those rules absolutely necessary to achieve its goals, and it should revise the language of the proposed rules both to minimize potential unintended harms and to recognize that issues relevant to “preserving the open Internet” occur at multiple layers of the Internet.

Thus, should the Commission decide to adopt formal Internet regulations,<sup>94</sup> it should only adopt a version of the first three principles of the *Internet Policy Statement* as rules, and it should apply them to the entire Internet ecosystem.<sup>95</sup> The Commission, however, should not adopt the fourth principle of the *Internet Policy Statement* as an enforceable rule – particularly in the form presented in the *NPRM* – and instead should retain the intent of the fourth principle as an overarching, aspirational policy goal for the entire Internet ecosystem.<sup>96</sup> This principle is a laudable goal, but ill-suited for establishment as an FCC rule. For example, it is not clear what it means to require a broadband ISP “not [to] deprive . . . users of the user’s entitlement to competition among network providers, application providers, service providers, and content providers.”<sup>97</sup> Even the *NPRM* appears to struggle with what exactly this means, as it dedicates only three sentences to explaining it, falling back on the tautology that it “protects competition among network providers, application and service providers, and content providers.”<sup>98</sup> This fails to provide any meaningful guidance to regulated entities as to what is expected of them. In

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<sup>94</sup> “[A]ssertions that this does not constitute regulation of the Internet [are] also beyond credible: imposing constraints on carrier pricing (zero charges on application providers), on carrier product differentiation (no expedited service), and on how carriers are permitted to manage their own networks certainly sounds like regulation.” Faulhaber & Farber, *supra* note 33, at 26.

<sup>95</sup> The first three principles are designed to ensure that consumers can access the lawful Internet content, applications, and services of their choice and can connect any device that does not harm the network. *See NPRM* ¶ 92.

<sup>96</sup> The fourth principle, as drafted in the *NPRM*, states: “Subject to reasonable network management, a provider of broadband Internet access service may not deprive any of its users of the user’s entitlement to competition among network providers, application providers, service providers, and content providers.” *Id.*

<sup>97</sup> *Id.*

<sup>98</sup> *Id.* ¶ 98.

addition, such a rule may be potentially unenforceable as a matter of law for being impermissibly vague.<sup>99</sup>

Should the Commission decide to adopt formal Internet regulations, assuming the necessary legal requirements are met, it can further improve its proposed rules in three concrete ways:

- (1) The Commission should apply its rules *across the Internet ecosystem*.
- (2) The Commission should narrow the scope of the nondiscrimination and transparency rules proposed in the *NPRM*.
- (3) The Commission should clarify certain aspects of the “reasonable network management” exception.

Taking these steps will help to ensure that the rules do not interfere with the important policy goals of continued investment in next-generation broadband networks and promoting broadband adoption. These steps will also recognize the interdependency of all layers of the Internet ecosystem and will further the Commission’s goal of “preserving an open Internet.”

**A. The Commission’s Rules Must Recognize the Symbiotic, Interdependent Relationship of the Internet Ecosystem, and the Need to “Preserve an Open Internet” at All Layers.**

The *NPRM* includes a number of questions about the scope of the proposed rules. Most prominently, the *NPRM* asks a series of questions about the applicability of these rules to

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<sup>99</sup> “Because ‘due process requires that parties receive fair notice before being deprived of property,’ we have repeatedly held that ‘in the absence of notice – for example, where the regulation is not sufficiently clear to warn a party about what is expected of it – an agency may not deprive a party of property by imposing civil or criminal liability.’” *Trinity Broad. of Fla., Inc. v. FCC*, 211 F.3d 618, 628 (D.C. Cir. 2000) (citing *General Elec. Co. v. EPA*, 53 F.3d 1324, 1328-29 (D.C. Cir. 1995)); see *Satellite Broad. Co. v. FCC*, 824 F.2d 1, 3 (D.C. Cir. 1987) (noting that “[t]raditional concepts of due process incorporated into administrative law preclude an agency from penalizing a private party for violating a rule without first providing adequate notice of the substance of the rule”); see also Hundt & Kornbluh, *Renewing the Deal Between Broadcasters and the Public: Requiring Clear Rules for Children’s Educational Television*, 9 Harvard J. of Law & Tech. 11, 13 (1996) (decrying vague rules for broadcast license renewal because they “disserve First Amendment principles as well as the due process principle that the government punish only after giving proper notice”).

different broadband technology platforms.<sup>100</sup> In addition, the *NPRM* asks whether it would be appropriate to impose these new rules on entities other than broadband ISPs.<sup>101</sup> Given the policy concerns identified by the Commission, any rules must ensure that the potential harms to “an open Internet” identified by the Commission are addressed no matter where they occur – though the details of how the Commission would *implement* any of these proposed regulations could differ based on the particular circumstances.

The need to ensure that any rules apply equally and appropriately to all participants in the Internet ecosystem is consistent with the definitions of the “Internet” proposed in the *NPRM*<sup>102</sup> and the one adopted by Congress in Section 230(f)(1) of the Communications Act, which defines the Internet as “the international computer network of both Federal and non-Federal interoperable packet switched data networks.”<sup>103</sup> Both definitions are broad in scope, covering a wide range of computers, devices, and networks. Under either definition, a broadband ISP’s network – whether cable, DSL, fiber, or wireless – is just as much part of the Internet as is the network of an application or service provider such as Google, Akamai, or eBay.<sup>104</sup> These

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<sup>100</sup> See *NPRM* ¶¶ 154-74.

<sup>101</sup> *Id.* ¶ 101.

<sup>102</sup> *Id.* ¶ 48 n.103 & app. A.

<sup>103</sup> 47 U.S.C. § 230(f)(1). Because there is already a statutory definition of the Internet, we believe that the Commission should refrain from adopting a new definition. If the Commission does decide to adopt a separate definition, it should be based on a clear need for such, and the Commission should be clear that the new definition is not intended to contradict the statutory definition, but merely to expound upon it.

<sup>104</sup> This is also consistent with how the primary architects of the Internet defined the Internet. See Barry M. Leiner, Vinton G. Cerf, David D. Clark, Robert E. Kahn, Leonard Kleinrock, Daniel C. Lynch, Jon Postel, Larry G. Roberts, & Stephen Wolff, *A Brief History of the Internet*, Internet Society, at <http://www.isoc.org/internet/history/brief.shtml#cerf> (last visited Jan. 14, 2010) (“The Internet is as much a collection of communities as a collection of technologies, and its success is largely attributable to both satisfying basic community needs as well as utilizing the community in an effective way to push the infrastructure forward. . . . Commercialization of the Internet involved not only the development of competitive, private network services, but also the development of commercial products implementing the Internet technology.”).

definitions recognize the interdependent and symbiotic nature of the Internet ecosystem, and any rules the Commission adopts should recognize that ineluctable fact. Moreover, applying the rules across the Internet ecosystem furthers the Commission’s “efforts to establish a consistent regulatory framework across broadband platforms by regulating like services in [a] similar manner.”<sup>105</sup>

The Commission always has worked to be consistent in its policy-making. Today, all broadband platforms compete vigorously with each other for consumers’ business, and that competition is growing each day. Recognizing this competition, the Commission has applied to all broadband ISPs the same deregulatory policies that have encouraged investment and innovation in the Internet ecosystem. Having determined that cable Internet service is not a Title II telecommunications service – because, although “cable modem service provides [information service] capabilities . . . ‘via telecommunications,’” the underlying “telecommunications component is not . . . separable from the [information service] capabilities” – the Commission in the *Cable Modem Declaratory Ruling* clarified that cable Internet service is an information service.<sup>106</sup> Then, in the *Wireline Broadband Order*<sup>107</sup> and *Wireless Broadband Declaratory Ruling*,<sup>108</sup> the Commission deregulated those services for many of the same reasons. Even if the Commission were to jettison the deregulatory policies of the past 15 years by adopting the proposed regulations, it must not exempt any broadband Internet platforms or Internet

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<sup>105</sup> *Wireless Broadband Declaratory Ruling* ¶ 2.

<sup>106</sup> *Cable Internet Declaratory Ruling and NPRM* ¶ 4, 39.

<sup>107</sup> *See Wireline Broadband Order* ¶ 1.

<sup>108</sup> *See Wireless Broadband Declaratory Ruling* ¶¶ 1-2.

application and service providers from any rules.<sup>109</sup> To the extent the Commission adopts rules, it can mitigate potential marketplace distortions by applying these rules to all broadband platforms and other participants in the Internet ecosystem.

At the same time, the implementation of specific rules could account for certain technological differences between broadband platforms. Different broadband platforms have different attributes. Comcast and others have explained how cable's broadband Internet architecture differs from other wireline broadband architectures such as DSL.<sup>110</sup> And CTIA has explained that, in the case of wireless broadband, the "underlying network infrastructure . . . makes wireless significantly different than other broadband networks."<sup>111</sup> Differences between broadband technologies are not grounds for exempting any particular type of platform from the objectives of this proceeding. However, the Commission could take legitimate differences among networks into account in determining *how* any rules apply to a particular situation.<sup>112</sup>

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<sup>109</sup> See, e.g., *id.* ¶ 2 (noting that the Commission's decision to deregulate mobile wireless broadband services was consistent with its "efforts to establish a consistent regulatory framework across broadband platforms by regulating like services in similar manner").

<sup>110</sup> See generally Transcript, FCC, *National Broadband Plan Workshop on Technology/Fixed Broadband* 112-15 (Aug. 13, 2009) (Statement of Jason Livingood, Executive Director, Internet Engineering, Comcast Corporation), available at [http://www.broadband.gov/docs/ws\\_05\\_tech\\_fixed\\_transcript.pdf](http://www.broadband.gov/docs/ws_05_tech_fixed_transcript.pdf); *id.* at 126-31 (Statement of Stuart Lipoff, President, IP Action Partners); Transcript, FCC, *Technical Advisory Workshop on Broadband Network Management* 146-51 (Dec. 8, 2009) (Statement of Paul Liao, President & CEO, CableLabs), available at [http://www.openinternet.gov/workshops/docs/ws\\_tech\\_advisory\\_process/Technical%20Advisory%20Workshop%20Transcript.doc](http://www.openinternet.gov/workshops/docs/ws_tech_advisory_process/Technical%20Advisory%20Workshop%20Transcript.doc).

<sup>111</sup> CTIA Comments, GN Docket No. 09-51, at 27 (June 8, 2009)

<sup>112</sup> For instance, network management practices that might be reasonable for a cable broadband ISP or a wireless broadband ISP, both of which utilize shared networks, may not be reasonable for a broadband ISP using DSL, or vice versa. See Yoo, *supra* note 39, at 202 ("It should thus come as no surprise that different types of providers vary in their tolerance for local congestion, with some taking more aggressive efforts to manage it and some taking less."). As discussed more below, this would be consistent with the Commission's past practice of adopting a general rule and applying the rule to the particular of a situation on a case-by-case basis. See *infra* section IV.D.

Moreover, the proposed rules as drafted in the *NPRM* would apply only to a limited number of members of the Internet ecosystem who, among other things, provide the networks that enable consumers to access the Internet, resulting in an unbalanced regulatory framework that conflicts with the Chairman’s stated goal of encouraging innovation and investment both at the edge and within the network.<sup>113</sup> Such an approach fails to address the potential threats to “an open Internet” that can occur elsewhere in the Internet, at any layer. As AT&T has noted, “[i]f the Commission were ever to impose binding ‘neutrality’ or disclosure rules, it could not logically confine those rules to providers of broadband Internet access services. It would have to extend those rules to all other Internet-based providers that influence whether the Internet will treat all applications and content ‘neutrally.’”<sup>114</sup>

Similarly, if the Commission believes that regulation is needed out of concern that potential “gatekeepers” may disrupt or interfere with consumers’ access to and use of Internet content, applications, and services, this concern applies to others in the Internet ecosystem. If there are in fact “gatekeepers” to the Internet, Commissioner Copps aptly recognized that “the gatekeepers of today may not be the gatekeepers of tomorrow.”<sup>115</sup> He certainly is not alone in this concern. As one commentator recently noted,

If the facilities-based ISPs are subject to these proposed rules, then I think the FCC is just encouraging device manufacturers (Apple, Microsoft, Nintendo, etc.) and application providers (Internet Explorer, Mozilla, Safari, etc.) to play a greater role in defining the Internet experience for consumers. . . . [T]he control over the consumer’s Internet

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<sup>113</sup> See *NPRM* at 92 (Statement of Chairman Julius Genachowski).

