

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20054**

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

COMMENTS OF MOTOROLA, INC.

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I. INTRODUCTION AND SUMMARY

Motorola, Inc. (“Motorola”) respectfully submits these comments in response to the Commission’s *NPRM*.¹ As a global communications leader focused on broadband access solutions for consumers, government and public safety first responders, commercial and industrial enterprises, and commercial operators, Motorola is uniquely situated to address the issues regarding net neutrality upon which the Commission has requested comment.

Fundamentally, the Commission, the industry, and consumers share the same goals – to preserve the enjoyment of both an open Internet and a vibrant broadband market, where providers throughout the Internet ecosystem are motivated to invest and innovate. However, the proposed net neutrality rules are inconsistent with these goals. They are unnecessary to maintain the open Internet that the United States enjoys today and, at the same time, would undermine investment and innovation in the broadband market. The evidence in the record conclusively establishes that the current regime is working to the benefit of consumers and providers alike.

¹ *Preserving the Open Internet; Broadband Industry Practices*, GN Docket No. 09-191, WC Docket 07-52, Notice of Proposed Rulemaking, FCC 09-93 (rel. Oct. 22, 2009) (“*NPRM*”).

The Commission should not be swayed by the proponents of net neutrality regulation, whose arguments are short on facts and long on unfounded speculation. In just the last five years, the Internet has enjoyed remarkable innovation and unparalleled growth, all of which has occurred without net neutrality rules. Before net neutrality rules are adopted, it is incumbent upon the Commission to find, and those seeking a change in the current regime to demonstrate a need for these rules. Such a finding cannot be based upon dire predictions of alleged harm that will befall the Internet in the absence of government regulation, especially when such predictions have been wrong time and time again.

The Commission's proposed extension of net neutrality rules to wireless broadband providers is particularly inappropriate. There is no market failure in the wireless broadband arena that the proposed rules are necessary to correct, nor is there any justification for government regulation in the vibrantly competitive wireless broadband market. Indeed, the *NPRM* offers no justification for extending net neutrality rules to wireless providers. Doing so would undermine the innovation, investment, and consumer benefits that have been the hallmark of the wireless broadband market.

Finally, as the *NPRM* acknowledges, managed services are a critical component of continued broadband innovation and investment and hold enormous promise for consumers. The Commission should encourage broadband providers to offer managed services to their customers, which will result in numerous consumer benefits, such as increased video competition, improved healthcare, and more efficient energy distribution and usage arrangements.

II. THE COMMISSION SHOULD NOT ADOPT PROPOSED NET NEUTRALITY RULES, WHICH ARE UNNECESSARY TO ENSURE AN OPEN INTERNET AND WOULD HINDER INVESTMENT.

No disagreement exists regarding the importance of an open Internet.² But since its inception, the openness of the Internet has existed and been maintained without the need for prescriptive regulatory rules. Indeed, the Commission time and again has followed a “light touch” regulatory approach to the Internet,³ which is consistent with Congressional intent.⁴

In 2005, instead of promulgating rules, the Commission opted to establish the “principles” articulated in the *Internet Policy Statement* to which it expected broadband Internet

² *NPRM* ¶ 17 (noting that the Internet’s openness “has been critical to the network’s success as an engine for creativity, innovation, and economic growth”); *see, e.g.*, Letter from James W. Cicconi, AT&T Senior Executive Vice President – External and Legislative Affairs, to Chairman Julius Genachowski, FCC, GN Docket No. 09-191 (Dec. 15, 2009) (acknowledging that an open Internet is a “key part” of achieving “the goal of ubiquitous, affordable broadband ...”); Joint Statement by Lowell McAdam, Verizon Wireless Chief Executive Officer, and Eric Schmidt, Google Chief Executive Officer, “Finding Common Ground on the Internet” (Oct. 21, 2009) (noting that an open Internet “has changed the way we do business forever, fueling unprecedented collaboration, creativity and opportunity”) (available at <http://policyblog.verizon.com/BlogPost/675/FindingCommonGroundonanOpenInternet.aspx>); Blog Post by David Cohen, Comcast Executive Vice President, “FCC Begins Examination of Potential Internet Regulation” (Oct. 23, 2009) (“We [Comcast] share and embrace the objective of preserving an open Internet, as we always have”) (available at <http://blog.comcast.com/2009/10/fcc-begins-examination-of-potential-internet-regulation.html>).

