

**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 CHARTER COMMUNICATIONS

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EXECUTIVE SUMMARY

The purpose of the proposed net neutrality rules is to “preserve the open Internet” whereby innovators and consumers at the edge do not require permission from network operators to deliver or receive services and content. The Notice acknowledges that Internet technologies have evolved substantially from an early “end-to-end” design to today’s modern network management practices that have expanded capacity and enabled new applications and services of huge benefit to consumers (*e.g.*, video, voice and telemedicine). What the Notice does not fully acknowledge is that today’s network management practices and associated business models emanating from the “core” of the network also evolved without the need for network operators to seek permission from the government or other third parties. The fact that this balance has succeeded with neither application providers at the edge nor network providers at the core needing the permission of the other to innovate is a testament to the effectiveness of existing market competition among broadband network providers and the intense public scrutiny directed at broadband provider practices in general.

Despite the Internet’s successful evolution under the lightest of government regulation, and the scant evidence of abuse by broadband network providers, the Commission expresses concern that today’s uncertain legal framework is dangerous to the Internet’s continued openness.¹ Chairman Genachowski explains that new rules are needed “given the potentially huge consequences of having the open Internet diminished.”² However, the Notice proposes to replace the current legal framework, with its virtually unqualified record of success, with an

¹ *Preserving the Open Internet; Broadband Internet Practices*, Notice of Proposed Rulemaking, 24 FCC Rcd. 13065, ¶ 6 (2009) (hereinafter “NPRM” or Notice”).

² *Id.* at 13153 (statement of Chairman Julius Genachowski).

untested and more uncertain legal framework that subjects fast changing network management practices and business models to the threat of collateral legal attack and second-guessing by third parties, including those with a financial interest in resisting change. Case-by-case review of allegedly abusive practices sounds fine in theory, but the reality is that micromanagement that subjects network providers to damages or enables particular interest groups to erect legal obstacles to evolving practices and business models is a sure recipe to freeze innovation in its tracks. Imagine if ILECs had been empowered to challenge cable VoIP as “discrimination.” The first successful facilities-based voice competitor, along with billions in consumer savings, would have been substantially delayed or snuffed out entirely in the face of such an uncertain legal landscape.

Charter’s experience is instructive given its vast rural footprint. Since 2000, Charter has invested over \$8 billion to rebuild its legacy analog plant and to deploy broadband, competitive voice and advanced video services to its largely rural subscriber base. Charter’s investment has helped to overcome the digital divide and to deliver cost savings to millions of rural consumers who now have a choice among voice services, including those offered by over-the-top providers. Nothing in the existing legal or market environment provides incentives for Charter to starve investment in its broadband plant to favor managed or specialized services over the traditional residential end-to-end network or to discriminate against online video content.

Given the success of the Internet under the existing regulatory structure, Charter is concerned that the greater danger to the Internet’s future lies in institutionalizing a regime where entrenched economic and other interests can use Commission processes (and potentially other forums) to inhibit the introduction of network management practices and business models that disturb the status quo. In light of the rapid pace of technological change and the deployment of

new Internet services unimagined just a decade ago, the Commission must resist the urge to enable such forces to disrupt the existing delicate balance between the edge and the core. The core of the Internet has thrived to the benefit of all by not having to seek permission from others to manage surging traffic and to experiment with new services. Yet, subjecting Charter and other providers to case-by-case review of such Internet practices and new services will impose burdens, costs and delays that will inevitably alter what has been a formula for success. To the extent that litigation, reporting and other new burdens are placed on Charter, its ability to continue to extend its broadband reach to rural communities will be adversely affected.

If the Commission feels compelled to follow this path, it is essential that the Notice's proposed "case-by-case" review be structured to minimize the inevitable chilling impact it will impose on innovation and investment. The proposed definition of "reasonable network management," including the essential inclusion of "other reasonable management network practices" to respect the rapid and unpredictable pace of technical change, will generate constant litigation, particularly by parties at the "edge" who prefer not to be faced with challenging new entrants enabled by creative management practices or business models. To minimize the burden of this process on broadband providers, the Commission should preempt and centralize authority over network management disputes and issues involving managed and specialized services. Class actions (and the risk of conflicting rulings and massive damages) should be expressly preempted. Complainants should have a heavy burden of proof and equitable relief should be limited to circumstances in which the defendant had no reasonable grounds to believe the network management technique was lawful. The Commission should retain the right to impose costs, including legal fees, on plaintiffs who abuse Commission processes or initiate frivolous

challenges. The continued right of the core to innovate without needing to seek permission must also be protected.

Any new rules should include broad exceptions for managed and specialized services to proactively encourage innovation and investment at the core without the threat and burden of legal entanglements. Reasonable network management disclosure guidelines that facilitate uniform industry standards and reduce uncertainty and litigation would be productive (such as the recently adopted Canadian disclosure rules), but the Commission should not adopt new reporting requirements that will impose additional burdens and costs on the industry.

Finally, the Commission should be fully aware that regulation of network management practices and managed services of broadband network providers (if such regulatory authority exists) will conflict with the First Amendment rights of such providers if they are not narrowly tailored to address real (not imagined) harms.

Chairman Genachowski is correct that

The full potential of the Internet cannot be unleashed without robust and healthy broadband networks, and broadband providers need room to experiment with new technologies and business models in order to earn a return on their investment and deploy high-speed broadband to all Americans.³

The Internet has developed dynamically, unpredictably and without regulatory intrusion into the unqualified success story that the Commission now seeks to protect. The Commission's proposed protection would substitute the current successful balance, where neither the edge nor the core must seek the other's permission to innovate, with an untested and uncertain legal framework that invites micromanagement and second-guessing of network providers' decisions. There is no evidence that this will improve the Internet and ample history to expect that it will not.

³ *Id.* at 13155.

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COMMENTS OF CHARTER COMMUNICATIONS

Charter Communications submits these comments in response to the captioned Notice of Proposed Rulemaking.

I. INTRODUCTION

Charter supports an “Open” Internet and the goal of preserving the free flow of lawful content over the Internet. The central issue is whether, at this stage of its evolution, new Federal Communications Commission (“Commission” or “FCC”) regulations, backed by enforcement penalties, are necessary (or instead counterproductive) to protect the Internet and to promote investment and the continued dynamic and beneficial innovation already seen over the past decade. The Internet’s stunning success continues today without regulatory intervention under circumstances where neither application providers and users at the network’s “edge” nor broadband service providers at the “core” have needed the permission of the other to innovate. Disturbing this balance by imposing a regime of legal jeopardy upon broadband providers by allowing application providers to second-guess rapidly changing network management practices

and business models will stifle network innovation and investment and undermine efforts to close the digital divide in rural areas.

Charter offers a unique voice in the ongoing debates because of its vast rural service footprint – more than half of the counties it serves are “majority rural” as defined by U.S. Census figures. Such rural areas are generally associated with lower broadband deployment and adoption rates than denser urban and suburban counties.⁴ Thus, Charter’s broadband deployment experience provides an important reference point for the Commission with regard to its interest in closing the digital divide to promote “employment, education, health care, and consumer welfare.”⁵

Despite the challenges associated with its rural service footprint and the economic turbulence of the last decade, Charter rebuilt its cable systems from analog systems below 550 MHz into advanced broadband networks providing digital cable, high-speed Internet – up to 60 Mbps – and facility-based voice competition. Charter alone has invested more than the entire broadband stimulus program, all while subject to fierce competition from both DBS and ILECs.

⁴ See, e.g., *Broadband Internet’s Value for Rural America*, at 29, U.S. Department of Agriculture, Economic Research Report No. 78 (Aug. 2009) (hereinafter “USDA Report”) (“The relative insensitivity of local income to patterns of broadband deployment may indicate that broadband providers perceive demand as being highly income inelastic. If so, cost of physical infrastructure would be the primary consideration in extending capacity into unserved or underserved areas...”); *id.* at 38 (“Broadband provision follows a geographical pattern strongly tied to population size and the urban-rural hierarchy.”); John Horrigan, *Home Broadband Adoption 2009*, Pew Internet & American Life Project (June 2009), at 14 (in April 2009, 46 percent of adults in rural areas subscribed to broadband compared to 63 percent nationally), available at <http://www.pewinternet.org/~media/Files/Reports/2009/Home-Broadband-Adoption-2009.pdf>; *Bringing Broadband to Rural America: Report On A Rural Broadband Strategy*, Acting Chairman Michael J. Copps, FCC, ¶ 15 (May 22, 2009) (“Rural communities have long been unserved or underserved by broadband technology, but the full implication of this divide has only emerged as the Internet has become less and less a novelty, and more and more a necessity.”), available at http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-291012A1.pdf.