<sup>114</sup> AT&T Reply Comments, WC Docket No. 07-52, at 16 (Feb. 28, 2008).

<sup>115</sup> *NPRM* at 95 (Statement of Commissioner Michael J. Copps).

experience will simply come to be dominated by device manufacturers and applications developers.<sup>116</sup>

Lately, a number of commentators have highlighted the significant role that Google and other application and service providers play in the Internet ecosystem. For example, noting that the fourth principle of the *Internet Policy Statement* states that “consumers are entitled to competition among network providers, *application* and service providers, and content providers,” AT&T recently pointed out that Google “blocks calls that Google Voice customers make to telephone numbers associated with [certain] local exchange carriers.”<sup>117</sup> “This intellectual contradiction . . . highlights the fallacy of any approach to Internet regulation that focuses myopically on network providers, but not application, service, and content providers.”<sup>118</sup>

Echoing Commissioner Capps’s concern, some commentators have observed that “[t]oday, search engines like Google, Yahoo and Microsoft’s new Bing have become the Internet’s gatekeepers, and the crucial role they play in directing users to Web sites means they are now as essential a component of its infrastructure as the physical network itself.”<sup>119</sup> “Google, with a 90% share of the search market in the UK and 72% in the US, wields unprecedented economic power.”<sup>120</sup> As one article recently noted, “If Google delivers a search

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<sup>116</sup> Paul Kouroupas, Vice President, Regulatory Affairs, Global Crossing, *Re-Thinking Net Neutrality*, Nov. 10, 2009, at <http://blogs.globalcrossing.com/?q=content/re-thinking-net-neutrality>.

<sup>117</sup> Letter from Robert W. Quinn, Jr., Senior Vice President, Federal Regulatory, AT&T, to Sharon Gillett, Chief, Wireline Competition Bureau, FCC, WC Docket No. 07-52, at 2-3 (Sept. 25, 2009) (quoting the *Internet Policy Statement*).

<sup>118</sup> *Id.* at 3.

<sup>119</sup> Adam Raff, *Search, but You May Not Find*, N.Y. Times, Op-Ed, Dec. 27, 2009, available at <http://www.nytimes.com/2009/12/28/opinion/28raff.html>.

<sup>120</sup> Search Neutrality.org, *Foundem’s Google Story* (Aug. 18, 2009), at <http://www.searchneutrality.org/foundem-google-story>; see Raff, *supra* note 119 (“Google’s dominance of both search and search advertising gives it overwhelming control. Google’s revenues exceeded \$21 billion last year, but (footnote continued...)”)

result in the top position, we click on it. If it's buried, the site might as well not exist."<sup>121</sup> In other words, these commentators show that search engines like Google can have gatekeeper power, effectively exercising the ability to "block or impair access," "censor," or "giv[e] preferential treatment to any specific website, service, or application based merely on its content, message, or ownership."<sup>122</sup> Considering that one of Google's primary selling features is prominent placement in its search results or on its webpage, customers necessarily pay for preferential treatment.<sup>123</sup> "If the Commission were to conclude that an interventionist regulatory regime is needed to preserve the 'neutrality' of the Internet, it could not defensibly apply that

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(...footnote continued)

this pales next to the hundreds of billions of dollars of other companies' revenues that Google controls indirectly through its search results and sponsored links.").

<sup>121</sup> Jia Lynn Yang & Nina Easton, *Obama & Google (a Love Story)*, *Fortune*, Oct. 26, 2009, available at [http://money.cnn.com/2009/10/21/technology/obama\\_google.fortune/](http://money.cnn.com/2009/10/21/technology/obama_google.fortune/).

<sup>122</sup> Media Access Project, Ex Parte Letter, WC Docket No. 07-52 (Dec. 14, 2009), available at <http://fjallfoss.fcc.gov/ecfs/document/view?id=7020352877> (attaching a Center for Media Justice handout titled *Network Neutrality, Universal Broadband, and Racial Justice*); see Search Neutrality.org, *Foundem's Google Story*, *supra* note 120 ("Every time Google ranks its search results, it is by definition expressing an opinion. . . . By introducing special treatment for particular site names manually fed to the algorithm (such as 'whitelists'), objectivity is lost, and the opinion becomes undeniably subjective.").

<sup>123</sup> See Kevin Werbach, *Only Connect*, 22 *Berkeley Tech. L.J.* 1233, 1278 (2007) ("And on the Internet, companies such as Google and Yahoo! sell top listings in their paid search results and ads on their pages to the highest bidder, 'discriminating' against everyone else."). Google recently started offering consumers a Domain Name System service as a substitute to the DNS service that most consumers now get from their broadband ISPs. Google's DNS service will put Google in the exact same "gatekeeper" position that Google claims broadband ISPs are in because Google will be able to block websites, will be able to redirect consumers to affiliated websites, and will generally be able to restrict where consumers who use its service go on the Internet. See Google, *Introduction to Google Public DNS*, at <http://code.google.com/speed/public-dns/docs/intro.html> (last visited Jan. 14, 2010) (implying that Google Public DNS is capable of blocking, filtering, or redirecting users, by volunteering that as a policy, it chooses not to block, filter or redirect users). These kinds of moves by Google and others make it increasingly clear "that the rationale supporting the FCC's proposed network neutrality rules . . . applies with equal force to other large providers in the greater Internet ecosystem." Esbin, *supra* note 73, at 18 (noting that a "recent Arbor Networks report shows that content delivery networks represent close to ten percent of Internet traffic, with Google alone accounting for six percent of all Internet traffic").

regime to broadband providers but not to Google (or any other provider of Internet-based services).”<sup>124</sup>

In light of the foregoing, the Commission, if it acts to adopt rules in this area, should adopt the following definitions:

**8.3 *Internet.*** *The international computer network of both Federal and non-Federal interoperable packet switched data networks. (See 47 U.S.C. § 230(f)(1)).*

*Broadband Internet Service Provider (“Broadband ISP”). A broadband ISP is a facilities-based provider to subscribers of broadband Internet access service, as well as applications or services that can be used with broadband Internet access service.*

*Internet Application or Service Provider. Any entity that provides any application or service over the Internet for the general public to access or use.*

The proposed rules also should be amended to reflect this scope.

**8.5 *Content.*** *Subject to reasonable network management, a broadband ISP or any Internet application or service provider may not prevent any user from sending or receiving the lawful Internet content of the user’s choice.*

**8.7 *Applications and Services.*** *Subject to reasonable network management, a broadband ISP or any Internet application or service provider may not prevent*

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<sup>124</sup> AT&T Comments, WC Docket No. 07-52, at 39 (Feb. 13, 2008). Respected individual and institutional commentators have also called for the Commission to expand its application of any rules to all members of the Internet ecosystem. See, e.g., Bret Swanson, *Google and the Problem with ‘Net Neutrality,’* Wall St. J., Op-Ed, Oct. 4, 2009, available at <http://online.wsj.com/article/SB10001424052748703628304574452951795911162.html> (“If neutrality applies selectively . . . to only one sliver of the network, then it is merely a political tool of one set of companies to cripple its competitors.”); *Google Exceptionalism,* Wall St. J., Editorial, Oct. 3, 2009, available at <http://online.wsj.com/article/SB10001424052748704471504574441223421435030.html> (“Content providers like Google want to dabble in the phone business, while phone companies want to sell services and applications. The coming convergence will make it increasingly difficult to distinguish among providers of broadband pipes, networks services and applications.”); Brian Szoka & Adam Thierer, Progress & Freedom Found., *Net Neutrality, Slippery Slopes & High-Tech Mutually Assured Destruction,* Progress Snapshot, at 2 (Oct. 2009), at <http://www.pff.org/issues-pubs/ps/2009/pdf/ps5.11-net-neutrality-MAD-policy.pdf> (“The promise made yesterday by the FCC--to only apply neutrality principles to the infrastructure layer of the Net – is hollow and will ultimately prove unenforceable. . . [W]hatever the FCC might say today, any large online intermediary with a popular platform potentially faces the threat of ‘network neutrality’ mandates – because every platform is essentially a ‘network,’ too. We’re not just talking about ‘search neutrality’ (Google as well as Microsoft) but also about ‘device neutrality’ (mobile handsets), ‘app neutrality’ (Apple’s iTunes store, Facebook’s developers and Google’s Android mobile OS) and so on for social networking, email, instant messaging, online advertising, etc.”).

*any user from running the lawful applications or using the lawful services of the user's choice.*

- 8.9 Devices.** *Subject to reasonable network management, a broadband ISP or any Internet application or service provider may not prevent any user from connecting to and using the user's choice of lawful devices that do not harm the network.*

**B. The Proposed Nondiscrimination Rule Is Overly Broad and Will Foreclose Services That Benefit Consumers and Can Further National Purposes.**

The *NPRM* proposes to codify a new principle that would require broadband ISPs to treat all lawful content, applications, and services the same, i.e., “in a nondiscriminatory manner.”<sup>125</sup> According to the *NPRM*, the Commission “understand[s] the term ‘nondiscriminatory’ to mean that a broadband [ISP] may not charge a content, application, or service provider for enhanced or prioritized access to the subscribers of the broadband [ISP].”<sup>126</sup> The only exceptions to this absolute prohibition on differentiation of services are what the Commission will determine on a case-by-case basis to be “reasonable network management” or “managed or specialized services.”<sup>127</sup>

If the Commission builds a record demonstrating the need for a nondiscrimination rule, and explains its bases for authority to adopt such a rule, as a general matter, any such rule should be as narrow as possible to protect the public interest without impairing the flexibility of service providers to respond to the needs and demands of consumers and the challenges of managing networks and delivering services. As the *NPRM* expressly recognizes, “[t]he key issue we face

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<sup>125</sup> *NPRM* ¶ 104.

<sup>126</sup> *Id.* ¶ 106.

<sup>127</sup> *Id.* ¶¶ 108, 133.

is distinguishing socially beneficial discrimination from socially harmful discrimination in a workable manner.”<sup>128</sup>

As drafted, the proposed nondiscrimination rule fails to properly address this “key issue.” Rather, it constitutes an absolute prohibition on discrimination or differentiation, notwithstanding the fact that the *NPRM* recognizes (as do many leading engineers and scholars) that some differentiation benefits consumers and furthers the public interest.<sup>129</sup> In contrast to the original principles in the *Internet Policy Statement* – which are clearly directed at the interests of consumers – the proposed nondiscrimination rule appears to be intended to protect Internet content, application, and service providers from *anticompetitive* conduct.<sup>130</sup> But the text of the rule is vastly broader than that.<sup>131</sup> In effect, the proposed rule bans *all* “discrimination,” whether beneficial or harmful,<sup>132</sup> with the only exceptions being for “reasonable network management”

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<sup>128</sup> *Id.* ¶ 103.

<sup>129</sup> *See id.*; Werbach, *supra* note 123, at 1277-78 (arguing that casting broadband policy in terms of nondiscrimination is an inferior approach because of the difficulty of distinguishing between benign and harmful behavioral discrimination, and because the perceived choice between best efforts delivery and quality of service management misrepresents the technical reality that different applications and services are optimized differently).