³ *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, ¶ 5 (2002) (“[B]roadband services should exist in a minimal regulatory environment that promotes investment and innovation in a competitive market”); *Appropriate Framework for Broadband Access to the Internet over Wireline Facilities*, Report and Order and Notice of Proposed Rulemaking, 20 FCC Rcd 14853, ¶ 1 (2005) (establishing a “minimal regulatory environment for wireline broadband Internet access services to benefit American consumers and promote innovative and efficient communications”) (“*Wireline Broadband Order*”); *Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion*, First Report, 14 FCC Rcd 2398, ¶ 18 (1999) (declaring that “[i]n no respect are we considering regulating the Internet”).

⁴ 47 U.S.C. § 230(b)(2) (declaring it 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”); *Wireline Broadband Order*, ¶ 44 (finding that economic regulation of broadband would have a “negative impact on deployment and innovation” and thus would violate “Congress’ clear and express policy goal of ensuring broadband deployment, and its directive that we remove barriers to that deployment”).

access providers to adhere.⁵ In the intervening years, the *Internet Policy Statement* has more than adequately preserved the openness of the Internet, and broadband investment and innovation have flourished throughout the entire Internet ecosystem.

As noted by the Columbia Institute for Tele-Information in its draft report prepared for the Commission, wireline providers have invested substantial amounts in broadband infrastructure, as a result of which broadband services are expected to be available to more than 95% of American households by 2014.⁶ In 2008 alone, wireline broadband investment by telephone companies and cable operators exceeded \$20 billion.⁷ Verizon has invested billions to deploy its fiber-to-the-home FiOS system and is on track to offer this service to 18 million households by the end of 2010.⁸ AT&T likewise is in the midst of a substantial fiber deployment initiative that is expected to result in the availability of its U-verse service to approximately 30 million households by the end of 2011.⁹ Cable operators continue to upgrade their networks to the DOCSIS 3.0 broadband standard, which allows customers to enjoy download speeds as high as 50 mbps (with one cable operator advertising download speeds of 101 mbps).¹⁰ Indeed, as

⁵ *Appropriate Framework for Broadband Access to the Internet over Wireline Facilities*, Policy Statement, 20 FCC Rcd 14986, ¶¶ 2, 3, 5 n.15 (2005) (“*Internet Policy Statement*”) (noting that the *Internet Policy Statement* sets forth “guidance and insight into [the FCC’s] approach to the Internet and broadband” and stating that the Commission was “not adopting rules” because the principles were “consistent with [the] Congressional directives” in sections 230(b) of the Communications Act and 706(a) of the Telecommunications Act of 1996).

⁶ Robert C. Atkinson and Ivy E. Schultz, Columbia Institute for Tele-Information, *Broadband in American: Where It Is and Where It Is Going (According to Broadband Service Providers)*, at 59, Figure 17 (Nov. 11, 2009) (“CITI Report”).

⁷ *Id.* at 66, Table 15.

⁸ *Id.* at 45.

⁹ *Id.* at 26.

¹⁰ *Id.* at 21.

many as 90% of American households are expected to be able to enjoy download speeds of 50 mbps by 2014.¹¹

Since adoption of the *Internet Policy Statement*, investment and innovation have flourished on the “edge” of the Internet as well. For example, video distribution websites that did not even exist in 2005 – such as YouTube and Hulu – have exploded in popularity, with more than 167 million U.S. Internet users watching nearly 28 billion online videos in October 2009.¹² Social networking sites, such as Facebook and Twitter, have reshaped the way in which Americans communicate and interact.¹³ In short, Internet innovation and investment is alive and well.