⁵ NPRM ¶ 82. See also Executive Office of the President, National Economic Council, *Recovery Act Investments in Broadband: Leveraging Federal Dollars To Create Jobs and Connect America* (Dec. 2009), at 13 (“Broadband access can contribute to the economic development of rural areas, providing new connections to education and health care resources and access to new markets and business practices.”), available at <http://www.whitehouse.gov/sites/default/files/20091217-recovery-act-investments-broadband.pdf>; USDA Report at 38-39.

Charter deployed its current broadband network and is delivering advanced broadband services and capabilities to its rural footprint under the Commission's current Internet policies of its own accord and without requirements for specific rules and the chilling effect of enforcement penalties. The interests identified by the NPRM to close the digital divide in rural areas were pursued by Charter without the need for, or risks associated with, regulatory intervention. As Internet technologies and capabilities hurtle forward and unanticipated new uses of the Internet are revealed, new network management challenges and market opportunities will inevitably arise. Any FCC rules adopted at this time and in this context, however high level and well meaning, will be unable to anticipate such change and will result in unintended, counterproductive consequences. The current regulatory regime has worked and has allowed the Internet to evolve consistent with the public interest and there is no need for new rules at this time.

If the Commission opts to inject itself into the marketplace as proposed, it should revise the proposed rules in manner designed to achieve a more balanced playing field, allowing the core to continue innovating and investing without the risk that undue uncertainty or litigation will overwhelm the day-to-day management of dynamic networks as they are faced with unpredictable new technologies and services. The Commission can mitigate much potential harm if it preempts and centralizes litigation over the rules at the Commission, expressly bars class action lawsuits and adopts other procedural measures to protect innovation and investment in the core. Charter does not object to reasonable disclosure requirements regarding network management practices, which, if properly crafted, will inform users without overwhelming them and help to contain the wave of litigation that is sure to follow. Without such changes to the

proposed rules, network operators like Charter will face increased challenges and costs in deploying broadband in rural areas thereby exacerbating the digital divide.

The Notice anticipates that the proposed rules raise constitutional questions.⁶ In light of the judicially recognized rights of media distributors, the government's intrusion into network management decisions as well as other managed and specialized services raises significant First Amendment concerns. Any Commission regulation in this area must be narrowly tailored to address actual (not speculative) harms and cannot impose a greater than necessary burden on distributors' speech than necessary to achieve significant government interests.

There is no need for the Commission to adopt its proposed rules and disturb the delicate existing balance in the marketplace that allows the edge and the core to innovate and invest without seeking the permission of the other. Regardless of the imagined fears expressed in the Notice about maintaining the current course, far greater harm is likely to be caused by imposing an untested new regime and imposing an uncertain legal process on broadband providers. Vigilance over the entire Internet ecosystem by interested parties in the context of the competitive marketplace has been remarkably effective and has allowed the Internet to thrive.

II. NET NEUTRALITY RULES ARE UNNECESSARY

A. Competition Is Driving Investment and Innovation

Charter appreciates that the NPRM strives for a light touch that does not unnecessarily stunt Internet development.⁷ However, given the few issues that have arisen under the current policy and the uncertain impact new rules will have on continued Internet investment and

⁶ NPRM ¶¶ 75-78.

⁷ *Id.* ¶ 49 (“Given the evolution of the Internet and the broadband marketplace, we believe that high-level rules specifying impermissible practices will best promote an Internet environment of widespread innovation and light-handed regulation.”).

innovation, the Commission’s touch should be much lighter than that called for in the proposed rules. The NPRM expresses concern that despite the Commission’s efforts to preserve an open and innovative Internet, “some conduct is occurring in the marketplace that warrants closer attention and could call for . . . action”⁸ The Commission refers to two isolated incidents (one occurring in 2005 and the other in 2007), both of which involved challenged conduct that was resolved quickly and effectively.⁹ No additional conduct or incident is identified, including any that is now occurring in the marketplace. This is remarkable given the enormous volume of Internet traffic that is managed and transmitted by Internet service providers every day,¹⁰ and speaks to the effectiveness of current competitive market conditions and the intense scrutiny that regulatory agencies (including the FCC and the Federal Trade Commission) and the public devote to Internet service provider practices.

⁸ *Id.* ¶ 50.

⁹ *Id.* See also *Madison River Communications*, Order, 20 FCC Rcd. 4295 (2005) (Madison River engaged in port blocking of VoIP telephone calls. The matter was resolved in less than a month, as the Commission’s Letter of Inquiry was issued February 11, 2005, and a Consent Decree resolving the matter was issued March 3, 2005.); *Formal Complaint of Free Press and Public Knowledge Against Comcast Corporation for Secretly Degrading Peer-to-Peer Applications*, Memorandum Opinion and Order, 23 FCC Rcd. 13028 (2008) (hereinafter “Comcast Network Management Practices Order”), *appeal pending*, *Comcast Corp. v. FCC*, No. 08-1291 (D.C. Cir. oral argument held Jan. 8, 2010). While the Commission’s legal authority to enforce its 2005 Internet Principles is on appeal, that did not obstruct the rapid resolution of the network management conduct in issue. Well before the Commission acted on the petition challenging Comcast’s network management practice, Comcast responded to the concerns raised, coordinated with affected file sharing services (e.g., BitTorrent) and began the process of modifying its management practices for those services. See Letter from David L. Cohen to Chairman Kevin J. Martin et al., Mar. 27, 2008.

¹⁰ For example, analysts report that, *every day*, 247 billion emails are sent; 11 million personal photos, graphics and videos are uploaded to the popular online photo storage site photobucket.com; 43 million gigabytes of data are sent from mobile phones to other mobile phones (enough data to fill 9.2 billion DVDs); bloggers post 900,000 new articles; more than 65 million Facebook users access the website with mobile devices, 55 million Facebook users update their status; and Twitter users post over 27 million “tweets.” Sara Radicati & Masha Khmartseva, *Email Statistics Report 2009-2013*, Radicati Research Group, Inc., May, 2009, Executive Summary at 3, available at <http://www.radicati.com/wp/wp-content/uploads/2009/05/email-stats-report-exec-summary.pdf>; Press Release, Photobucket Corp., *Photobucket Now Available to Android Users* (Dec. 22, 2009), available at <http://www.prweb.com/releases/2009/12/prweb3378294.htm>; *A Day in the Internet*, Online Education, <http://onlineeducation.net/internet/> (last visited Dec. 30, 2009); *Statistics*, Facebook, <http://www.facebook.com/press/info.php?statistics> (last visited Jan. 1, 2010); Erick Shoenfeld, *Pingdom Says People Are Tweeting 27 Million Times A Day*, TechCrunch, Nov. 12, 2009, <http://www.techcrunch.com/2009/11/12/twitter-27-million-tweets-day-pingdo/>.

The record is overwhelming that the broad prophylactic rules proposed in the NPRM are unnecessary. Ten years ago “open access” advocates predicted that without mandated access to cable and ILEC facilities, competition and consumer choice would languish in the market for broadband Internet service. These predictions could not have been more wrong. The FCC’s regulatory self-restraint was rewarded by huge strides in network investment by MSOs and ILECs, intensified competition and an explosion of new services.