<sup>130</sup> This concern seems to be based on the assumption that broadband ISPs have the incentive and ability (both technically and economically) to discriminate against a particular content, application, or service provider. As discussed earlier, however, such conjectural, hypothetical harms do not withstand scrutiny. *See supra* section II.B.

<sup>131</sup> The *NPRM* expressly notes that the “proposed nondiscrimination and reasonable network management rule bears more resemblance to unqualified prohibitions on discrimination added to Title II in the 1996 Telecommunications Act than it does to the general prohibition on ‘*unjust or unreasonable*’ discrimination’ by common carriers in section 202(a) of the Act.” *Id.* ¶ 109.

<sup>132</sup> *See* Tim Wu & Christopher Yoo, *Keeping the Internet Neutral?: Tim Wu and Christopher Yoo Debate*, 59 Fed. Comm. L.J. 575, 577 (June 2007) (“Whether it comes to employment, networks, or just about anything else, no one really believes in systems that ban discrimination completely. . . . Yet I don’t think the fact that an absolute ban on discrimination would be ridiculous undermines the case for discrimination laws. . . . [W]hat I think is going on in the network neutrality debate -- the useful part of it -- is getting a better grip on what amounts to good and bad forms of discrimination on information networks.” (statement of Tim Wu)).

practices or the provision of “managed or specialized services.”<sup>133</sup> The overbreadth of such a rule will have serious unintended consequences that could jeopardize the Commission’s overarching goals of expanding broadband Internet deployment and promoting broadband adoption.

The proposed rule locks in current technologies and business models, foreclosing the experimentation, development, and implementation of technologies or business models that can better serve consumers and the public interest.<sup>134</sup> An absolute ban on discrimination would potentially prevent the emergence of technologies and business models that deliver innovative applications and services in new, more effective, more efficient, and more secure ways:

A close analysis of the economics of innovation raises serious doubts about the position taken by network neutrality proponents. Deviations from network neutrality can in fact enhance innovation. Conversely, preventing such deviations *can forestall many new applications from emerging.*<sup>135</sup>

As the Commission’s Chief Technologist has written: “*Network neutrality should not be about banning all discrimination. . . . [D]iscrimination can be used in ways that benefit users,*

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<sup>133</sup> As AT&T has noted, the proposed rule “would be *more restrictive* than the prohibition on ‘unreasonable discrimination’ adopted for monopoly-era telephone companies in the Communications Act of 1934.” AT&T Ex Parte, WC Docket No. 07-52, at 1 (Nov. 18, 2009) (emphasis added).

<sup>134</sup> See Esbin, *supra* note 73, at 4 (explaining that the proposed rule “would freeze in place today’s Internet operations and business models, interfere with the organic evolution that has characterized the Internet ecosystem, and place the FCC firmly in the middle of all future network management, service modification, and quality of service decisions, without a demonstration that such a radical reform is necessary”).

<sup>135</sup> Yoo, *supra* note 39, at 228 (emphasis added); *see id.* at 234 (“Formal models indicate that allowing networks to offer premium services can stimulate innovation at the edges of the network, particularly among smaller content providers.”). Professor Yoo explains that “[p]reventing network providers from prioritizing traffic, restricting the use of certain applications, or varying the prices they charge to their customers thus has the potential to reduce consumer welfare, not only by limiting network providers’ ability to induce end users to rationalize their consumption, but also by preventing them from engaging in pricing mechanisms or employing proxies that require content and applications providers to bear a greater proportion of the fixed costs.” *Id.* at 227.

potentially improving security, improving quality of service, decreasing infrastructure costs, and allocating resources to those who benefit the most from them.”<sup>136</sup>

There are any number of reasonable business practices that may arguably be prohibited by the proposed rule. For example:

- The proposed rule could result in a ban on paid-peering arrangements,<sup>137</sup> which allow entities like Google, Microsoft, Akamai, and other Internet application and service providers to more efficiently route their traffic to end users, thereby enhancing the end user experience. Such arrangements are an important component of the Internet ecosystem, and have been so for over two decades.
- The proposed rule could prohibit a broadband ISP from working with VoIP providers to give VoIP calls priority over other Internet traffic – a practice that many experts, including OET Chief Julius Knapp, recognize to be reasonable.<sup>138</sup>
- The proposed rule could prohibit a broadband ISP from providing a service that allows *consumers* to decide which content, applications, or services they want to give priority status, despite widespread acknowledgment that such a service would be perfectly reasonable and beneficial to consumers.<sup>139</sup> For example, this might include a health monitoring application that may benefit from a guaranteed quality of service.
- The proposed rule could prohibit *Internet content, application, and service providers* from improving their existing offerings with the assistance of a broadband ISP,

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<sup>136</sup> Jon Peha, Carnegie Mellon U., *The Benefits and Risks of Mandating Network Neutrality, and the Quest for a Balanced Policy* 13, 34<sup>th</sup> Telecomm. Policy Research Conference, (Sept. 2006) (emphasis in original), available at [http://web.si.umich.edu/tprc/papers/2006/574/Peha\\_balanced\\_net\\_neutrality\\_policy.pdf](http://web.si.umich.edu/tprc/papers/2006/574/Peha_balanced_net_neutrality_policy.pdf); see *id.* at 21 (“Network neutrality policies could limit or even prohibit discrimination, and many forms of discrimination are beneficial to Internet users. . . . If a network neutrality policy were to prohibit such practices . . . then there would be collateral damage that deserves serious consideration.”); Weiser, *supra* note 38, at 543.

<sup>137</sup> See, e.g., George Ou, *FCC NPRM Ban on Paid Peering Harms New Innovators*, Digital Society, Nov. 10, 2009, available at <http://www.digitalsociety.org/2009/11/fcc-nprm-ban-on-paid-peering-harms-new-innovators/>.

<sup>138</sup> See Louis Trager, *FCC Economist: Resale Market Could Yield New Wireless Spectrum*, Comm. Daily, Nov. 6, 2009 (“The FCC recognizes that voice and video have special requirements, so giving the data for them high priority is ‘a reasonable network practice.’”)

<sup>139</sup> M. Chris Riley & Robb Topolski, *The Hidden Harms of Application Bias*, Free Press/New America Foundation Policy Brief, at 2 n.4 (Nov. 2009), available at [http://www.freepress.net/files/The\\_Hidden\\_Harms\\_of\\_Application\\_Bias.pdf](http://www.freepress.net/files/The_Hidden_Harms_of_Application_Bias.pdf) (“When users have complete control over their own application priority, and when their choice does not impact the network connection of others, . . . prioritization can be beneficial without raising substantial harms.”).

regardless of whether doing so would be pro-competitive and beneficial to consumers.<sup>140</sup>

- The proposed rule could prohibit edge-caching or other collocation services. Such services, which are considered “common practice” by many, have been touted by Google and others for their ability to maximize the user experience.<sup>141</sup>

Many eminent engineers and computer scientists have noted that an absolute ban on discrimination would constrain service providers’ ability to leverage innovative technologies and business models to serve consumers,<sup>142</sup> making it harder to attract investment dollars for researching, developing, and deploying next-generation services and broadband networks.<sup>143</sup> In effect, these regulations could potentially lock broadband ISPs into a 2009 operating model forever.

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<sup>140</sup> See Yoo, *supra* note 39, at 182.

<sup>141</sup> See Richard Whitt, *Net Neutrality and the Benefits of Caching*, Google Public Policy Blog, Dec. 15, 2008, at <http://googlepublicpolicy.blogspot.com/2008/12/net-neutrality-and-benefits-of-caching.html>.

<sup>142</sup> See, e.g., Cecilia Kang, *Computer Science Professor, Former FCC Official Warns Against Net Neutrality*, Wash. Post, Sept. 25, 2009 available at [http://voices.washingtonpost.com/posttech/2009/09/computer\\_science\\_professor\\_for.html](http://voices.washingtonpost.com/posttech/2009/09/computer_science_professor_for.html) (“David Farber, a professor of computer science and policy at Carnegie Mellon, said the FCC’s proposal for new net neutrality rules could hamper innovation on the Web. Farber . . . said that Internet networks have always prioritized certain traffic and that new rules proposed by the [FCC] to try to stop discrimination on cable, DSL and wireless networks could constrain operators and tech companies from properly managing their networks.”); Steven Bauer, David Clark, William Lehr, *The Evolution of Internet Congestion* 32 (Aug. 28, 2009), available at [http://people.csail.mit.edu/wlehr/Lehr-Papers\\_files/Bauer\\_Clark\\_Lehr\\_2009.pdf](http://people.csail.mit.edu/wlehr/Lehr-Papers_files/Bauer_Clark_Lehr_2009.pdf) (“The use of techniques and technologies like volume capping, usage-based pricing, application prioritization, and Deep Packet Inspection all represent significant deviations from TCP fairness. . . . Our assessment of this legacy and of more recent research efforts to characterize Internet traffic more carefully lead us to conclude that there is ample scope for useful innovation in ISP traffic management practices beyond TCP fairness. Consequently, we would caution against any regulatory policies that had the likely effect of enshrining TCP fairness and thereby limiting the scope of the Internet technical community’s on-going experiments with how to best manage best-effort traffic over medium (month or less) to short time-scale (seconds to minutes).”); Weiser, *supra* note 38, at 543.

<sup>143</sup> See, e.g., Darby, *supra* note 34, at 5 (“The practical effect, and clear intent, of the proscription [on nondiscrimination] is to prevent broadband network providers from adopting ‘two-sided’ business models that are widely used throughout the economy in general and by Internet content and applications providers in particular. That single regulatory constraint has negative impacts on all the drivers of operator investment – risk, earnings, growth prospects and the ability to explore new and innovative business models and market strategies.”); George Ou, *New Harsher Net Neutrality Rules Endanger Investments*, Digital Society, Oct. 22, 2009, <http://www.digitalsociety.org/2009/10/new-harsher-net-neutrality-rules-endanger-investments/>.

Perhaps recognizing the overly broad nature of the proposed rule, the Commission has proposed exempting “reasonable network management” practices from the nondiscrimination rule. This effort, however, does not remedy the defects outlined above. As Professor David Farber explained:

The problem here is everyone talks about reasonable network management, but if you look at it from a technical perspective, someone trying to build new ways of operating networks is going to sit there saying, “I wonder if this new brilliant idea is reasonable or not. And if I go through all the energy of implementing it and testing it, will someone in Washington say that that violates some reasonable network management criteria?”<sup>144</sup>

Were a nondiscrimination rule to be adopted, one that prohibits *unreasonable and anticompetitive* discrimination would better balance concerns about discrimination against the preservation of public interest benefits that will accrue from leveraging innovative technologies and business models to deliver services more effectively, efficiently, and securely.<sup>145</sup>

“Discrimination is, in fact, not ordinarily something regulators worry about today. Government intervenes, as the antitrust mantra intones, to protect competition, rather than competitors.”<sup>146</sup> A

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<sup>144</sup> Link Hoewing, *Network Management as Seen by the Experts*, Verizon Policy Blog, Oct. 12, 2009 (quoting Professor David Farber), at <http://policyblog.verizon.com/BlogPost/673/NetworkManagementasSeenbytheExperts.aspx>; Peha, *supra* note 136, at 21. Other experts have noted that the Commission’s *current* approach to regulating the Internet has compromised Internet security because broadband ISPs fear that their practices will be challenged; a rule prohibiting discrimination would only exacerbate these fears, even with an exception for reasonable network management. *See, e.g.*, Jonathan L. Zittrain, *The Future of the Internet and How To Stop It*, Mar. 16, 2008, at <http://yupnet.org/zittrain/archives/18#42> (“ISPs are in a good position to help in a way that falls short of undesirable perfect enforcement. . . . There are said to be tens of thousands of PCs converted to zombies daily, and an ISP can sometimes readily detect the digital behavior of a zombie. . . . Yet ISPs currently have little incentive to deal with this problem. . . . If the ISP quarantines an infected machine until it has been recovered from zombie-hood—cutting it off from the network in the process—the user might claim that she is not getting the network access she paid for.”).