Importantly, the innovation and investment that the United States has experienced throughout the entire Internet ecosystem has occurred in the absence of government regulation, which is the most compelling evidence that the current regime is functioning perfectly well. To the extent the Commission seeks to change that regime, it must adequately explain the changes

¹¹ *Id.* at 51.

¹² See *YouTube Hits 100 Million*, eMarketer Digital Intelligence (March 18, 2009) (noting that “YouTube received more than 100 million unique visits in January, making it again the most widely viewed video service in the US”) (available at <http://www.emarketer.com/Article.aspx?R=1006981>); Press Release, comScore, *Hulu Delivers Record 856 Million U.S. Video Views in October During Height of Fall TV Season* (Nov. 25, 2009) (available at http://www.comscore.com/Press_Events/Press_Releases/2009/11/Hulu_Delivers_Record_856_Million_U.S._Video_Views) (“comScore Press Release”).

¹³ See Scott Duke Harris, “For Facebook, Popularity Also Brings Scrutiny,” *LA Daily News* (Dec. 26, 2009) (noting that in 2009 Facebook had “more than 350 million users globally and surpassed dot-com pioneer AOL in popularity within the United States”) (available at http://www.dailynews.com/ci_14070528?source=most_viewed); *US Twitter Usage Surpasses Earlier Estimates*, eMarketer Digital Intelligence (Sept. 14, 2009) (noting that “in 2009, there will be 18 million US adults who access Twitter on any platform at least monthly,” which “represents a 200% increase over 2008 levels,” and projecting that “[u]sage will reach 26 million US adults in 2010, a further 44.4% climb”) (available at <http://www.emarketer.com/Article.aspx?R=1007271>).

being made and identify the significant problems that the proposed rules rationally are designed to address.¹⁴ The *NPRM* fails in that regard.

First, the two isolated examples referenced in the *NPRM* do not justify imposing industry-wide net neutrality rules.¹⁵ The conduct in which Madison River was engaged occurred before the adoption of the *Internet Policy Statement*, and both the Madison River and Comcast matters were resolved promptly without the need for prescriptive rules. Furthermore, had it been in place, the Commission's proposed nondiscrimination rule – which would prohibit a broadband Internet access provider from charging for enhanced or prioritized services – would not have even addressed the conduct of either Madison River or Comcast.¹⁶

Second, concerns about changes in technology, particularly “deep packet inspection,” are misguided.¹⁷ “The use of packet inspection technologies is not new, and they are an important element of network operations for any company that maintains a substantial networking infrastructure.”¹⁸ In particular, deep packet inspection is a critical tool to “improve network security, implement access requirements, guarantee quality of service, and tailor service for

¹⁴ Cf. *Verizon Telephone Cos. v. FCC*, 570 F.3d 294, 304 (D.C. Cir. 2009) (rejecting Commission action when the agency had failed to “justify its departure from its precedent”); *Ramaprakash v. FAA*, 346 F.3d 1121, 1124 (D.C. Cir. 2003) (“reasoned decisionmaking” by an agency requires that “prior policies” be reasonably changed rather than “casually ignored”).

¹⁵ *NPRM* at ¶ 50 (citing *Madison River Order*, 20 FCC Rcd 4295 and *Comcast Network Management Practices Order*, 23 FCC Rcd 13028).

¹⁶ See *NPRM*, at ¶ 106.

¹⁷ *Id.* at ¶¶ 57-59.

¹⁸ Christopher Parsons, *Deep Packet Inspection in Perspective: Tracing Its Lineage and Surveillance Potentials*, 5 & 13 (Jan. 2008) noting that “[p]acket analysis technologies have been in use for over 15 years”) (available at http://www.surveillancproject.org/files/WP_Deep_Packet_Inspection_Parsons_Jan_2008.pdf).

particular applications.”¹⁹ And the *NPRM* is devoid of any evidence that such technologies are being used for anticompetitive purposes or in a manner that the current regime could not adequately address.