Today’s net neutrality advocates voice similar concerns that MSOs will starve Internet capability and discriminate against unaffiliated video applications in order to sustain pay television. However, Charter’s massive broadband network investment enabling over-the-top competition belies those concerns. Between 2000 and 2002 alone, Charter spent \$8 billion to upgrade the majority of its cable systems, an investment that has enabled and continuously improved the operation of the Internet. Charter’s Internet access speeds have increased dramatically to as high as 60 Mbps. Through ongoing efforts to convert analog video channels to digital and switched digital video technology, Charter is repurposing bandwidth to enable next generation DOCSIS 3.0 Internet services. These investments are intended to maximize the consumer experience for all Charter services (*e.g.*, Internet, video, voice) in the face of formidable marketplace competition. Recent data concerning demand for online video delivered by broadband providers shows that the Notice’s concerns regarding occurrences of anticompetitive marketplace activity are completely unsupported – “170.6 million U.S. residents watched almost 31 billion videos” in November 2009 “up from 146 million unique viewers and 12.7 billion videos” in November 2008.¹¹ Far from starving the Internet or discouraging online

¹¹ Juan Carlos Perez, *Study: Online Video Booms, but MySpace Viewers, Videos Drop*, PCWorld, Jan. 6, 2010, available at http://www.pcworld.com/businesscenter/article/186088/study_online_video_booms_but_myspace_viewers_videos_drop.html.

video, Charter is investing aggressively to make next generation broadband services a reality, including over the top competition.¹²

B. Network Management Is Essential to an Affordable and Functional Internet

Like all operators of complex communications networks, Charter must actively manage the communications over its network in order to deliver services effectively and efficiently to its customers. Every second of each day Charter broadband customers are creating millions of connections across the network, using hundreds of Gigabits per second in thousands of different ways to millions of destinations. Much like the function of Air Traffic Control, Charter ensures that it is able to route all traffic all the time with the expectation that sometimes traffic will be higher than others. Charter evaluates information such as patterns of use, congestion, latency and jitter to form management policies designed to provide the best customer experience. Decisions about traffic engineering and overall congestion are made in a manner that is agnostic to the type or destination of traffic being routed, and no determination is made regarding protocol, destination or application to facilitate network management.

Network management allows the Internet to function in the face of rapidly growing congestion from spectrum hungry applications, relentless attacks by malicious traffic (*i.e.*, spam, viruses, cyber attacks and other malware), and the transmission of unwanted and unlawful content. Charter, other MSOs and ILECs have invested heavily over the past decade deploying higher capacity networks to satisfy the dramatic growth in consumer broadband demand and to

¹² The cable television industry as a whole is following this trend. CableLabs estimates that cable modem data rates are doubling every 21 months and will increase tenfold every 6 years. Paul Liao, *Cable network operating and planning considerations*, Cable Television Laboratories, Inc., Dec. 8, 2009, at 14, presented at the Commission's December 8, 2009 Open Internet Workshop in Washington, D.C. (hereinafter "CableLabs Presentation"). The investments made by the cable industry, ILECs and other Internet service providers over the past decade should greatly reduce the Commission's concern that providers will "reduce or fail to increase the transmission capacity available for standard best-effort Internet access." NPRM ¶ 71.

enable ever increasing bandwidth-intensive applications.¹³ However, despite massive industry investment, the demand for broadband continues to outstrip supply. For example, “real time entertainment traffic in general (e.g., streaming audio and video, peercasting, place-shifting, and Flash video) increased its share of total broadband traffic to 26.6% in 2009 from 12.6% only a year earlier.”¹⁴ Global Internet traffic more than doubled from 2005 to 2007 and still is projected to increase six times between 2007 through 2012.¹⁵ Without network management tools, Internet service providers would only be able to accommodate *half* of this traffic on today’s networks.¹⁶ Reliance on increasing network capacity through new investment alone is unrealistic and impractical as it is estimated that, absent network management, continual network upgrades would “cost consumers about \$9.3 billion annually” to keep pace with current demand.¹⁷ Network management is essential to a functioning Internet, controlling consumer costs, and advancing the national goals of promoting broadband adoption and affordability. Network

¹³ See CableLabs Presentation at 15. See also John Horrigan, *Home Broadband Adoption 2006*, Pew Internet & American Life Project, May 28, 2006, at 1 (noting that consumers with home broadband connections grew from 60 million in March 2005 to 84 million in March 2006 – a leap of 40 percent), available at http://www.pewinternet.org/PPF/r/184/report_display.asp.

¹⁴ *2009 Global Broadband Phenomena, Research Report Executive Summary*, Sandvine, Oct. 2009, available at <http://www.sandvine.com/downloads/documents/2009%20Global%20Broadband%20Phenomena%20-%20Full%20Report.pdf>.

¹⁵ See Paul Sanchirico, *A Discussion with the FCC on the Open Internet*, Cisco Systems, Inc., Dec. 8, 2009, at 6, presented at the Commission’s December 8, 2009 Open Internet Workshop in Washington, D.C. (hereinafter “Cisco Presentation”). The average Internet connection today uses about 11.4 Gigabytes of traffic monthly. *Id.* at 8.

¹⁶ *Id.* at 17 (“[Quality of Service] delivers [greater than two times] Bandwidth Gain over Networks without [Quality of Service]”). Network management tools are essential throughout networks, including the core. A Cisco representative explains that the company would be unable to “sell a router without QoS capability.” *ISPs Can’t Build Way Out of Network Congestion, FCC Told*, Communications Daily, Dec. 9, 2009, at 2.

¹⁷ See Benjamin E. Hermalin & Michael L. Katz, *The Economics of Product-Line Restrictions With an Application to the Network Neutrality Debate* 28, AEI-Brookings Joint Center for Regulatory Studies, Working Paper 07-02, 2007, available at <http://www.reg-markets.org/publications/abstract.php?pid=1157>.

management tools are essential to Charter's deployment of broadband and other advanced services to its rural service footprint thereby helping to bridge the digital divide.¹⁸

The TCP/IP protocol may have worked adequately for a time. When the original "standard" algorithm for fairness was developed, the primary protocols in use were Telenet (remote login), FTP (File Transfer), and SMTP (electronic mail delivery), and routers were not optimized for handling any particular applications.¹⁹ This end-to-end design may have worked for email and bulletin boards, but it does not deal practically with many of today's networks, applications, or applications the future will inevitably bring. Innovations and capacity investment have enabled mass audiences to enjoy Internet web browsing, gaming, music and video streaming, voice and IP video, among other things, but these applications, which are critical tools to stimulate greater broadband adoption, were never envisioned when the end-to-end network was designed and do not work as consumers require under best-efforts service.

The congestion avoidance algorithms that the Internet community used to accept are not followed by all applications. Viruses, botnets, distributed denial of service attacks and P2P were designed to exploit shortfalls in TCP congestion and flow management algorithms. P2P file sharing and video streaming open more capacity flows and leave them open longer than other applications, working their way around TCP congestion and flow management algorithms.²⁰

Many of these applications have peak use at the same times. Moreover, it is estimated that just

¹⁸ See *A National Broadband Plan for Our Future*, Notice of Inquiry, 24 FCC Rcd. 4342 (2009); USDA Report at 15 ("Residents in rural areas have always faced higher costs for telecommunication services than those in urban areas and, at least for the foreseeable future, will continue to do so. . . . With fewer people in any geographic space, the per capita costs of providing telecommunication services rise. . . . Rural telecommunications service providers must spend more per customer for maintenance and repair crews than urban providers.").

¹⁹ NPRM ¶ 19.

²⁰ As Cisco observes, P2P is "often designed to consume all available bandwidth." Cisco Presentation at 4.

10 percent of broadband customers generate 60 percent of Internet traffic.²¹ When congestion occurs in a network, all traffic is impacted and without effective network management, broadband consumption by a small minority of high-bandwidth customers can degrade the service of the majority of low-bandwidth customers. Eliminating or constraining network management by providers is hardly “neutral” and simply constitutes another form of network management that allows certain applications to crowd out other applications (typically those relied on by the vast majority of Internet users).

Internet traffic associated with some services is more sensitive to the effects of congestion than other services. Common examples of applications that are extremely sensitive to jitter and latency caused by Internet congestion include VoIP, video streaming and telemedicine. Traditional end-to-end Internet system design is ill-suited to such services and various network management techniques must be employed to ensure that these applications can be utilized as consumers expect in the real world. Prioritization of such traffic is commonly used to ensure that the applications function as customers require. Where existing network management practices and prioritization techniques have proven inadequate to accommodate modern applications, parties have developed alternative approaches to serve consumers with the quality of service the market demands. Content Delivery Networks (CDNs) evolved as such a work around for applications dependent upon more reliable and speedy connections than best-efforts

²¹ *Id.* at 8 (one percent of users create 20 percent of traffic).

Internet generally can deliver.²² Some companies build data centers and servers connecting directly to Internet backbones to ensure rapid delivery of content.²³

To accommodate these and other unpredictable future requirements, network providers will need to make decisions in real time because the marketplace will demand the continuous provision of quality service.²⁴ Cable companies must manage network spectrum to meet consumer demand or customers will leave for competitors.²⁵ CDNs and collocation of data servers with backbone providers emerged due to prioritization shortcomings of the existing network. New solutions to emerging issues and customer expectations may come from technical bodies (*e.g.*, IETF) or network equipment vendors and new business models (*e.g.*, consumption

²² See Al-Mukaddim Khan Pathan & Rajkumar Buyya, *A Taxonomy and Survey of Content Delivery Networks*, GRIDS-TR-2007-4, GRIDS Laboratory, University of Melbourne, Australia, Feb. 2007, at 1 (“With the proliferation of the Internet, popular Web services often suffer congestion and bottlenecks due to large demands made on their services.... [CDNs] provide services that improve network performance by maximizing bandwidth, improving accessibility and maintaining correctness through content replication.”), available at <http://www.gridbus.org/reports/CDN-Taxonomy.pdf>.