<sup>145</sup> Peha, *supra* note 136, at 16 (stating that net neutrality policy “should balance two objectives . . . the policy should limit discriminatory practices that allow network operators to exploit their market power to significantly harm Internet users . . . [and it] should try not to interfere with network operators’ ability to use discrimination that benefits users”).

<sup>146</sup> Werbach, *supra* note 123, at 1279.

limitation that focuses on unreasonable and anticompetitive discrimination would give service providers the necessary flexibility to experiment with different business models, technologies, and network management practices, while still ensuring that the Commission has sufficient authority to address situations where individual parties take actions that contravene the Commission's goal of an open, vibrant Internet.<sup>147</sup> The Commission has a long history of adjudicating what is unjust or unreasonable.<sup>148</sup> It could rely on this history and its expertise to put appropriate parameters around any nondiscrimination rule. Focusing the scope of the rule on conduct that is unreasonable and anticompetitive, and clarifying that it is designed to protect those parties with whom service providers have a relationship, will give the Commission sufficient authority to address perceived grievances while maintaining the workability of the rules.<sup>149</sup>

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<sup>147</sup> The *NPRM* notes that its proposed absolute discrimination prohibition resembles the prohibition on discrimination in Section 251 of the Act. See *NPRM* ¶ 109. There are a number of reasons why Section 251 is inapposite. Section 251, for the most part, was designed by Congress in 1996 with a very specific purpose: to provide competitors access to the then-monopoly last-mile facilities (and related assets, like operator services and directory listings) owned and operated by ILECs. See, e.g., Werbach, *supra* note 123, at 1235 (noting that it “made sense” that “[n]on-discrimination rules of ‘common carriage’ dominated communications law for most of the twentieth century” because “there was a single regulated monopoly network,” in comparison to interconnection rules, which developed as part of “regulatory efforts to foster competition in end-user equipment and computer-based ‘enhanced services’”). But with broadband Internet services, the Commission is not dealing with a monopoly marketplace, a fact that is reflected throughout the *NPRM* (which speaks to the provision of broadband Internet service on cable, telephone, satellite, wireless, and other networks). See, e.g., *NPRM* ¶¶ 16, 21, 154, 155. This is a competitive, vibrant marketplace that will only become more so as the Commission pursues measures to liberalize spectrum policies for licensed and unlicensed purposes. Moreover, this proceeding is not about forcing broadband ISPs to give competing broadband ISPs access to last-mile facilities (a business model that makes even less sense today than it did a decade ago). It is about ensuring that consumers can continue to access the plethora of broadband Internet content, applications, and services through a plethora of broadband ISPs.

<sup>148</sup> See, e.g., *MCI Telecomms. Corp. v. FCC*, 842 F.2d 1296, 1303 (D.C. Cir. 1988); *Nat'l Communications Ass'n v. AT&T Corp.*, 238 F.3d 124 (2d Cir. 2001); *Orloff v. Vodafone AirTouch Licenses LLC*, Mem. Op. & Order, 17 FCC Rcd. 8987 (2002), *aff'd sub nom.* *Orloff v. FCC*, 352 F.3d 415 (D.C. Cir. 2003); *Cellexis Int'l, Inc. v. Bell Atl. NYNEX Mobile Sys., Inc.*, Mem. Op. & Order, 16 FCC Rcd. 22887, 11892 (2001); *Beehive Tel., Inc. v. Bell Operating Cos.*, Mem. Op. & Order, 10 FCC Rcd. 10562, 10567 (1995).

<sup>149</sup> See Letter from Senator Olympia J. Snowe, U.S. Senate, to FCC Chairman Julius Genachowski (Oct. 22, 2009); Letter from James W. Cicconi, Senior Executive Vice President, External & Legislative Affairs, AT&T, to FCC Chairman Julius Genachowski, GN Docket No. 09-191, at 2 (Dec. 15, 2009).

Thus, should the Commission build a record demonstrating both a need and legal authority for rules, a “nondiscrimination” rule should read as follows:

**8.13 Nondiscrimination.** *Subject to reasonable network management, a broadband ISP or other Internet application or service provider may not engage in unreasonable and anticompetitive discrimination against any lawful Internet content, application, or service.*

**C. The Proposed Network Disclosure Regulations Should Be Narrowly Tailored To Protect Consumers.**

Broadband ISPs typically provide their customers with timely, accurate, and complete information about their service offerings and are always looking to improve the simplicity, accessibility, and utility of those communications. Ensuring customer satisfaction is essential for attracting new customers and retaining existing customers – especially in a world where video, data, and phone service choices are continually expanding. Comcast and other service providers are making more information about their products and services available to consumers than ever before.<sup>150</sup>

Comcast has long recognized that clear communication with our customers is an important part of a successful relationship. For years, our usage policies have informed customers that our Internet service is a shared resource and that we manage our network to ensure as high a level of performance for as many users as possible.<sup>151</sup> In 2008, we revised our

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<sup>150</sup> Comcast Reply Comments, CG Docket No. 09-158, at iii, 4-5 (Oct. 28, 2009); Comcast Comments, CG Docket No. 09-158, at 2-3, 5-12 (Oct. 13, 2009).

<sup>151</sup> Comcast’s Terms of Service (“TOS”) have specified that Comcast High-Speed Internet service is subject to “speed and upstream and downstream rate limitations,” and that the service may be used only for “personal, residential, non-commercial purposes.” Comcast Corp., *Residential Subscriber Agreement Terms of Service, Comcast Agreement for Residential Services* §§ 4, 7, available at <http://www.comcast.net/terms/subscriber.jsp> (last visited Jan. 14, 2010). The TOS also prohibits uses of the service for operation of “a server site for ftp, telnet, rlogin, e-mail hosting, ‘Web-hosting’ or other similar applications.” *Id.* § 7.b. Similarly, for years, the Acceptable Use Policy (“AUP”) has prohibited the use of the service that “restrict[s], inhibit[s], or otherwise interfere[s] with the ability of any other person . . . to use or enjoy the [s]ervice, including . . . generating levels of traffic sufficient to

(footnote continued...)

Acceptable Use Policy and Frequently Asked Questions and reposted them on our Comcast.net website.<sup>152</sup> In September 2008, we provided consumers and the Commission with further explanations of our network management practices.<sup>153</sup> Today, Comcast has some of the most detailed disclosures available from any ISP, and it is a competitive imperative to continue to keep customers informed about our HSI service.<sup>154</sup> As the *NPRM* acknowledges, other broadband ISPs have followed suit and enhanced their disclosure of their network management practices.<sup>155</sup>

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(...footnote continued)

impede others' ability to send or retrieve information." And, for years, the AUP has required customers to ensure that their "use of the Service does not restrict, inhibit, interfere with, or degrade any other user's use of the Service nor represent . . . an overly large burden on the network." Comcast Corp., *Comcast Acceptable Use Policy for High-Speed Internet Services*, at <http://www.comcast.net/terms/use/> (last visited Jan. 14, 2009).

<sup>152</sup> See Comcast Corp., *Frequently Asked Questions About Network Management*, at <http://customer.comcast.com/Pages/FAQViewer.aspx?Guid=24f9d063-b8ca-4c93-a528-cb62e1fd664b> (last visited Jan 14, 2010); Comcast Corp., *Comcast Acceptable Use Policy for High-Speed Internet Services*, at <http://www6.comcast.net/terms/use/> (last visited Jan. 14, 2010).

<sup>153</sup> Harold Feld, wetmachine.com (Sept. 21, 2008), at <http://www.wetmachine.com/category/26/page/3> ("[Comcast] appear[s] to have made a thorough disclosure of [its] current network management practices and their future network management plans. . . . Comcast appears to have complied as thoroughly as I could wish.").

<sup>154</sup> Comcast's disclosures include, among other things, what speeds the service can deliver and limitations on those speeds, what speeds customers receive with upgrades to DOCSIS 3.0, whether customers are in a DOCSIS 3.0 market, and how PowerBoost works, Comcast customerCentral, *DOCSIS 3.0 – Comcast's Fastest Fast Speeds*, at <http://customer.comcast.com/Pages/FAQListViewer.aspx?topic=Internet&folder=5acf957c-c9ac-4b82-9098-ce88678cc311> (last visited Jan. 14, 2010), explanations of why and how Comcast manages its network, including descriptions of its congestion management practices and how its network management practices affect its customers, if at all, Comcast customerCentral, *Frequently Asked Questions about Network Management*, at <http://customer.comcast.com/Pages/FAQViewer.aspx?Guid=24f9d063-b8ca-4c93-a528-cb62e1fd664b> (last visited Jan. 14, 2010), and what security measures Comcast takes to protect its network and customers. Comcast customerCentral, *Security*, at [http://customer.comcast.com/Pages/FAQListViewer.aspx?topic=Internet&folder=26e6dcc4-3d44-4d21-9e34-49c793715cb6#faq\\_breakout1](http://customer.comcast.com/Pages/FAQListViewer.aspx?topic=Internet&folder=26e6dcc4-3d44-4d21-9e34-49c793715cb6#faq_breakout1) (last visited Jan. 14, 2010). For more examples of disclosures that Comcast makes, see generally <http://customer.comcast.com/Pages/HelpFolders.aspx?topic=Internet> (last visited Jan. 14, 2010). This information is available to anyone (including content, application, and service providers and policymakers) with the click of a mouse.

<sup>155</sup> See *NPRM* ¶ 124.

As the *NPRM* further recognizes, there is a fine line between adequate disclosures and confusing customers with too many technical, potentially unnecessary details.<sup>156</sup> In that regard, the Commission should consider working with all interested parties to develop best practices that establish a baseline of information that all consumers need. Those best practices should apply to all broadband ISPs, and corresponding disclosures should apply to all Internet application and service providers.<sup>157</sup>

The *NPRM*, however, proposes moving forward with formal regulations that would mandate “disclos[ure of] such information concerning network management and other practices as is reasonably required for users . . . to enjoy the protections” of the Commission’s proposed rules.<sup>158</sup> As applied to ISPs, such a rule is unnecessary in light of their current disclosure and transparency efforts.

The *NPRM* also proposes that broadband ISPs disclose information concerning network management and other practices to “content, application, and service providers.” In other words, it proposes to impose a duty on broadband ISPs that potentially would require them to provide proprietary information to tens of millions of parties around the globe who are not even their customers. Today, a broadband ISP’s duty of transparency appropriately flows to its customers, the end users who pay to receive the high-speed Internet service it provides. Broadband ISPs do

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<sup>156</sup> *Id.* ¶ 126 (noting that “too much detail may be counter-productive if users ignore or find it difficult to understand those details”). Broadband ISPs have to balance keeping consumers informed and the disclosure of information that provides a roadmap to those who would try to get around management techniques, such as hackers, spammers, phishers, creators of worms and viruses, and others who seek to harm consumers.

<sup>157</sup> It is becoming increasingly clear that the practices of Internet content, application, and service providers have as much to do with the openness and security of the Internet as broadband ISPs’ practices do. This is especially true as such providers begin to offer services similar to those offered by broadband ISPs – e.g., DNS services that determine where and how traffic is routed. *See supra* note 123 and accompanying text.