Third, the Commission cannot give credence to unsupported speculation that net neutrality rules are required in order to preserve innovation on the Internet.²⁰ Such claims are belied by the facts, discussed above, which establish a constant and undisturbed pattern of Internet innovation, all of which has occurred without net neutrality rules. Indeed, the *NPRM* does not provide a single concrete example of an outsider electing “not to innovate” under the current regime.²¹ Furthermore, for years net neutrality advocates have been making dire

¹⁹ *Id.* at 10; *see also* Ido Dubrawsky, “Firewall Evolution – Deep Packet Inspection,” *Security Focus* (July 29, 2003) (available at <http://www.securityfocus.com/infocus/1716>); Matt Hamblen, “Ball State Uses Deep Packet Inspection to Ensure Videoconferencing Performance,” *Computerworld* (Sept. 17, 2007) (available at http://www.computerworld.com/s/article/9036959/Ball_State_uses_deep_packet_inspection_to_ensure_videoconferencing_performance?taxonomyId=16&intsrc=hm_topic).

²⁰ *See NPRM*, at ¶ 63 (noting arguments by supporters of net neutrality rules that “differentiation by Internet access providers can be especially harmful to innovation by outsiders ... , many of whom may have limited resources but can innovate on today Internet with very low marginal costs, could choose not to innovate if faced with fees from Internet access service providers for equal access to end users”).

²¹ The *NPRM* references comments by two software developers in support of the notion that the potential that broadband Internet access providers may charge for prioritized or enhanced services “may deter outsiders from investing in long-term research and development” *NPRM* ¶ 63, n.147. However, these comments are short on details, and neither commenter actually states that he elected not to innovate because of the absence of net neutrality rules. *See* Atyas June 15, 2007 Comments, WC Docket 07-52 (claiming without elaboration that “[a]llowing ISPs to prioritize packets based on their own particular agenda will seriously compromise my ability to provide timely services to my company”). The *NPRM* also points to Folding@home as an example of an academic research project that could be disrupted without net neutrality rules. *NPRM* ¶ 63, n.147. However, from all indications, Folding@home has flourished without the need for net neutrality rules, receiving various awards for its research as well as funding from the likes of the National Institutes of Health, the National Science Foundation, ATI, Dell, Google, Intel, and Sony. *See* <http://folding.stanford.edu/English/About#ntoc22>.

predictions about the demise of innovation on the Internet in the absence of regulation, none of which has come to fruition.²²

The Commission also must not lose sight of the fact that, in addition to the importance of an open Internet, it has the responsibility to create proper incentives for the investments necessary to deploy broadband networks.²³ As the Obama Administration repeatedly has confirmed, broadband is critical to the United State’s long-term prosperity and essential to the country’s economic recovery.²⁴ But these objectives will not be realized without private investment in broadband networks. According to the Commission’s Broadband Task Force, “the investment required” for universal broadband ranges “from \$20 billion for 768 Kbps-3 Mbps service to \$350 billion for 100 Mbps or faster”;²⁵ nearly all of this investment must come from the “[p]rivate sector” because “new [government] funding is limited.”²⁶

Broadband providers are prepared to do their part. Even with challenging economic conditions, telephone companies and cable operators are projected to invest approximately \$65

²² See, e.g., Ex Parte Letter from Coalition of Broadband Users and Innovators to Michael K. Powell, FCC Chairman, CC Docket Nos. 02-33, 98-10 & 95-20, CS Docket No. 02-52, and GN Docket No. 00-185 (Nov. 18, 2002) (urging the Commission to “assure that consumers and other Internet users continue to enjoy the unfettered ability to reach lawful content and services” because otherwise broadband Internet access providers would impose “impediments” to accessing certain content, which would hinder the development of the Internet).

²³ See *NPRM* ¶ 5 (citing 47 U.S.C. § 254(b)(2); 47 U.S.C. § 230).

²⁴ Executive Office of the President, National Economic Council, *Recovery Act Investments in Broadband: Leveraging Federal Dollars to Create Jobs and Connect America*, at 1 (Dec. 2009) (available at <http://www.whitehouse.gov/sites/default/files/20091217-recovery-act-investments-broadband.pdf>).