²³ See, *e.g.*, *Virginia data center connected to a FiberLight network*, Focus Magazine, Aug. 27, 2009 (“A recently opened large colocation data center in Virginia has been connected to a fiber backbone . . . allowing its customers to take advantage of the . . . network that links Northern Virginia, Maryland and Washington, D.C.”), available at <http://datacentredynamics.de/ME2/Audiences/dirmod.asp?sid=&nm=&type=news&mod=News&mid=9A02E3B96F2A415ABC72CB5F516B4C10&AudID=E5BD2FF22AF74DF3A0D5F4E519A61511&tier=3&nid=9253F65938394F309196A823ED502978>; Erick Schonfeld, *Where Are All The Google Data Centers?*, TechCrunch, Apr. 11, 2008 (estimating that Google has at least 36 data centers located around the world), <http://www.techcrunch.com/2008/04/11/where-are-all-the-google-data-centers/>; Map of Google Data Center Locations, Apr. 11, 2008 (“According to Google’s earnings reports, they spent \$1.9 billion on data centers in 2006, and \$2.4 billion in 2007. Google unveiled four new data center projects in 2007. Each has a cost estimate of \$600 million, which will include everything from construction to equipment and computers.”), available at <http://royal.pingdom.com/2008/04/11/map-of-all-google-data-center-locations/>; Miguel Helft, *Snap and Search (No Words Needed)*, N.Y. Times, Dec. 19, 2009 (Google’s experimental “Goggles” service searches for information about photos without using words. “Google’s data centers distribute the image-matching problem among hundreds or even thousands of computers to return an answer quickly.”), available at <http://www.nytimes.com/2009/12/20/business/20ping.html>; Patrick Thibodeau, Think big, green: Microsoft’s mall-size data centers, Computerworld, Nov. 10, 2007, 154 (“Microsoft needs data center space, in part, for some new services, including storage space for customers to house high-definition video, music and documents under its planned Microsoft Live Drive program.”), available at http://www.computerworld.com/s/article/print/9046298/Think_big_green_Microsoft_s_mall_size_data_centers?taxonomyName=Servers+and+Data+Center&taxonomyId=154.

²⁴ As Cisco explains, “The customers’ expectations are really driving the need for network management.” Communications Daily, Dec. 9, 2009, at 2.

²⁵ *Id.* at 3.

based billing), but decisions will necessarily be made.²⁶ The Commission must exercise extreme caution not to undermine the dynamic process that has allowed the Internet to thrive by allowing the edge and core to innovate without seeking government or third party permission.

III. THE RISKS OF INTERNET REGULATION ARE HIGH

A. Congress' Internet Policy Favors the Lightest Regulatory Touch

Early in the Internet's commercial development, Congress recognized both the vast potential of the Internet and the irresistible draw to regulate it. In the Telecommunications Act of 1996 Congress declared:

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.²⁷

Shortly thereafter President Clinton explained that, “[f]or electronic commerce to flourish, the private sector must continue to lead. Innovation, expanded services, broader participation, and lower prices will arise in a market-driven arena, not in an environment that operates as a regulated industry.”²⁸ The Commission declined to impose open access requirements on cable delivered Internet access and refused to retain common carrier regulation of wireline broadband

²⁶ Application providers use comparable tools to manage network resource consumption. Skype “throttles down the transmission rate based on available network resources . . . [and] puts hard limits on audio and video bandwidth when relays are used.” *Id.* at 3.

²⁷ 47 U.S.C. § 230(b)(2). The Act further directed the Commission to “encourage the deployment of advanced telecommunications capability . . . by utilizing . . . methods that remove barriers to infrastructure investment. Section 706(a) of the Act (note to 47 U.S.C § 157). As the Supreme Court observed just a year after the 1996 Act, the Internet “is not supervised by any federal agency.” *Reno v. ACLU*, 521 U.S. 844, 869 n.33 (1997).

²⁸ William J. Clinton & Albert Gore, A Framework for Global Electronic Commerce, July, 1997, available at <http://clinton4.nara.gov/WH/New/Commerce/read.html>.

services.²⁹ In lifting common carrier obligations for wireline broadband providers, the Commission noted that it “must ensure that the balance struck provides adequate incentives for infrastructure investment.”³⁰

The Commission’s reluctance to supplant an investment-friendly regime with a regulatory regime has served the public interest exceedingly well. The development of cable broadband networks is itself a case study in the power of light touch regulation. Micromanagement of the cable industry gradually declined in the late 1990’s. Since 1996, the cable industry has invested more than \$161 billion to upgrade plant to create today’s national broadband networks.³¹ Deregulation also ignited the cable programming market and allowed for the development and deployment of hundreds of new programming channels increasing diversity and choice.³² Cable modem service quickly became widely deployed over these new broadband networks because the Commission freed the cable industry from state and local franchising

²⁹ See, e.g., *Inquiry Concerning High-Speed Access to the Internet Over Cable and Other Facilities*, Declaratory Ruling and Notice of Proposed Rulemaking, 17 FCC Rcd. 4798 (2002) (hereinafter “Broadband Decl. Ruling”), *aff’d*, *NCTA v. Brand X*, 545 U.S. 967 (2005); Wireline Broadband Order, 20 FCC Rcd. 14853 (2005), *aff’d*, *Time Warner Telecom, Inc. v. FCC*, 507 F.3d 205 (3d Cir. 2007). The Commission has also declined to extend Title II regulation to wireless Internet-access service and broadband over power line Internet access service. See *Appropriate Regulatory Treatment for Broadband Access to the Internet Over Wireless Networks*, Declaratory Ruling, 22 FCC Rcd. 5901 (2007); *United Power Line Council’s Petition for Declaratory Ruling Regarding the Classification of Broadband over Power Line Internet Access Service as an Information Service*, Memorandum Opinion and Order, 21 FCC Rcd. 13281 (2006); *Vonage Holdings Corp.*, Memorandum Opinion and Order, 19 FCC Rcd. 22404 (2004) (hereinafter “Vonage Order”), *aff’d sub nom.*, *Minnesota Pub. Utils. Comm’n v. FCC*, 483 F.3d 570 (8th Cir. 2007).

³⁰ Wireline Broadband Order, 20 FCC Rcd ¶ 78. The Commission relied upon Section 706 and its emphasis on encouraging broadband deployment by removing barriers to infrastructure investment.

³¹ *Industry Data*, National Cable and Telecommunications Association, available at <http://www.ncta.com/Statistics.aspx> (last visited Jan. 7, 2010).

³² There were 139 cable programming services available nationwide by the end of 2005. That number had grown to 565 by 2006. See *History of Cable Television*, National Cable and Telecommunications Association, <http://www.ncta.com/About/About/HistoryofCableTelevision.aspx> (last visited Jan. 8, 2010); *Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming*, Thirteenth Annual Report, 24 FCC Rcd. 542, ¶ 21 (2009).

barriers and from traditional federal cable and common carrier regulation.³³ That deployment enabled the first large scale facilities-based voice competition when the Commission declined to extend legacy monopoly regulations to VoIP.³⁴ Similar benefits from light touch regulation have been seen with spectrum based services. For example, Wi-Fi in homes and hospitals, RFID in retail outlets, and Bluetooth have delivered substantial benefits by economically expanding