<sup>158</sup> *NPRM* ¶ 119.

not have relationships with, or legal obligations to, the vast majority of application or service providers or other third parties.<sup>159</sup>

The *NPRM* does not provide sufficient reason for changing this dynamic. As an initial matter, it does not explain what information an application or service provider may legitimately need that would not otherwise be disclosed to consumers.<sup>160</sup> Disclosures such as those provided by Comcast to its customers provide significant information about Comcast's network management practices, and are available to *anybody on the Internet*, consumers and Internet application and service developers alike. In addition, the *NPRM* does not explain how creating this new legal duty would in any way potentially benefit the Internet ecosystem, nor does it balance that potential benefit with the risks that such information would be used by bad actors whose intent is to circumvent legitimate network management and security practices.<sup>161</sup>

Furthermore, if there is an issue in the Internet ecosystem about transparency and disclosures, it makes no sense to impose a new duty on broadband ISPs alone. It is noteworthy

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<sup>159</sup> Nevertheless, ISPs generally work closely with application or service providers and other third parties to maximize the user experience in a variety of ways. For example, ISPs may do things like peer their networks with networks hosting popular applications and services.

<sup>160</sup> The *NPRM* asks whether the “comparably efficient interconnection (CEI) and open network architecture (ONA) rules . . . provide a useful guide in developing disclosure requirements in this context.” *NPRM* ¶ 127. The answer is, no. In fact, the CEI and ONA rules offer helpful insights into the quagmire such rules are likely to create and the burdens such regulations would impose on ISPs. Moreover, those rules were rooted in the unique problems associated with the historic Bell System monopoly and not the free marketplace environment of the Internet.

<sup>161</sup> The underground actors that generate spam, conduct phishing attacks, distribute malware, control and rent out access to bot networks, etc., constitute a multi-billion-dollar, global criminal enterprise. This criminal enterprise evolves its tools and attack vectors rapidly and any delay or inability to respond to and protect against threat evolutions effectively is likely to have significant financial and infrastructure disruption, and even national security implications. See Nik Cubrilovic, *Twitter Hack: Part Of Broader Iranian Strategy*, TechCrunch.com, Dec. 18, 2009, at <http://www.washingtonpost.com/wp-dyn/content/article/2009/12/18/AR2009121801982.html> (describing how an attack on Twitter was “part of a concerted effort across the Iranian government and military to take a stronger diplomatic stance against the United States and European Union in the lead up to negotiations on Iran's nuclear plans”). Hampering or in any way hindering ISPs' ability to deal with, prevent, or mitigate such cyber-attacks can have dire consequences for our online economy, Internet-based communication tools, online news sources, and other Internet applications and services.

that, with respect to transparency and disclosure, Google and Verizon Wireless expressly agreed that “[a]ll providers of broadband access, services and applications should provide their customers with clear information about their offerings.”<sup>162</sup> If all players in the Internet ecosystem should be held to the same standards for transparency and disclosure, it is only logical that they all should be held to the same standards in all respects where the goal is to “preserve an open Internet.”

The Comcast-BiTorrent agreement from March 2008 demonstrates the need for *mutual* disclosure on the part of broadband ISPs and Internet application and service developers and providers in various circumstances. In return for Comcast moving to a protocol-agnostic congestion management practice and disclosing the nature of that practice, BitTorrent agreed “to work with Internet service providers, other technology companies, and the Internet Engineering Task Force, a nonprofit standards body, to develop ways to optimize file swapping on networks like Comcast’s. It also plans to publish its work in forums and Internet standards communities so that other application developers can get a glimpse of what’s going on.”<sup>163</sup>

The mutual disclosures by both Comcast and BitTorrent will greatly help other efforts, such as the P4P Working Group,<sup>164</sup> as well as similar efforts by participants in the Internet

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<sup>162</sup> *Google-Verizon Wireless Joint Statement*, *supra* note 26.

<sup>163</sup> Anne Broache, *Comcast and BitTorrent Agree To “Collaborate,”* CNET.com, Mar. 27, 2008, available at [http://news.cnet.com/8301-10784\\_3-9904494-7.html?tag=mncol:txt](http://news.cnet.com/8301-10784_3-9904494-7.html?tag=mncol:txt). See also Ex Parte Letter of David L. Cohen, Comcast Corp., to Chairman Kevin J. Martin et al., FCC, WC Docket No. 07-52 (Mar. 27, 2008). Importantly, there were mutual non-disclosure agreements to guard against improper disclosure of competitively sensitive information.

<sup>164</sup> The P4P Working Group’s “mission is to work jointly and cooperatively with leading Internet service providers (ISPs), peer-to-peer (P2P) software distributors, and technology researchers to ascertain appropriate and voluntary best practices . . . to accelerate distribution of content and optimize utilization of ISP network resources in order to provide the best possible performance to end-user customers.”, Pando Networks, *The P4P Working Group*, at <http://www.pandonetworks.com/p4p> (last visited Jan. 14, 2010). Comcast, Verizon, and others collaborated with Pando Networks on a field test of these principles, and the group reported in April 2008 that these tests “demonstrate significant benefits for national and international broadband networks using multiple technologies including cable, (footnote continued...)”

ecosystem to work together to bring consumers the best broadband Internet experience possible. That agreement was the harbinger of many similar activities throughout the Internet community, including an IETF-sponsored Peer-to-Peer Infrastructure Workshop in May 2008,<sup>165</sup> as well as the creation of IETF working groups on issues such as Low Extra Delay Background Transport (LEDBAT)<sup>166</sup> and Application-Layer Transport Optimization (ALTO),<sup>167</sup> and IETF investigatory efforts<sup>168</sup> on Congestion Exposure (CONEX)<sup>169</sup> and De-Couple Application Data Enroute (DECADE).<sup>170</sup> A rule that only applies to a subset of the Internet ecosystem casts a cloud over these efforts and increases regulatory disparity, thereby distorting investment incentives and placing at risk the Chairman's goal of innovation and investment at the edge *and* within the network.

Finally, the *NPRM* asks whether the rules should require prior approval from, or at least disclosure to, the Commission for any network changes.<sup>171</sup> An obligation of that nature would bring the Internet to a grinding halt. All ISPs make regular changes to their network

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(...footnote continued)

DSL, and fiber.” See Ex Parte Letter of Kathryn A. Zachem, Comcast Corp., to Marlene H. Dortch, Secretary, FCC, WC Docket. No. 07-52 (Apr. 9, 2008).

<sup>165</sup> See IETF, *RFC 5594, Report from the IETF Workshop on Peer-to-Peer (P2P) Infrastructure* (May 28, 2008), available at <http://tools.ietf.org/rfc/rfc5594.txt>.

<sup>166</sup> The LEDBAT working group charter can be found at <http://www.ietf.org/dyn/wg/charter/ledbat-charter.html> (last visited Jan. 14, 2010). Notably, the LEDBAT working group at the IETF is co-chaired by an engineer from BitTorrent, Mr. Stanislav Slaunov. The other co-chair is Mr. Murari Sridhavan, from Microsoft. IETF, *Low Extra Delay Background Transport (LEDBAT)*, at <http://www.ietf.org/dyn/wg/charter/ledbat-charter.html> (last visited Jan. 14, 2010).

<sup>167</sup> The ALTO working group charter can be found at <http://www.ietf.org/dyn/wg/charter/alto-charter.html>.

<sup>168</sup> These investigatory efforts are referred to as “Birds of a Feather” – or BoF – meetings at the IETF. A BoF meeting is an exploration of a technical subject that may lead to an IETF working group in the future.

<sup>169</sup> CONEX BoF minutes from IETF 76 are available at <http://www.ietf.org/proceedings/76/conex.html>.

<sup>170</sup> DECADE BoF minutes from IETF 76 are available at <http://www.ietf.org/proceedings/76/decade.html>.

<sup>171</sup> *NPRM* ¶ 129.

management practices, most often to address spam and malware, but occasionally to optimize and improve performance, or route around problems or congestion points on the Internet. Requiring broadband ISPs to disclose to policymakers (or seek regulatory approval for) every detail of network management would be disastrous given the rapidly changing nature of the Internet and the need for engineers and the networks they manage to respond to novel threats and the demands of the network, often within hours, minutes, seconds, or even in real-time. For example, Comcast must, in real-time, manage spam inbound to and outbound from our comcast.net email servers. Likewise, we are constantly working to detect and defend against distributed denial of service attacks against our network resources or our subscribers. Filtering rules and other tools must be regularly adjusted to respond to adaptations made by malevolent actors, such as senders of email containing spam, viruses, and other malware. If those tools are slower to react because of requirements to disclose such changes before they are implemented, the result could be hundreds of millions of extra spam messages delivered over our network *each day*, or many more successful denial of service attacks.

Thus, should the Commission build a record demonstrating both a need and legal authority for rules, the “transparency” rule should thus read as follows:

**8.15 Transparency.** *Subject to reasonable network management, broadband ISPs and Internet application and service providers must disclose such information about its service as is reasonably required for consumers to enjoy the protections specified in this part.*

**D. To the Extent the Commission Adopts Any Rules, Practices Related to Network Management Should Be Presumed “Reasonable.”**

If the Commission establishes both the need and authority to adopt rules and elects to proceed, it is critical to ensure that any rules not interfere with broadband ISPs’ reasonable network management practices, or the needs of law enforcement, public safety, or homeland

security. “It is a given that broadband providers must manage their networks, and it is quite likely (and healthy) for them to use different strategies to do so.”<sup>172</sup> As the *NPRM* recognizes,

[The] goals in this proceeding are to encourage investment and innovation, promote competition, and protect the rights of users . . . . While the six rules proposed . . . are derived from and designed to support these goals, there may be times when strict application of those rules would be in tension with these goals. For example, the general usefulness of the Internet could suffer if spam floods the inboxes of users, if viruses affect their computers, or if network congestion impairs their access to the Internet. Other critical governmental interests such as law enforcement, national security, and public safety may require that [broadband ISPs] discriminate with regard to particular traffic.<sup>173</sup>

These exceptions to the Commission’s proposed rules are necessary but not sufficient. They do, however, raise a number of questions that the Commission should clarify. Specifically, the Commission should:

- (1) Confirm that the rules are intended to be flexible to allow broadband ISPs to react to marketplace and technological demands without delay;
- (2) Establish a safe harbor for network management practices that conform with standards promulgated by standards-setting bodies like the Internet Engineering Task Force (“IETF”) and other relevant Standards Development Organizations (“SDOs”); and
- (3) Create a presumption that any broadband ISP management practice that utilizes “best practices” promulgated and publicized by trade associations, industry consortia, or a government advisory committee, as well as any practices or other relevant standards documents that address recognized legitimate network management concerns – e.g., congestion management, security, spam, copyright protection, law enforcement needs, etc. – are reasonable, and require anyone challenging such a practice to rebut the presumption that the practice is reasonable with specific evidence of why it is unreasonable and anticompetitive.

First, the Commission should adopt a general rule and offer guidance on a case-by-case basis as network management practices are brought before the agency. As the *NPRM* recognizes, “the novelty of Internet access and traffic management questions, the complex nature

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<sup>172</sup> Philip. J. Weiser, *The Next Frontier for Network Neutrality*, 60 Admin L. Rev. 273, 293 (2008).