²⁵ News Release, *Broadband Task Force Delivers Status Report on Feb. 17 National Broadband Plan*, at 2 (Sep. 29, 2009) (available at <http://reboot.fcc.gov/open-meetings/2009/september>).

²⁶ National Broadband Plan Policy Framework (Dec. 16, 2009), at 5 (available at http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-295259A1.pdf).

billion in wireline broadband infrastructure over the next four years.²⁷ The last thing that the Commission should do is impose net neutrality rules, which would only hinder broadband investment and thereby jeopardize the ability of the United States to achieve its goal of ubiquitous broadband availability.

III. PROPOSED NET NEUTRALITY RULES SHOULD NOT APPLY TO WIRELESS SERVICES, WIRELESS NETWORKS, OR MOBILE DEVICES.

When the Commission adopted the *Internet Policy Statement* in 2005, the principles were intended to apply to wireline broadband networks. The Commission never extended such principles to wireless broadband networks.²⁸

However, without any discussion about whether the purported justification for net neutrality rules even applies in the wireless arena, the *NPRM* would impose these proposed rules to all broadband networks, including wireless. Such an outcome is unjustified and threatens to undermine the innovation, investment, and consumer benefits that have been the hallmark of the wireless broadband market.

For example, according to the Commission, the proposed net neutrality rules “would support our goals of protecting consumers and encouraging innovation and investment.”²⁹ But for the same reasons that rules are unnecessary to accomplish these goals for wireline broadband service, there is even less need for such rules in the wireless broadband arena. The record is clear that wireless broadband consumers have been the beneficiaries of incredible innovation and investment, all of which has taken place in the absence of Commission regulation.

²⁷ CITI Report, at 66, Table 15.

²⁸ See *NPRM* ¶ 43, n.91; see also *A National Broadband Plan for Our Future*, Notice of Inquiry, FCC 09-31, ¶ 48, n.71 (rel. April 8, 2009) (declining to “prejudge” “the extent to which the principles in the *Internet Policy Statement* apply to wireless service providers”).

²⁹ *NPRM* ¶ 93.

As CTIA correctly observed, “the wireless ecosystem has embraced the evolution of networks to 3G and now 4G technologies, the explosion of innovative handsets, the emergence of application stores and new machine-to-machine communications.”³⁰ According to CTIA, mobile wireless networks with 3G technology have been deployed to more than 92 percent of the U.S. population, and carriers in the United States are leading the world in developing and deploying 4G networks relying on WiMAX and LTE technologies.³¹ CTIA estimates that 32 companies manufacture devices for the United States market, giving consumers more than 630 unique device models from which to choose, more than 85 percent of which are Internet-capable.³²

Service providers are aggressively competing to deliver the most advanced smartphones available. For example, Motorola has developed the DROID, which utilizes the Android operating system that allows users to modify and run different versions of the operating system as well as operate tens of thousands of third-party applications.³³ Google recently announced its new Nexus One smartphone, also utilizing the Android system, which Google calls its “superphone” and which will be sold through a Web store operated by Google and is available either with or without mobile service.³⁴

³⁰ Reply Comments of CTIA – The Wireless Association®, GN Docket 09-157, GN Docket 09-51, at 1 (filed Nov. 5, 2009) (“*CTIA Comments*”).

³¹ *Id.* at 4.

³² *Id.* at 4-5.

³³ <http://www.motorola.com/Consumers/US-EN/Consumer-Product-and-Services/Mobile-Phones/Motorola-DROID-US-EN>.

³⁴ Doug Gross, “Google Unveils Nexus One ‘Superphone’”, CNN.com (Jan. 5, 2010) (available at <http://www.cnn.com/2010/TECH/01/05/google.nexus.announcement/index.html>).