³³ See Broadband Decl. Ruling, 17 FCC Rcd ¶¶ 59-60 (classifying cable modem service as an interstate information service subject to the Commission’s jurisdiction and not a “cable service”). By June 2008, the Commission estimated that “high-speed cable modem service [was] available to 96 percent of the households to which cable system operators could provide cable TV service.” *Inquiry Concerning the Deployment of Advanced Telecommunications Capability to all Americans in a Reasonable and Timely Fashion*, Fifth Report, FCC 08-88, 23 FCC Rcd 9615, ¶ 8 (2008); see also *IP-Enabled Services*, Report and Order, 24 FCC Rcd. 6039, ¶ 8 n.21 (2009) (“The Commission to date has not classified interconnected VoIP service as a telecommunications service or information service as those terms are defined in the Act, and we do not make that determination today.”); *E911 Requirements for IP-Enabled Service Providers*, First Report and Order and NPRM, 20 FCC Rcd. 10245 (2005); *In the Matter of Communications Assistance for Law Enforcement Act and Broadband Access and Services*, First Report and Order and Further Notice of Proposed Rulemaking, 20 FCC Rcd. 14989 (2005); *Telecommunications Carriers’ Use of Customer Proprietary Network Information and Other Customer Information*, 22 FCC Rcd. 6927 (2007), *aff’d*, *NCTA v. FCC*, 555 F.3d 996 (D.C. Cir. 2009); *Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities*, Report and Order, 22 FCC Rcd. 11275 (2007); *Telephone Number Requirements for IP-Enabled Services Providers*, Report and Order, Declaratory Ruling, Order on Remand, and NPRM, 22 FCC Rcd. 19531 (2007), *pet. for review pending*, *National Telecomms. Cooperative Ass’n v. FCC*, No. 09-1071 (D.C. Cir.); *Universal Service Contribution Methodology*, Report and Order, 21 FCC Rcd. 7518 (2006), *aff’d in part, vacated in part*, *Vonage Holdings Corp. v. FCC*, 489 F.2d 1232 (D.C. Cir. 2007).

³⁴ *Vonage Order*, 19 FCC Rcd. ¶¶ 33-37 (“[W]e cannot permit more than 50 different jurisdictions to impose traditional common carrier regulations...on DigitalVoice and still meet our responsibility to realize Congress’s objective.”), *aff’d sub nom.*, *Minnesota Pub. Utils. Comm’n v. FCC*, 483 F.3d 570, 580 (8th Cir. 2007) (“The FCC has promoted a market-oriented policy allowing providers of information services to ‘burgeon and flourish in an environment of free give-and-take of the market place without the need for and possible burden of rules, regulations and licensing requirements.’” (*quoting Vonage Order*, ¶ 21)).

access to broadband and mobile services beyond the traditional workplace thereby increasing productivity and improving public safety.³⁵

This history explains why 72 Democratic Congressmen joined in writing the Commission in October urging restraint on changing current Commission broadband policies that have ignited such tremendous investment and innovation over the past decade.³⁶ The investments and innovations discussed above happened because regulators were able to suspend doubts and to relax “prophylactic” regulations, thereby letting industry innovate and actually deliver value to consumers in new ways.

B. Regulation Puts Innovation and Investment at Risk

A number of government experiments relying on regulation to achieve consumer welfare benefits and other policy objectives have been less successful. Attempts to impose legacy carrier

³⁵ See, e.g., Steve Evans, *Going Mobile*, Computer Business Review, Jan. 4, 2010 (“With the technology available today mobile and remote workers can be just as productive as their office-based counterparts.”), available at http://www.cbronline.com/comment/going_mobile_040110; Press Release, Ekahau, Inc. *The Ohio State University Medical Center Leverages Expansive Wi-Fi Network to Track and Manage Medical Equipment, Improve Workflow and Increase Staff and Patient Safety Using Ekahau RTLS* (Jan. 5, 2010), available at <http://www.prnewswire.com/news-releases/the-ohio-state-university-medical-center-leverages-expansive-wi-fi-network-to-track-and-manage-medical-equipment-improve-workflow-and-increase-staff-and-patient-safety-using-ekahau-rtls-80696312.html>; Thomas Hoffman, *Innovative tech projects won’t slow down for some*, ComputerWorld, Dec. 29, 2009 (reporting that Aspen Skiing Co. is expanding use of RFID technology from embedding it in season passholders tickets for use in automated gates to embedding the technology in all ski passes, enabling them to store value for use in the resorts’ shops and restaurants. The organization might also use RFID to track rental skis and boots.), available at http://www.computerworld.com/s/article/345446/Innovative_tech_projects_won_t_slow_down_for_some. Dramatic innovation and investment is also seen in areas where the Commission has traditionally not intruded on communications investment decisions and relied upon the market to command resources to their most efficient and beneficial use. For example, peering, transit, backhaul, and CDNs emerged without government command or micromanagement which enabled massive infrastructure investment and associated consumer benefits. The Commission’s “white spaces” initiative reflects this no touch philosophy where no particular applications or business models are favored. See *Unlicensed Operation in the TV Broadcast Bands*, Second Report and Order and Memorandum Opinion and Order, 23 FCC Rcd. 16807, ¶ 32 (2008) (“This decision will provide significant benefits for the public by enabling the development and operation of a wide range of new unlicensed wireless communications devices and systems”); *id.* at 16931 (statement of Comm’r Robert M. McDowell) (“While new broadband technologies are the most likely uses of these channels, the most exciting part about our action today is that we are creating the opportunity for an explosion of entrepreneurial brilliance. Our de-regulatory order will allow the market place to produce new devices and new applications that we can’t even imagine today.”).

³⁶ Letter from Rep. Gregory Meeks (and 71 other Democratic Congressman) to Chairman Genachowski (Oct. 15, 2009). House and Senate Republicans share the concerns expressed in the Meeks letter. See, e.g., Letter from Rep. Cliff Stearns (and 18 other Republicans) to Chairman Genachowski (Oct. 5, 2009); Letter from Sen. Sam Brownback (and 18 other Senate Republicans) to Chairman Genachowski (Oct. 13, 2009).

regulations led to the demise of video dial tone and open video systems and delayed the vibrant competition in the video marketplace that has developed over the past decade.³⁷ The cable programming market crashed in the wake of the 1992 Cable Act, which imposed a litany of well intentioned but damaging rate and other controls on the cable industry.³⁸ More recently, the Commission's regulations governing the 700 MHz auction also produced unintended results. The 700 MHz D Block auction and service requirements so deterred investors that the single D block bid submitted did not meet the reserve price, and the D block spectrum remains unsold and undeveloped.³⁹ Similarly, as observed by Commissioner McDowell, the Commission's 700 MHz open access rules did not result in another desired objective:

I also did not think that the rule would achieve the advertised goal of attracting a new national broadband provider. Additionally, I was concerned that larger carriers would avoid the encumbered spectrum and outbid smaller players in the smaller, unregulated spectrum blocks. Sadly, my fears proved to be correct, but I wish I had been wrong.⁴⁰

As history has proven, overly regulatory intrusive federal policies have stymied, rather than encouraged, investment and innovation by effectively requiring network operators to “obtain

³⁷ Robert Corn-Revere, Speech at FCC Workshop, *Democratic Engagement, and the Open Internet*, Dec. 15, 2009, available at <http://www.ncta.com/DocumentBinary.aspx?id=869> (“Both Video Dial Tone and Open Video Systems were regulatory constructs . . . relegated largely to the dustbin of regulatory history.”); see also Robert Corn-Revere, *The Public Interest, The First Amendment, and a Horse's Ass*, 2000 L. Rev. M.S.U.-D.C.L. 165, 170 (Spring 2000); S. Rep. No. 104-230, at 179 (1996) (“Those rules implemented a rigid common carrier regime, including the Commission's customer premises equipment and Computer III rules, and thereby created substantial obstacles to the actual operation of open video systems.”). Open Video Systems were the next installment, with the same premise, and failed to do any better. It is generally recognized to be “a flop.” See M. Botein, *Open Video Systems: Too Much Regulation Too Late?*, 58 Fed. Comm. L.J. 439, 439 (2000).

³⁸ *Implementation of Sections of the Cable Television Consumer Protection and Competition Act of 1992: Rate Regulation*, Second Order on Reconsideration, Fourth Report and Order, and Fifth NPRM, 9 FCC Rcd. 4119, ¶ 22 (1994) (“A key concern expressed by operators and programmers throughout this proceeding has been that the benchmark approach may not permit operators to respond to marketplace incentives to expand the services included in regulated program tiers. The ‘going-forward’ methodology set forth in this Order provides such incentives for the benefit of operators, programmers, and subscribers alike.”).

³⁹ See, e.g., Saul Hansell, *Frontline, Silicon Valley's Wireless Start-Up, Folds*, N.Y. Times, Jan. 8, 2008; Paul Kapustka, *FCC May Examine "D" Block Auction Fiasco*, GigaOM, Feb. 11, 2008, available at <http://gigaom.com/2008/02/11/fcc-may-examine-d-block-auction-fiasco/>; Paul Kapustka, *Frontline Out of 700 MHz Auction*, GigaOM, Jan. 8, 2008, available at <http://gigaom.com/2008/01/08/frontline-out-of-700-mhz-auction/>.