<sup>173</sup> *NPRM* ¶ 133.

of the Internet, and a general policy of restraint in setting policy for [broadband ISPs] weigh in favor of a case-by-case approach.”<sup>174</sup> And as the CEOs of Google and Verizon Wireless recently indicated, “[W]e’re in wild agreement that in this rapidly changing Internet ecosystem, flexibility in government policy is key. Policymakers sometimes fall prey to the temptation to write overly detailed rules, attempting to predict every possible scenario and address every possible concern. This can have unintended consequences.”<sup>175</sup>

The Commission has adopted a similarly flexible approach – general rules subject to case-by-case examination – in a number of other contexts, including many areas with both competitive and First Amendment implications. For example:

- Mobile wireless roaming (“Upon a *reasonable* request, it shall be the duty of each host carrier . . . to provide automatic roaming to any technologically compatible home carrier, outside of the requesting home carrier’s home market, on *reasonable and nondiscriminatory* terms and conditions.”);<sup>176</sup>
- Customer proprietary network information (“CPNI”) (“Telecommunications carriers must take *reasonable* measures to discover and protect against attempts to gain unauthorized access to CPNI.”);<sup>177</sup> and
- Reasonable access to broadcast time for candidates to Federal office (“Section 312(a)(7) of the Communications Act provides that the Commission may revoke any station license or construction permit for willful or repeated failure to allow *reasonable access* to, or to permit purchase of, *reasonable amounts* of time for the use of a broadcasting station by a legally qualified candidate for Federal elective office on behalf of his candidacy.”).<sup>178</sup>

Second, the Commission should consider a safe harbor for network management practices that conform to standards and practices promulgated by SDOs like the IETF (described

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<sup>174</sup> *Id.* ¶ 134.

<sup>175</sup> *Google-Verizon Wireless Joint Statement, supra* note 26.

<sup>176</sup> 47 C.F.R. § 20.12(d) (emphasis added).

<sup>177</sup> *Id.* § 64.2010(a) (emphasis added).

<sup>178</sup> *Id.* § 73.1944(a) (emphasis added).

in more detail below). Although the *NPRM* notes that “[p]roviders would not be required to seek a declaratory ruling from the Commission before a practice is actually deployed,” it expressly states that “individual adjudications will principally involve resolution of complaints about broadband [ISPs’] specific practices.”<sup>179</sup> In effect, broadband ISPs would be free to deploy network management practices without seeking prior Commission approval, but would then potentially be subject to second-guessing by any individual or entity that files a complaint about that practice. Particularly if the Commission were to adopt a level of scrutiny in any way resembling the strict scrutiny standard imposed on Comcast in the *Comcast Network Management Order*,<sup>180</sup> this approach would significantly constrain the flexibility of network operators to respond to operational necessities.

A “safe harbor” approach, on the other hand, would provide guidance to broadband ISPs, as well as recognize the important role that non-governmental bodies have in the management of the Internet. Global, transparent standards-setting bodies, like the IETF, are the best place to discuss the technical aspects of network management.<sup>181</sup>

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<sup>179</sup> *NPRM* ¶ 134.

<sup>180</sup> See *In re Formal Complaint of Free Press and Public Knowledge Against Comcast Corporation for Secretly Degrading Peer-to-Peer Applications; Broadband Industry Practices*, Memorandum Opinion & Order, 23 FCC Rcd. 13028 ¶ 47 (2008) (“*Comcast Network Management Order*”). In that regard, we note approvingly that the *NPRM* recognizes that the standard imposed in that case was “unnecessarily restrictive.” *NPRM* ¶ 137. However, in light of calls for even more strict scrutiny, see Letter from Jack Balkin et al. to Julius Genachowski, Chairman, FCC (Nov. 2, 2009), available at <http://voices.washingtonpost.com/posttech/NetN%20NPRM%20FCC%20professor%20letter.pdf>, it is important for the Commission to keep in mind that imposing any kind of strict scrutiny standard on network management practices will unnecessarily hinder broadband ISPs’ ability to respond to consumer demands and changing conditions, regardless of when in the process the Commission scrutinizes the broadband ISPs’ decision.

<sup>181</sup> See *NPRM* at 96-97 (Statement of Commissioner Robert McDowell) (“For example, the Internet Society (ISOC), an umbrella organization founded in 1992, is home to the Internet Engineering Task Force (IETF) that develops technical standards for the Internet. It is a non profit corporation with a board of trustees consisting of, and funded by, individuals and organizations in the Internet community virtually free from government influence. . . . By creating flat Internet governance mechanisms that collaboratively work from the ‘bottom-up,’ rather than relying  
(footnote continued...)”)

The IETF is the principal body engaged in the development of new Internet standards.<sup>182</sup> It is “the *premier standards body for the Internet*”<sup>183</sup> – an open, international community of volunteer network designers, operators, vendors, and researchers,<sup>184</sup> the stated mission of which is to “make the Internet work better by producing high quality, relevant technical documents that influence the way people design, use, and manage the Internet.”<sup>185</sup> The IETF has no formal membership,<sup>186</sup> and no direct corporate representation.<sup>187</sup> Rather, its funding and support are provided by the Internet Society, itself an international, non-profit organization dedicated to fostering the continued growth and development of the Internet.<sup>188</sup> This open structure encourages a standards-setting process that focuses on improving the Internet experience through open Internet standards, interoperability, global Internet security and scalability, and other things important to perpetuate a vibrant and open Internet, rather than protecting parochial industry or national interests, or endorsing specific companies. In addition, the transparency of the process

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(...footnote continued)

on a government-mandated ‘top-down’ model, the Internet is better able to flourish as an entity that promotes freedom at all levels.”).

<sup>182</sup> IETF, *The Tao of IETF: A Novice’s Guide to the Internet Engineering Task Force* § 3 (Nov. 30, 2009), available at <http://www.ietf.org/tao.html>.

<sup>183</sup> Ethan Zuckerman & Andrew McLaughlin, *Introduction to Internet Architecture and Institutions* (August 2003) (emphasis added), available at <http://cyber.law.harvard.edu/digitaldemocracy/internetarchitecture.html>.

<sup>184</sup> IETF, *About the IETF*, <http://www.ietf.org/about/> (last visited Jan. 14, 2010).

<sup>185</sup> IETF, *Mission Statement*, <http://www.ietf.org/about/mission.html> (last visited Jan. 14, 2010).

<sup>186</sup> *The Tao of IETF*, *supra* note 182, § 3.

<sup>187</sup> See Emmanuel Baccelli et al., *The Internet Engineering Task Force and the Future of the Internet*, ERCIM News, Apr. 2009, at 20, available at <http://ercim-news.ercim.org/images/stories/EN77/EN77-web.pdf>; see also Carolyn Duffy Marsan, *IETF Hums Along at 20*, Network World, Jan. 16, 2006, available at <http://www.networkworld.com/news/2006/011606widernetietf.html> (“Unlike other standards-setting bodies . . . the IETF has individual rather than corporate or government participants. Anyone can propose a protocol to the IETF, but the protocol must achieve rough consensus from the group and have working prototypes before it can be approved as a standard.”).

<sup>188</sup> See *The Tao of IETF*, *supra* note 182, § 3.2.1.

ensures that any and all interested parties can follow and participate in the development of standards.<sup>189</sup>

The IETF performs its work through a transparent, careful, deliberative process.<sup>190</sup> Prior to adopting any standards,<sup>191</sup> best current practices, experimental drafts, or informational drafts as IETF Requests for Comment,<sup>192</sup> one of the IETF's several topic-specific working groups will publish draft specifications to be reviewed and independently considered and evaluated by participants.<sup>193</sup> The proposed documents are elevated to IETF RFC status only after an intensive, multi-stage review process.<sup>194</sup> This is precisely the kind of organization and process to which former Commissioner Adelstein was referring to when he noted that, “[t]o the extent that engineers can work out these issues among themselves, it obviates the need for Commission action.”<sup>195</sup>

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<sup>189</sup> See Marsan, *supra* note 187. As Harald Alvestrand, former chairman of the IETF, noted, “The biggest strength of the IETF is its openness.” *Id.*

<sup>190</sup> Scott Bradner, *The Internet Engineering Task Force*, Open Sources: Voices from the Open Source Revolution (1999), available at <http://linuxjunkies.org/articles/bradner.pdf> (“IETF working groups created the routing, management, and transport standards without which the Internet would not exist. IETF working groups have defined the security standards that will help secure the Internet, the quality of service standards that will make the Internet a more predictable environment, and the standard for the next generation of the Internet protocol itself.”).

<sup>191</sup> An Internet standard is generally a specification that “is stable and well-understood, is technically competent, has multiple, independent, and interoperable implementations with substantial operational experience, enjoys significant public support, and is recognizably useful in some or all parts of the Internet.” S. Bradner, IETF, *The Internet Standards Process – Revision 3*, § 6 (Oct. 1996), at <http://tools.ietf.org/html/rfc2026>.

<sup>192</sup> These are commonly known as an RFC, such as RFC 1, which can be found at <http://tools.ietf.org/html/rfc1>.

<sup>193</sup> Bradner, *supra* note 191, § 6; Baccelli et al., *supra* note 187. These working groups are overseen by the Internet Engineering Steering Group (“IESG”), which is responsible for technical management of IETF activities and the Internet standards process. *The Tao of IETF*, *supra* note 182, § 3.2.2.

<sup>194</sup> Bradner, *supra* note 191, § 6

<sup>195</sup> *Comcast Network Management Order* at 13082 (Separate Statement of Commissioner Jonathan S. Adelstein).

The indispensable role played by the IETF in the development of the modern Internet is widely acknowledged.<sup>196</sup> The IETF has been responsible for many of the key standards that govern the Internet, including the Domain Name System (“DNS”) that has been instrumental to the growth of the World Wide Web, and the Simple Mail Transfer Protocol (SMTP) standard for e-mail.<sup>197</sup> The Commission should take formal notice of the IETF process, and should accord substantial deference to standards or practices resulting from the very open, consensus-based processes used by the IETF and other, similar SDOs. Providing for a safe harbor is the best way to do that.

Third, the Commission should consider a rebuttable presumption that practices consistent with “best practices” promulgated and publicized by trade associations (such as NCTA, USTelecom, or CTIA), industry consortia or working groups (such as CableLabs or the Messaging Anti-Abuse Working Group (“MAAWG”)),<sup>198</sup> or a Commission-sanctioned advisory committee (modeled on the Commission’s Communications Security, Reliability, and Interoperability Council (“CSRIC”)) are reasonable. These organizations can serve a valuable

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<sup>196</sup> “[S]tandards developed by the IETF and published as RFCs tend to be complied with because they are of high quality, are timely, widely supported, and represent a high level of technical consensus amongst a broad group of experts and users.” Jeremy Malcolm, *The Space Law Analogy to Internet Governance*, 17 J.L. Info. & Sci. 1, 6 (2006) (discussing how the Internet’s technical standards are not mandated by law, in part, because of the success of the voluntary standards developed by IETF); Stephen M. Ryan, Raymond A. Plzak; and John Curran, *Legal and Policy Aspects of Internet Number Resources*, 24 Santa Clara Computer & High Tech. L.J. 335, 340 (2007-08) (“The IETF is a large, open international community of network designers, operators, vendors, and researchers who define the protocols that ensure the smooth operation of the Internet.”); Douglas A. Hass, *The Never-Was-Neutral Net and Why Informed End Users Can End the Net Neutrality Debates*, 22 Berkeley Tech. L.J. 1565, 1587 (2007) (“The IETF has continued to innovate and improve the ability to control access from end-to-end on a network, maintaining multiple active working groups and creating dozens of refined standards for tiered network access.”).

<sup>197</sup> See Carolyn Duffy Marsan, *Internet Society Invests in W3C*, Network World, Dec. 11, 2009, available at <http://www.networkworld.com/news/2009/121009-internet-society-w3c.html?hpg1=bn>.

<sup>198</sup> Messaging Anti-Abuse Working Group, *Home*, at <http://www.maawg.org/home> (last visited Jan. 14, 2010) (“The Messaging Anti-Abuse Working Group is a global organization focusing on preserving electronic messaging from online exploits and abuse with the goal of enhancing user trust and confidence, while ensuring the deliverability of legitimate messages.”).

role in gathering the best technical and operational ideas and practices from industry participants. Organizations such as CableLabs already serve as a repository of information and learning about how to best utilize existing infrastructure to deliver the services that consumers demand, and they are constantly innovating through the adoption and promulgation of new specifications for technologies (such as the highly successful and widely adopted DOCSIS standards).