⁴⁰ NPRM at 13163 (statement of Comm'r Robert M. McDowell).

permission” in advance of deploying innovative core management techniques that control congestion and costs and that enable new applications and services.⁴¹

IV. MITIGATING THE RISKS OF REGULATION

To encourage continued innovation and investment at the core, the Commission must be mindful not to promote frivolous and costly litigation. Federal authorities have been very cautious about exposing cable and broadband distributors to damages and to inconsistent decisions by local authorities with respect to dynamically changing technologies that the federal government seeks to promote. Through FCC and Congressional action, authority over cable technology⁴² and information services⁴³ was preempted and centralized. In establishing new rules for the Internet, Congress immunized ISPs for “good faith” editorial controls,⁴⁴ barred recovery of monetary damages and restricted equitable remedies associated with transitory communications,⁴⁵ and created a careful balance between trademark law and Internet domain

⁴¹ Broadband Connectivity Competition Policy: A Federal Trade Commission Staff Report (June 2007), at 160, available at <http://www.ftc.gov/reports/broadband/v070000report.pdf> (“2007 FTC Report”) (“[B]road regulatory schemes almost certainly will have unintended consequences, some of which may not be known until far into the future. . . . In the broadband Internet context, regulation that nominally seeks to protect innovation in content and applications by prohibiting broadband providers from charging for prioritized delivery over their networks actually could erect barriers to new content and applications that require higher-quality data transmission.”)

⁴² See *City of New York v. FCC*, 486 U.S. 57 (1988); 47 U.S.C. § 544(e); *Implementation of Cable Act Reform Provisions of the Telecommunications Act of 1996*, Report and Order, 14 FCC Rcd. 5296, ¶ 126 (1999), quoting H.R. Rep. No. 104-204, pt. 1, at 110 (1995). See also *American Library Ass’n v. Pataki*, 190 F. Supp. 160, 181 (S.D.N.Y. 1997) (“The courts have long recognized that certain types of commerce demand consistent treatment and are therefore susceptible to regulation only on a national level. The Internet represents one of those areas.”).

⁴³ See *NCTA v. Brand X Internet Servs.*, 545 U.S. 967 (2005); *Vonage Order*, 19 FCC Rcd 22404 (2004), *aff’d sub nom.*, *Minnesota Pub. Utils. Comm’n v. FCC*, 483 F.3d 570 (8th Cir. 2007).

⁴⁴ Section 230 of the Communications Decency Act (47 U.S.C. § 230) announced a national policy to “preserve the vibrant and competitive free market that presently exists for the Internet and other interactive computer services” and immunized ISPs from liability for exercising “good faith” editorial control by removing offensive or explicit content, including “any action voluntarily taken in good faith to restrict access to or availability of material that the provider or user considers to be obscene . . . whether or not such material is constitutionally protected.” It provides safe harbors from liability and expressly precludes a private right of action that is inconsistent with its provisions.

⁴⁵ Section 512 of the Digital Millennium Copyright Act (17 U.S.C. § 512) provides a safe harbor for online service providers from liability for copyright infringement when they provide certain services, namely transitory communications, system caching, storage of information on networks at the direction of users, and information location tools. This safe harbor completely bars recovery of monetary damages and restricts equitable remedies.

management by precluding “cyber squatting” claims when the defendant had reasonable grounds to believe that the use of the domain name was “fair use” or otherwise lawful.⁴⁶

Investment, innovation and deployment do not work well when subjected to conflicting standards and when litigators are invited to second-guess what is “reasonable” or “nondiscriminatory.” To reduce uncertainty for broadband providers utilizing dynamic network management technologies and to ensure the consistency of standards governing the Internet, the FCC should preempt and centralize authority over network management disputes exclusively at the FCC. Class actions (and the risk of conflicting rulings and massive damages) should be expressly preempted. The Supreme Court upheld the FCC’s authority to preempt state and local technical standards for cable television companies to eliminate the “potential serious negative consequences” for operators and consumers of inconsistent local standards “in terms of the cost of service and the ability of the industry to respond to technological changes.”⁴⁷ The Commission has the same fundamental interests and authority to preempt with regard to the

⁴⁶ The Anticybersquatting Consumer Protection Act (ACPA) prohibits bad faith, for profit, abusive registration of Internet domain names in violation of the rights of trademark owners. 15 U.S.C. § 1125(d). It includes a safe harbor provision that generally precludes a finding of bad faith when the defendant had reasonable grounds to believe that the use of the domain name was “fair use” or otherwise lawful. In the absence of bad faith, a plaintiff cannot prevail on a claim for a violation of the ACPA.

⁴⁷ *City of New York*, 486 U.S. at 64 (“[T]he agency may determine that its authority is exclusive and preempt[] any state efforts to regulate It has long been recognized that many of the responsibilities conferred on federal agencies involve a broad grant of authority to reconcile conflicting policies.”). See also *Louisiana Pub. Serv. Comm’n v. FCC*, 476 U.S. 355, 369 (1986) (“[A] federal agency acting within the scope of its congressionally delegated authority may preempt state regulation.”); *Implementation of Cable Act Reform Provisions of the Telecommunications Act of 1996*, Report and Order, 14 FCC Rcd. 5296, ¶ 126 (1999), quoting H.R. Rep. No. 104-204, pt. 1, at 110 (1995) (“The Committee finds that the patchwork of regulations that would result from a locality-by-locality approach is particularly inappropriate in today’s intensely dynamic technological environment); *Exclusive Jurisdiction With Respect to Potential Violations of the Lowest Unit Charge Requirements of Section 315(b) of the Communications Act of 1934, as amended*, Order on Reconsideration, 7 FCC Rcd. 4123, ¶ 21 (1992) (concluding that preemption of state regulation of “the lowest point charge” under 47 U.S.C. § 315(b) “was well within [the Commission’s] delegated authority under the Communications Act to enforce Section 315(b) and was necessary to achieve our purpose of ensuring uniform standards for interpreting and enforcing” the requirement. The Commission also “declared that the Commission shall be the sole forum for adjudicating such matters.”).

development of the rapidly evolving Internet.⁴⁸ The Commission should also limit equitable relief to circumstances where the defendant had no reasonable grounds to believe that the use of the network management technique or introduction of a managed service was lawful. The burden of proof should be placed on the complainant challenging any particular network management practice or managed service to allow for the learning process to develop and to encourage experimentation.⁴⁹ The Commission should retain the right to impose costs, including legal fees, on plaintiffs who abuse Commission processes or initiate frivolous challenges.

Subjecting core network management practices to case-by-case review by third parties, including those with a financial interest in preventing future technological advances and innovation, introduces legal uncertainty that threatens the existing marketplace balance that has enabled the Internet's success. However, if the Commission adopts an approach whereby case-by-case review is undertaken, Commission preemption over disputes and adoption of the other suggested procedural protections for network providers will mitigate the damage.

V. REASONABLE DISCLOSURE REQUIREMENTS

Charter agrees that reasonable network management practice disclosures provide important information that customers and application providers should reasonably expect. Such disclosures are also critical to survival for broadband Internet service providers in today's

⁴⁸ Of course, centralization of enforcement authority at the FCC presumes the existence of statutory authority to engage in net neutrality regulation at all, a matter currently in issue. See *Final Opening Brief*, Comcast Corp., Case No. 08-1291 at 41-52, filed Nov. 23, 2009 (D.C. Cir.) *Intervenor for Petitioner Brief*, NBC Universal and National Cable & Telecommunications Association, Case No. 08-1291, at 30-35, filed Aug. 10, 2009 (D.C. Cir.).

⁴⁹ Antitrust law offers a useful analog here in that it allows economic actors the assurance needed to experiment and innovate by placing the burden of proof on plaintiffs. See, e.g., *KLM Royal Dutch Airlines v. Amber Air Int'l, Ltd.*, No. 89 C 4953, 1992 U.S. Dist. LEXIS 15067, at *25 (N.D. Ill. 1992) ("The burden of proof is on the antitrust plaintiff, in response to an antitrust defendant's motion for summary judgment to put forth sufficient evidence to establish the validity of its market data.") (citing *A.A. Poultry Farms v. Rose Acre*, 881 F.2d 1396, 1399 (7th Cir. 1988)).

competitive marketplace.⁵⁰ The issue is how to balance the amount and nature of disclosed information to render the disclosure useful and to avoid overwhelming recipients with volume and details that are ignored or cannot be understood.⁵¹ Disclosure of certain information could give purveyors of spam, viruses, worms and other malware the ability to circumvent legitimate network security measures that consumers depend on to protect personal computers and to benefit from broadband Internet access. Disclosures that are too detailed could compromise competitive advantages of providers. Moreover, it would be counterproductive to provide information that empowers parties to circumvent traffic congestion management techniques that benefit the vast majority of customers.

Consistent with these considerations and the need to minimize new regulatory burdens and costs, Charter suggests that the Commission look to Canada's network management disclosure framework for broadband Internet service providers as the basis for a checklist of what providers should address.⁵² "Given the varied and evolving nature of networks, services being offered, and user needs," the Canadian Radio-Television Telecommunications Commission determined that "it would not be appropriate to create bright-line rules as to which

⁵⁰ See *Consumer Information and Disclosure*, Notice Of Inquiry, 24 FCC Rcd. 11380 (2009) (Comments of Comcast Corp. at 4).

⁵¹ NPRM ¶ 126. Numerous academic studies and experts have concluded that there is a limit to the amount of information consumers are able to beneficially process. See, e.g., Cass R. Sunstein, *Informing America: Risk, Disclosure, and the First Amendment*, 20 Fla. St. U. L. Rev. 653, 668 (1993) (concluding that information overload "caus[es] consumers to treat a large amount of information as equivalent to no information at all."); Susanna Kim Ripken, *The Dangers and Drawbacks of the Disclosure Antidote: Toward a More Substantive Approach to Securities Regulation*, 58 Baylor L. Rev. 139, 160 (2006) (stating that, "[i]n some contexts, too much information can be worse than too little because people are boundedly rational and have only limited cognitive abilities to process vast amounts of complex information at once.").

⁵² Canadian Radio-Television Telecommunications Commission, *Review of the Internet traffic management practices of Internet service providers*, Telecom Regulatory Policy CRTC 2009-657, File No. 8646-C12-200815400 (Oct. 21, 2009), available at <http://crtc.gc.ca/eng/archive/2009/2009-657.htm>.

types of ITMPs [“Internet traffic management practices”] are acceptable.”⁵³ Rather, Canada’s framework outlines key information for ISPs to disclose on their websites:

- Why ITMPs are being introduced;
- Who is affected by the ITMP;
- When the Internet traffic management will occur;
- What type of Internet traffic (e.g., application, class of application, protocol) is subject to management;⁵⁴ and
- How the ITMP will affect a user’s Internet experience, including the specific impact on speeds.

Posting of such disclosures on the service provider’s website will provide effective and efficient access for interested parties, including monitoring by the FCC in lieu of routine reporting requirements. If existing network management practices are modified in a manner that materially impacts the posted disclosures, the disclosure should be timely updated.

Government filings and reports should not be required unless needed as demonstrated by the submission of credible evidence of misleading or otherwise inadequate network management

⁵³ *Id.* Norway’s network neutrality principles, modeled on the FCC’s guidelines, reflect a strong interest in promoting a light regulatory touch by providing that the “principles will not have any formal legal status, nor will [the Norwegian Post and Telecommunications Authority] be able to issue sanctions on the basis thereof.” Norwegian Post and Telecommunications Authority, *Network Neutrality: Guidelines for Internet Neutrality*, available at <http://www.npt.no/ikbViewer/Content/109604/Guidelines%20for%20network%20neutrality.pdf>.

⁵⁴ The CRTC disclosure rules exclude ITMPs used for network security and integrity.

Specifically, these ITMPs have been employed to protect users from network threats such as malicious software, spam, and distribution of illicit materials. In the Commission’s view, such activities are unlikely to trigger complaints or concerns . . . and are a necessary part of an ISP’s network operations. The Commission is therefore not addressing. . . ITMPs used only for the purpose of network security, [temporary events (e.g., traffic surges due to global events or failures of a provider’s network)] in order to protect network integrity.

Telecom Regulatory Policy CRTC 2009-657, ¶¶ 44-45. Since network management is a dynamic process responding to unpredictable congestion, malware and other threats, providing consumers with such information would be impractical, unenlightening and counterproductive.

disclosures.⁵⁵ Internet service providers already provide substantial and relevant information in response to customer expectations and market competition, minimizing any need for costly new reporting requirements. Additionally, both the FCC and the FTC provide consumer information concerning broadband and Internet service providers.⁵⁶ Only if these existing protections are deemed inadequate should additional layers of reporting and regulation be considered.

VI. MANAGED/SPECIALIZED SERVICES

If the proposed net neutrality rules are adopted, there is also a critical need to carefully limit their scope to preserve an enterprise zone for innovation – distinct from residential best-efforts Internet service – where the Internet can freely evolve in response to consumer demand and technical developments. The Commission’s recognition of IP managed or specialized services is a step in the right direction, but the rules should not begin with any presumption that new regulations apply to all IP services, and then define exceptions. All network services are managed, whether they are carried in analog, QAM or IP. Rules designed to “preserve” open Internet access should have no application to other network services and applications, many of which are carried over the same networks as, but separately and apart from, best-efforts Internet

⁵⁵ See NPRM ¶ 128. Foregoing a reporting requirement would be consistent with the Commission’s efforts to minimize reporting burdens and consistent with other national efforts to promote the universal broadband deployment by lowering cost barriers. See, e.g., *Local Telephone Competition and Broadband Reporting*, Report and Order, 19 FCC Rcd. 22340, ¶ 22 (2006) (eliminating several questions “of limited usefulness” from Form 477); *Local Telephone Competition and Broadband Reporting*, Report and Order, 15 FCC Rcd. 926 (2000) (reducing the frequency of local competition and broadband reporting to minimize the regulatory burden on companies’ resources).

⁵⁶ See, e.g., FCC & Consumer Governmental Affairs Bureau, Consumer Publications (listing consumer fact sheets on cable and internet issues, among others), available at http://www.fcc.gov/cgb/information_directory.html#internet; *Shopping for Broadband: Satisfying Your Need for Speed*, Federal Trade Commission, Bureau of Consumer Protection, available at <http://www.ftc.gov/bcp/edu/pubs/consumer/tech/tec17.shtm>. The FTC recently reaffirmed its intent to “continue to devote substantial resources to maintaining competition and protecting consumers from deceptive or unfair acts or practices . . . and to expend considerable efforts at consumer education, industry guidance and competition advocacy in the important area of Internet access.” *Broadband Connectivity Competition Policy: A Federal Trade Commission Staff Report* (June 2007) at 12, available at <http://www.ftc.gov/reports/broadband/v070000report.pdf> (hereinafter “2007 FTC Report”).

services. The Commission should explicitly reject suggestions that the entire capacity of broadband providers must be subject to a uniform regulatory regime.⁵⁷ There is no legal basis for superimposing a “net neutrality” regime onto core video services which have long operated successfully under entirely different business models.

Nor should the Commission attempt to apply new regulations to all IP services, and then corral and define a limited set of exceptions for evolving new services that happen to be carried in IP. That approach would undermine innovation. AT&T prioritizes its own IP video traffic to offer U-verse cable service.⁵⁸ CDNs evolved to provide quality of service that could not be provided under end-to-end principles. VoIP networks happen to be carried in IP. All of these services could have been derailed or delayed even longer if they had been subjected to the kind of regulatory constraint that the proposed rules suggest for Internet access. The Commission acknowledges that “potential future offerings such as specialized telemedicine, smart grid, or eLearning applications” are not possible with best-efforts service.⁵⁹ Billions of dollars in consumer savings would have been delayed or lost if such challenges had been entertained by Commission rules. New managed and special services should have the same breathing room to develop free from collateral legal attacks.

If successful services such as U-verse and VoIP could run afoul of the Commission’s proposed rules (or be slowed by legal challenges while their bona fides are debated), then many other potential innovative services impractical under best efforts principles are at risk. Even

⁵⁷ See, e.g., Comments of Free Press, Docket No. 09-51, at 168 (June 8, 2009) (“[S]ervices that do not provide Internet access but that share capacity with Internet access services do not need to be subject to the same regulatory bucket as Internet services, but the broader policies of open networks should be extended to them to continue to protect an open Internet and to confer the benefits of open networks onto these services.”); Comments of Public Knowledge, *et al.*, Docket No. 09-51, at 20-21 (December 18, 2009).