The Commission might also consider establishing an Open Internet Advisory Committee (“OIAC”) that could advise the Chairman and Commissioners on technical issues related to the Internet, as well as publish, from time to time, “best practices” that, if followed, would establish a rebuttable presumption in favor of the particular practice. Like CSRIC, the Advisory Committee could be composed of members of the Internet community – including broadband ISPs large and small; application and service providers; public safety representatives; representatives of local and state governments and other federal government agencies (like the FTC, Department of Justice, Department of Commerce, etc.); and representatives of end users.<sup>199</sup> To ensure fairness, in creating such a committee, committee membership should be “fairly balanced in terms of the points of view represented and the functions to be performed,”<sup>200</sup> ensuring that differing viewpoints are represented to provide a foundation for developing advice and recommendations that are fair and comprehensive.<sup>201</sup> Involving all these parties, ensuring that the OIAC is populated with technologists and engineers with real-world network

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<sup>199</sup> See, e.g., Pub. Safety & Homeland Sec. Bureau, *Communications Security, Reliability and Interoperability Council (CSRIC) Members*, available at <http://www.fcc.gov/pshs/advisory/csric/members.html> (last visited Jan. 9, 2010). Including representatives from the other agencies could promote greater coordination of policy among the agencies and regulatory clarity for the private sector.

<sup>200</sup> Federal Advisory Committee Act, § 5, Pub. L. No. 92-463, 86 Stat. 770 (1972) (codified as an appendix to 5 U.S.C.).

<sup>201</sup> See U.S. Gen. Servs. Admin., *The Federal Advisory Committee Act (FACA) Brochure*, at [http://www.gsa.gov/Portal/gsa/ep/contentView.do?contentType=GSA\\_BASIC&contentId=11869](http://www.gsa.gov/Portal/gsa/ep/contentView.do?contentType=GSA_BASIC&contentId=11869).

management experience, and providing for openness and transparency, could help foster legitimacy in the eyes of the entire Internet community.

The OIAC could focus on collecting information from around the country and around the world, detailing best practices for broadband ISPs and Internet application and service providers, as well as ways for various members of the Internet community to collaborate to address challenges and meet consumer demands.<sup>202</sup> For example, part of its mission could be to keep the Commission abreast of developments at global standards-setting bodies such as the IETF. The OIAC could also be called upon to offer the Commission recommendations on particular technical issues. In this way, it could serve as a follow-on to the Technical Advisory Process that the Commission established as part of this proceeding.<sup>203</sup>

Finally, the Commission should consider a presumption that any practice demonstrably designed to manage temporary traffic congestion, or to combat spam, “malware” and denial of service attacks, or other threats known and yet to emerge, is reasonable.<sup>204</sup> For example, in 2009 Comcast launched its “Constant Guard” program that notifies Comcast customers when the Comcast network has detected activity that is indicative of a user’s computer being infected with a bot or a virus, and then offers the user assistance in removing the bot or virus.<sup>205</sup> Because this

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<sup>202</sup> See *Charter of the FCC’s Communications Security, Reliability, and Interoperability Council*, [http://www.fcc.gov/pshs/docs/advisory/csric/CSRC\\_charter\\_03-19-2009.pdf](http://www.fcc.gov/pshs/docs/advisory/csric/CSRC_charter_03-19-2009.pdf) (last visited Dec. 22, 2009).

<sup>203</sup> *NPRM* ¶ 177.

<sup>204</sup> That these issues are legitimate matters for network management is beyond dispute. See, e.g., *Google-Verizon Wireless Joint Statement*, *supra* note 26. Likewise, the *NPRM* recognized that “it appears reasonable for a Broadband [ISP] to refuse to transmit copyrighted material if the transfer of that material would violate applicable laws,” as well as blocking “any traffic that a particular user has requested be blocked.” *NPRM* ¶¶ 138-139.

<sup>205</sup> Press Release, Comcast Corp., *Comcast Unveils Comprehensive “Constant Guard” Internet Security Program* (Oct. 8, 2009), available at <http://www.comcast.com/About/PressRelease/PressReleaseDetail.ashx?prid=926>. For more information about Constant Guard, see Comcast’s Constant Guard page at <http://security.comcast.net/constantguard/>.

practice is clearly designed to redress and prevent the spread of malware, it should be presumed reasonable. Such a presumption is consistent with the *NPRM*'s acknowledgment that the standard of review imposed in the *Comcast Network Management Order* was “unnecessarily restrictive.”<sup>206</sup>

For the “reasonable network management” exception to work, the threshold for reasonableness must be one that allows network operators freedom to experiment with different technologies, techniques, and practices, and that allows engineers to take actions in good faith in response to rapidly changing network conditions. Establishing a reasonableness presumption for practices designed to address issues that the Commission recognizes as legitimate concerns allows network operators that flexibility, while still allowing the presumption to be rebutted by providing specific evidence of why it is unreasonable and anticompetitive.

To that end, the Commission, if it adopts rules in this area, should adopt the following definition for reasonable network management:

**8.3** *Reasonable Network Management.* *Reasonable network management practices consist of:*

*(a) Practices designed to address (i) network congestion or service quality concerns, (ii) traffic that is unwanted by users or otherwise harmful, (iii) the transfer of unlawful content, or (iv) the unlawful transfer of content. Any practice designed to address these issues shall presumptively be considered reasonable network management, unless the complainant meets the burden of showing that the practice is unreasonable and anticompetitive.*

*(b) Practices standardized or otherwise recognized as best current practices by international standards development organizations. The Commission shall annually release a list of international standards development organizations, the standards or best practices of which will be considered per se reasonable network management. Such list shall consist at least of the Internet Engineering Task Force, and any other bodies so designated by the Office of*

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<sup>206</sup> *NPRM* ¶ 137.

*Engineering and Technology.*

*(c) Practices adopted and publicized as “best practices” by the Open Internet Advisory Committee, trade associations, and industry consortia and working groups. Any practice that comports with the “best practices” promulgated by the Open Internet Advisory Committee, trade associations, or industry consortia or working groups shall presumptively be considered reasonable, unless the complainant shows by a preponderance of the evidence that such practice is unreasonable and anticompetitive.*

**V. MANAGED SERVICES WILL PROMOTE INNOVATION, INVESTMENT, AND CONSUMER WELFARE, AND SHOULD BE DEEMED OUTSIDE THE SCOPE OF REGULATIONS PROPOSED IN THE NPRM.**

The *NPRM* asks a number of questions about “managed” or “specialized” services (collectively “managed services”), including “what functions such managed or specialized services might fulfill,” “what policies should apply to [such] services, if any, in light of the Commission’s statutory mandate and the goals of this rulemaking,” and “whether and, if so, how the Commission should address [such] services in order to allow providers to develop new and innovative technologies and business models and to otherwise further the goals of innovation, investment, competition, and consumer choice, while safeguarding the open Internet.”<sup>207</sup> As the *NPRM* recognizes, the development and growth of managed services can offer numerous public interest benefits, from greater competition in the voice and video marketplaces to increased deployment of broadband facilities.<sup>208</sup> Additionally, as NTIA and RUS recognized in the Notice of Funds Availability, use of broadband networks to deliver managed services can help further

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<sup>207</sup> *NPRM* ¶¶ 148-153.

<sup>208</sup> *Id.* ¶ 148.

the national purposes outlined in the Recovery Act, such as through telemedicine, public safety, and distance learning services.<sup>209</sup>

The Commission should refrain from prematurely imposing new regulations on managed services. In particular, the Commission should *not* subject managed services to any open Internet rules it may adopt in this proceeding. Managed services are distinct from the open broadband Internet services that broadband ISPs offer today, and raise different policy questions. Given that this is a brand new, very loosely defined regulatory concept, and particularly in light of the likelihood that the ability to offer managed services will be important to continued investment and innovation in broadband networks, applications, and services, such regulatory restraint is the most prudent course.

**A. The Commission Should Adopt a Broad, High-Level Definition of Managed Services.**

The Commission has not previously attempted to define what it means by “managed services” or explained the significance of the term from a legal or regulatory standpoint.<sup>210</sup> The *NPRM* describes managed services as “Internet-Protocol-based offerings . . . , often provided over the same networks used for broadband Internet access service, *that have not been classified by the Commission.*”<sup>211</sup>

First, by this definition, those services that *have previously been classified* by the Commission, or by statute, are properly *not* “managed services” as that term is used in the instant

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<sup>209</sup> Broadband Initiatives Program; Broadband Technology Opportunities Program, 74 Fed. Reg. 33104, 33111 (July 9, 2009).

<sup>210</sup> See *NPRM* ¶ 151 (seeking comment on how to define these services).

<sup>211</sup> *Id.* ¶ 148 (emphasis added).

*NPRM*.<sup>212</sup> Services such as “cable services” and “telecommunications services” already have been defined and regulated under provisions of the Communications Act and Commission precedent; thus, any service so regulated would not come within the new “managed services” rubric the Commission seeks to create here.<sup>213</sup> By recognizing this, the Commission acknowledges that the “mixed use” of broadband networks – to provide information, cable, telecom, and now managed services – has played, and will continue to play, a critical role in building the business case for deploying world-class networks capable of providing state-of-the-art broadband Internet services.<sup>214</sup>

Second, the *NPRM* tentatively concludes that it intends for “managed services” to be “Internet Protocol-based” (“IP-based”) services.<sup>215</sup> This would make the use of IP technology a “necessary” condition for inclusion. However, it should not be a “sufficient” condition – in other words, the mere use of IP should not sweep a service into the “managed service” definition. For example, there are existing legacy voice and cable services (most of which are already defined and classified by the Communications Act and Commission rules and policies) that utilize IP technologies in varying degrees, and it is likely that these legacy services will transition completely to IP over time to take advantage of scale economies, enable greater customization by users, and other benefits. When a service is offered pursuant to existing regulations governed

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<sup>212</sup> Essentially, managed services appear to be a subset of information services that are distinct from other services that already have been classified by statute or by the Commission.

<sup>213</sup> For example, traditional voice services have been classified as telecommunications services and governed by Title II of the Communications Act. *See, e.g.*, 47 U.S.C. §§ 153(43)-(48). Likewise, cable services are classified as such and governed by Title VI of the Communications Act and the Commission’s rules and regulations promulgated thereunder. *See* 47 U.S.C. § 522(6).

<sup>214</sup> *Cf. NPRM* ¶¶ 148-49. An obvious example: but for the ability of cable operators to offer “cable service,” there would have been no business case for the risky and massive investments they have made in providing broadband Internet services.

<sup>215</sup> *NPRM* ¶ 148.

by the Communications Act, it should remain outside the definition of “managed services,” whether it uses IP in whole or in part for delivery. The providers of these services need regulatory certainty and should not be discouraged by uncertainty and potential new regulations from transitioning legacy services to IP technologies, which can bring significant cost savings and innovation to better meet consumer needs and desires.

This view is reinforced by the fact that, as a legal matter, the relevant definitions in the Communications Act are generally functional, not technological.<sup>216</sup> For example, “cable services” are regulated under Title VI and there is nothing in the definition of “cable services” suggesting that providers using different underlying technologies – whether traditional QAM-based cable services like Comcast’s, IP-based cable services like AT&T’s U-Verse, or mixed QAM/IP cable services like Verizon’s FiOS – to provide similar services would result in these services falling outside of Title VI.<sup>217</sup>

Finally, the *NPRM* concludes that managed services are “often provided over the same *networks* used” to provide broadband Internet service.<sup>218</sup> This characterization is overbroad because many companies that build broadband networks – both wireline and wireless – provide multiple services on the same *physical* facilities that they use to provide broadband Internet service. Rather than focusing on shared networks, the Commission’s definition of “managed services” should apply to broadband services that receive “enhanced quality of service.” As the

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<sup>216</sup> See, e.g., 47 U.S.C. § 522(6) (defining cable services).