⁵⁸ NPRM ¶ 34.

⁵⁹ *Id.* ¶ 150.

today, one can envision a number of valuable services that can be of enormous consumer benefit but may not fit comfortably within a net neutrality rule applicable to residential best efforts Internet service. Stock research and trading firms, or content developers and providers, might utilize “certified” P2P clients on secure secondary networks. Government agencies or training facilities might use secure cloud computing to manage applications or desktop clients remotely over a secondary network. Banking and financial institutions would find great utility and value in establishing ultra secure connections to consumers. Trusted parties could proactively manage desktop security, software versioning/protection, or remote storage and backup. Priority services could be provided to appropriate governmental, emergency, or financial services staff to ensure continued operation during emergencies. Film editing among multiple sites could be available more securely. IP delivery of commercial films on a transactional basis might be even more broadly commercialized and available.

The Commission acknowledges that innovation must come from both the Internet’s edge and core.⁶⁰ But core innovations such as described above, as well as those that could promote even broader global interests, are vulnerable under the proposal. For example, more reliable and secure networks could substantially improve conditions for telecommuting thereby reducing the number of carbon producing automobiles in use and delivering huge ecological benefits. In the event of national or global pandemic, such telecommuting capabilities could mitigate otherwise dire economic consequences and enhance public safety capabilities.

Rapid advances in technology and business models will produce countless other services (unimaginable today) outside the realm of residential best efforts Internet service that should be encouraged free from regulation and third party second-guessing. Trying to regulate these

⁶⁰ *Id.* ¶ 47.

services or to categorize them will frustrate innovation and investment and the Commission should not want to be bound in advance.

The Commission’s concern that “growth of managed or specialized services might supplant or otherwise negatively affect the open Internet” is misplaced.⁶¹ As described earlier, Charter has invested heavily (over \$8 billion) since 2000 to rebuild its cable network thereby facilitating the growth of broadband adoption in its substantially rural service areas.⁶² This investment enabled the deployment of facilities-based voice competition as well as other over-the-top competition. Existing marketplace competition is only intensifying with the deployment of FiOS, U-verse and new mobile communications broadband services. This competition has proven effective in balancing continued growth of robust best-efforts Internet service, consumer choice and the evolution of other innovative services that rely on sophisticated quality of service techniques and business models.

VII. FIRST AMENDMENT CONSTRAINTS

Refining and focusing the proposed rules is required not only to protect innovation and investment: it is required by Constitutional constraints on the Commission. The U.S. Supreme Court and lower federal courts have held that mass media distributors such as cable and telephone companies “engage in and transmit speech, and they are entitled to the protection of the press and press provisions of the First Amendment.”⁶³ In *Ameritech*, the court stated that “[t]here can be no doubt that interactive programming is a form of communication or mode of

⁶¹ *Id.* ¶ 149.

⁶² *See supra* p. 6.

⁶³ *Turner Broad. Sys., Inc. v. FCC*, 512 U.S. 622, 636, (1994) (citing *Leathers v. Medlock*, 499 U.S. 439, 444 (1991)); *see also Ameritech Corp. v. United States*, 867 F. Supp. 721, 728 (N.D. Ill. 1994). The federal Cable Act specifically limits government control over content selection because of cable’s free speech rights. *See* 47 U.S.C. § 544(b) (local franchise authorities are generally prohibited from establishing “requirements for video programming or other information services” in cable franchises).

expression of ideas.”⁶⁴ Even common carrier telephone companies have a recognized right to refuse to transmit content that they choose not to transmit.⁶⁵ Both the Supreme Court and the Commission have confirmed that “the service that Internet access providers offer the public is Internet access, not a transparent ability (from the end user's perspective) to transmit information.”⁶⁶

Any proposal to regulate the network management practices and content transmitted by broadband service providers must be both tailored and justified to withstand the First Amendment’s demand of heightened scrutiny. If regulations compel service providers to transmit specific content, the rule is subject to strict scrutiny and must be narrowly tailored to further a compelling government interest.⁶⁷ If the regulations are content neutral restrictions on speech, they must be narrowly tailored to achieve an important government interest.⁶⁸

The Commission’s proposed rules are premised on two isolated incidents that occurred several years ago (2005 and 2007) and which were quickly resolved without any substantial harm suffered by the public. As recently as 2007, the Federal Trade Commission issued a 165-page report concluding that net neutrality regulations are potentially harmful and likely

⁶⁴ *Ameritech*, 867 F. Supp. at 728.

⁶⁵ See *Sable Commc’ns v. ACLU*, 492 U.S. 115, 133 (1989) (Scalia, J., concurring) (“While we hold the Constitution prevents Congress from banning indecent speech in this fashion, we do not hold that the Constitution requires public utilities to carry it.”).

⁶⁶ *NCTA v. Brand X Internet Serv.*, 545 U.S. 967, 971 (2005).

⁶⁷ See *Reno v. ACLU*, 521 U.S. 844, 870 (1997) (there is “no basis for qualifying the level of First Amendment scrutiny that should be applied” to Internet speech).

⁶⁸ See, e.g., *United States v. O’Brien*, 391 U.S. 367, 377 (“incidental restriction on alleged First Amendment freedoms is not greater than is essential to furtherance” of “an important or substantial governmental interest”); *Ameritech*, 867 F. Supp. at 736 (government restriction cannot impose a “greater than-necessary burden on plaintiff’s speech and [must be] narrowly tailored to serve the Government’s significant interest in preventing anticompetitive behavior...”).

unnecessary.⁶⁹ No current evidence of “significant market failure or demonstrated consumer harm” is identified by the Commission and the Commission presents no evidence that less restrictive regulations would be ineffective to achieve its objectives.⁷⁰ In *Ameritech*, the court noted that the government’s rationale for restricting telco entry into cable was “debatable,” which was not sufficient to sustain its burden of demonstrating that marketplace conditions justified the restriction.⁷¹ Moreover, the government failed to demonstrate that less restrictive regulations would be ineffective in achieving the government’s interest. Thus, “[e]ven when all inferences are drawn in the Government’s favor, there is no genuine issue of fact as to whether § 533(b) unconstitutionally burdens substantially more speech than is necessary to serve the Government’s interests”⁷² In this case, the proposed rules are not narrowly tailored and fail even the intermediate scrutiny test by placing a “greater than necessary” burden on broadband service providers’ speech to promote the government’s stated interests.

CONCLUSION

For decades the Commission has declined to impose economic regulations on information services recognizing that marketplace competition best serves the public interest. This resolve, reinforced by Congress’s directive to preserve the Internet unfettered by Federal or state regulations, ignited extraordinary investment and innovation at the network’s edge and core which has resulted in unimaginable new services and economic opportunities. Investment and

⁶⁹ See 2007 FTC Report at 11 (“Two aspects of the broadband Internet access industry heighten the concerns raised by regulation generally. First, the broadband industry is relatively young and dynamic, and, as noted above, there are indications that it is moving in the direction of more competition. Second, to date we are unaware of any significant market failure or demonstrated consumer harm from conduct by broadband providers. Policy makers should be wary of enacting regulation solely to prevent prospective harm to consumer welfare, particularly given the indeterminate effects that potential conduct by broadband providers may have on such welfare.”).

⁷⁰ In fact, the opposite is true, as Americans viewed 31 billion videos in November 2009, up almost 20 billion from the number viewed in November 2008. See *supra* note 11.

⁷¹ *Ameritech*, 867 F. Supp. at 736.

⁷² *Id.*

innovation emerged because neither the network's edge nor core have needed to obtain the permission of the other in responding to consumer demand or experimenting with new technologies. In this environment, Charter and other broadband service providers have invested billions of dollars to expand network capacity and to deliver disruptive new services such as facilities-based VoIP and other over-the-top competitive services. The current system works, disciplined by fierce marketplace competition and vigilant oversight by consumers and other interested parties. The Commission's proposal to impose an untested and uncertain new legal framework over the dynamic and successful Internet ecosystem – whereby network management practices and new core services can be second-guessed by the government and third parties – will disturb the existing delicate balance, undermine investment and innovation, exacerbate the digital divide and potentially violate the First Amendment rights of broadband providers. If the Commission selects this path, it should take affirmative steps to minimize the inevitable damage by centralizing challenges at the FCC, prohibit class actions, and adopt other policies that discourage frivolous litigation.

Respectfully submitted,

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