<sup>217</sup> Simply because traditional cable video services are starting to be transmitted in IP does not mean the Commission suddenly has authority to define them as a new service subject to regulation outside Title VI – or to exempt them from the regulations that apply under Title VI. See, e.g., *Office of Consumer Counsel v. S. New England Tel. Co.*, 515 F. Supp. 2d 269 (D. Conn. 2007) (concluding that AT&T’s U-verse service does constitute a “cable service” within the meaning of the Cable Act); Ex Parte Letter of Neal Goldberg, NCTA, to Marlene Dortch, FCC, WC Docket No. 04-36 (Nov. 1, 2005).

<sup>218</sup> *NPRM* ¶ 148 (emphasis added).

*NPRM* notes, “the record in our National Broadband Plan proceeding includes discussion of potential future offerings such as specialized telemedicine, smart grid, or eLearning applications that *may require or benefit* from enhanced quality of service rather than traditional best-effort Internet delivery.”<sup>219</sup> Enhanced quality of service should be a necessary prerequisite for considering any particular service a managed service. Services that are provided on a “best efforts” basis are simply Internet services subject to whatever policies or regulations the Commission imposes on the open Internet.

**B. Managed Services May Have Profound Benefits for Consumers, and the Commission Should Not Prematurely Regulate Such Nascent Services.**

As the Commission has found time and again, there are significant potential benefits for consumers – and the public interest – from leveraging IP technology to deliver new and innovative services.<sup>220</sup> Today, the potential benefits of such services are even more clear. The record in the National Broadband Plan proceeding is replete with examples of services that could be provided over broadband networks.<sup>221</sup> Telemedicine services, smart grid services, distance

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<sup>219</sup> *Id.* ¶ 150 (emphasis added).

<sup>220</sup> *IP-Enabled Services NPRM* ¶¶ 1, 5. The record in that proceeding provides substantial data and evidence supporting these conclusions. *See, e.g.*, AT&T Comments, WC Docket No. 04-36, at 1 (May 28, 2004) (“Existing [VoIP] services already offer consumers capabilities that far exceed those of traditional phone service . . . .”); The VON Coalition Comments, WC Docket No. 04-36, at 3-5 (May 28, 2004) (detailing a myriad of innovative voice capabilities); Vonage Holdings Corp. Comments, WC Docket No. 04-36, at 36, (May 28, 2004) (describing consumer enthusiasm for IP-enabled services and linking that to broadband growth); Comcast Corp. Reply Comments, WC Docket No. 04-36, at 2-3 (July 14, 2004) (saying that it is now “crystal clear” that IP will enable so much more than just an upgrade from the POTS system, and detailing various innovative offerings to consumers).

<sup>221</sup> *See, e.g.*, Verizon Comments, GN Docket No. 09-51 (NBP PN#2), at 1-2 (Oct. 2, 2009) (discussing the potential for commercial broadband networks to implement and benefit from smart grid technology); Qualcomm Comments, GN Docket No. 09-51 (NBP PN #2), at ii-iii (Oct. 2, 2009) (detailing a plan to develop chipsets for smart grid application that can communicate using both satellite-based and terrestrial mobile broadband); AT&T Comments, GN Docket No. 09-51 (NBP #3), at 6-7 (Sept. 22, 2009) (discussing its efforts to enable greater telework opportunities for its employees); Telcordia Comments, GN Docket No. 09-51 (NBP PN #8), at 5-6 (Nov. 12, 2009) (filed by Adam t. Drobot) (describing how mobile wireless broadband can improve effectiveness of public safety systems); American Telemedicine Ass’n Comments, GN Docket No. 09-51 (NBP PN #17) (Dec. 3, 2009) (discussing various applications enabled by telemedicine); GE Healthcare Comments, GN Docket No. 09-51 (NBP  
(footnote continued...))

learning services, public safety services, and other specialized services would directly drive the realization of the national purposes offset forth in the Recovery Act, as well as help drive the adoption of broadband Internet services. For example, seniors currently represent a disproportionately high segment of non-adopters of broadband, and the reason most often cited is the lack of relevance of broadband to their lives. By promoting telemedicine services, the FCC can help to improve the relevance of broadband to many seniors.<sup>222</sup>

Moreover, as the *NPRM* implicitly recognizes, managed services may provide additional revenue streams that can drive broadband investment, improve the business case for deployment to currently unserved areas, and accelerate investment in next-generation networks.<sup>223</sup> The National Broadband Plan team has noted that, depending on the technology used, it could take up to \$350 billion to deploy next-generation broadband networks to every corner of the country, and that the bulk of that investment is going to have to come from the private sector. Improving the

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(...footnote continued)

PN #17), at 6 (Dec. 4, 2009) (describing the “application value” in terms of healthcare cost reduction and improving health outcomes).

<sup>222</sup> See, e.g., Charles M. Davidson & Michael J. Santorelli, Advanced Comm. L & Pol’y Inst., N.Y. Law School, *The Impact of Broadband on Senior Citizens* 23, 25 (Dec. 2008), available at <http://www.uschamber.com/assets/env/broadbandseniors.pdf> (“It has been estimated that broadband-based health resources can save some \$927 billion in health care costs for seniors and people with disabilities. . . . Acknowledging and promoting these successes is essential to attracting more seniors to broadband.”). Comcast and its cable partners continue to promote widespread adoption of broadband, including adoption among underserved communities. See *Comcast and One Economy Launch Comcast Digital Connectors Program*, PRNewswire, Nov. 30, 2009, available at <http://www.prnewswire.com/news-releases/comcast-and-one-economy-launch-comcast-digital-connectors-program-78131737.html> (describing Comcast’s and One Economy’s Digital Connectors Program promoting digital literacy and broadband adoption); Press Release, Nat’l Cable Telecomm. Ass’n, *NCTA Proposes Adoption Plus (A+): A National Public-Private Partnership To Bring Broadband to Millions of Middle School Students in Low-Income Families* (Dec. 1, 2009), available at <http://www.ncta.com/ReleaseType/MediaRelease/NCTA-Proposes-Adoption-Plus-Program.aspx>.

<sup>223</sup> *NPRM* ¶ 148 (“The existence of these services may provide consumer benefits . . . and may lead to increased deployment of broadband networks.”).

business case for these investments should be a policy imperative of the Commission's actions in this and other broadband-related proceedings.<sup>224</sup>

In light of the potential benefits of managed services and the fact that the marketplace for these services (as well as the services themselves) is nascent, the Commission should pursue a “do no harm” policy approach. The Commission should maintain the flexibility to fashion policies appropriate to each new “managed service” as it emerges,<sup>225</sup> and it should refrain from imposing regulations unless and until policy considerations and facts and evidence from the marketplace dictate that such regulations may be necessary. For example, “managed services” may include both smart-grid and telemedicine services, but, as a policy matter, it may be prudent to (1) refrain from regulating those services until there is evidence that dictates such regulations are necessary, and (2) then subject each to somewhat different regulatory approaches – the services may be subject to different marketplace conditions, different consumer privacy requirements, etc. Such an approach would be consistent with law,<sup>226</sup> and with the policies adopted in Computer II that were enshrined in the 1996 Act.<sup>227</sup> This policy approach has been

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<sup>224</sup> The National Broadband Plan team identified in its December presentation pole attachments and access to rights-of-way as potential costs that worsen the business case for deploying broadband. National Broadband Plan Policy Framework, Presentation, FCC Open Meeting 14 (Dec. 16, 2009), at [http://hraunfoss.fcc.gov/edocs\\_public/attachmatch/DOC-295259A1.pdf](http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-295259A1.pdf). It would be self-defeating for the Commission to seek to reduce costs of deploying broadband networks on the one hand, while, on the other, reducing revenue opportunities for those who deploy (or who may deploy in the future) broadband networks.

<sup>225</sup> *Computer II Final Decision* ¶ 102 (“Consistent with this principle, we seek to remove unnecessary and inappropriate FCC regulation as an inhibiting barrier to the various combinations and permutations of enhanced services that may be offered over the nationwide telecommunications network.”).

<sup>226</sup> *See supra* Section III (discussing the requirements that the Commission must satisfy for use of its ancillary authority).

<sup>227</sup> *Computer II Final Decision* ¶ 115 (“Moreover, we are convinced that such a regulatory scheme [not regulating enhanced services] offers the greatest potential for efficient utilization and full exploitation of the interstate telecommunications network.”).

instrumental in the Internet's success, and is entirely appropriate in light of the significant public interest benefits that managed services may deliver.

Finally, whatever the Commission elects to do with regard to managed services, it is important to recognize that there are laws and policies to guard against anticompetitive or anti-consumer conduct, most notably those empowering the FTC to take action when appropriate.

## VI. CONCLUSION

The Commission seems poised to issue Internet regulations for the first time. If it does so, it must carefully consider the unique – indeed unprecedented – attributes of the network of networks it seeks to regulate. It must clearly establish that it has the authority, and that the record shows a compelling need, to regulate. Comcast respectfully requests that the agency not proceed unless it has done so. If the Commission chooses to move forward with rules, it should adopt the refinements and modifications discussed herein.

Respectfully submitted,

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**APPENDIX**  
**PROPOSED RULES**

**8.3 Definitions.**

*Internet. The international computer network of both Federal and non-Federal interoperable packet switched data networks. (See 47 U.S.C. § 230(f)(1)).*

*Broadband Internet Service Provider (“Broadband ISP”). A broadband ISP is a facilities-based provider to subscribers of broadband Internet access service, as well as applications or services that can be used with broadband Internet access service.*

*Internet Application or Service Provider. Any entity that provides any application or service over the Internet for the general public to access or use.*

*Reasonable Network Management. Reasonable network management practices consist of:*

*(a) Practices designed to address (i) network congestion or service quality concerns, (ii) traffic that is unwanted by users or otherwise harmful, (iii) the transfer of unlawful content, or (iv) the unlawful transfer of content. Any practice designed to address these issues shall presumptively be considered reasonable network management, unless the complainant meets the burden of showing that the practice is unreasonable and anticompetitive.*

*(b) Practices standardized or otherwise recognized as best current practices by international standards development organizations. The Commission shall annually release a list of international standards development organizations, the standards or best practices of which will be considered per se reasonable network management. Such list shall consist at least of the Internet Engineering Task Force, and any other bodies so designated by the Office of Engineering and Technology.*

*(c) Practices adopted and publicized as “best practices” by the Open Internet Advisory Committee, trade associations, and industry consortia and working groups. Any practice that comports with the “best practices” promulgated by the Open Internet Advisory Committee, trade associations, or industry consortia or working groups shall presumptively be considered reasonable, unless the complainant shows by a preponderance of the evidence that such practice is unreasonable and anticompetitive.*

**8.5 Content.** *Subject to reasonable network management, a broadband ISP or any Internet application or service provider may not prevent any user from sending or receiving the lawful Internet content of the user’s choice.*

- 8.7 Applications and Services.** *Subject to reasonable network management, a broadband ISP or any Internet application or service provider may not prevent any user from running the lawful applications or using the lawful services of the user's choice.*
- 8.9 Devices.** *Subject to reasonable network management, a broadband ISP or any Internet application or service provider may not prevent any user from connecting to and using the user's choice of lawful devices that do not harm the network.*
- 8.13 Nondiscrimination.** *Subject to reasonable network management, a broadband ISP or other Internet application or service provider may not engage in unreasonable and anticompetitive discrimination against any lawful Internet content, application, or service.*
- 8.15 Transparency.** *Subject to reasonable network management, broadband ISPs and Internet application and service providers must disclose such information about its service as is reasonably required for consumers to enjoy the protections specified in this part.*