There is no merit to the notion that net neutrality rules are necessary in the wireless broadband arena in order to “promot[e] competition ... in the upstream markets for content, applications, and services ...”³⁵ Wireless upstream services are vibrantly competitive, as evidenced by the explosion in mobile phone applications. Since introduction of the iPhone and the launch of the iTunes App Store, “more than 100,000 mobile-specific applications have come to the market from six different stores on six differentiated platforms.”³⁶ It also is worth noting that this mobile applications explosion has occurred despite predictions just three years ago that providers would be unable to develop and customers would not be permitted to run mobile applications of their choosing without Commission regulation.³⁷

Equally without merit is the suggestion that net neutrality rules are necessary to guard against wireless broadband providers blocking or degrading unaffiliated content because consumers allegedly have limited competitive choices.³⁸ Consumers can choose between four national facilities-based providers, multiple regional carriers, a host of resellers, and countless pre-paid options. As the Commission noted just last year, “More than 95 percent of the U.S. population lives in census blocks with at least three mobile telephone operators competing to offer service, and more than 60 percent of the population lives in census blocks with at least five

³⁵ *NPRM* ¶ 94.

³⁶ *CTIA Comments* at 5-6.

³⁷ *See Petition to Confirm A Consumer’s Right to Use Internet Communications Software and Attach Devices to Wireless Networks*, RM-11361, at 2, 6 & 19-20 (filed Feb. 20, 2007); see also Tim Wu, *Wireless Net Neutrality: Cellular Carterfone and Consumer Choice in Mobile Broadband*, New America Foundation, Working Paper #17, at 2 (Feb. 17, 2007) (accusing wireless carriers of imposing “excessive burdens and conditions on application entry in the wireless application market, stalling what might otherwise be a powerful input into the U.S. economy”) (available at http://www.newamerica.net/files/nafmigration/WorkingPaper17_WirelessNetNeutrality_Wu.pdf).

³⁸ *NPRM* ¶¶ 67-74.

competing operators.”³⁹ Wireless broadband options also continue to expand. For example, Clearwire expects to make available 4G service to approximately 120 million subscribers by the end of 2010, up from 30 million at the end of 2009.⁴⁰ With its LTE deployment, Verizon Wireless intends to provide subscribers with download speeds of 4 to 12 Mbps in a deployment expected to reach 94% of the United States population by 2013.⁴¹ In short, competition in the wireless broadband industry is thriving, and there has been no market failure that would warrant the imposition of net neutrality rules.

Furthermore, net neutrality rules are particularly problematic for wireless providers because network management on mobile networks is more complicated than on wireline networks. Because of limited spectrum resources, wireless network providers generally have less bandwidth to allocate to multiple users than wired networks. As a result, wireless providers require substantial flexibility in order to provide quality service to their customers.

In addition, wireless providers must manage their networks to deliver service in more dynamically changing environments than wired networks. The characteristics of radio propagation dictate that mobile broadband consumers are subject to constantly fluctuating quality of service and data speeds from the wireless network infrastructure. Technology known as “schedulers” are required in 3G and 4G broadband systems to manage the resource allocation over the air interference within each cell of the network. The scheduler examines each data flow, its quality of service size, the buffer for that flow and other characteristics, which is then

³⁹ *Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993*, Thirteenth Report, DA 09-54, at 5 (rel. Jan. 2009). Because “many U.S. mobile providers have integrated the marketing of mobile voice, mobile broadband and other mobile data services ...,” the Commission has found “it reasonable to analyze competitive conditions with respect to these services together.” *Id.* ¶ 7.

⁴⁰ CITI Report at 27.

⁴¹ *Id.* at 8.

compared against each device's current (and constantly changing signal to noise condition) status to determine how to best (most efficiently) utilize the resources over the air to maximize the performance and benefits for each data stream for each user. Literally millions of such decisions are made every minute in each cell of each network. Equipment vendors compete by developing equipment that handles these tasks in an efficient and cost-effective manner. This type of network innovation could be frustrated under industry-wide net neutrality regulations such as those proposed in the *NPRM*.

The need for wireless broadband providers to manage their networks is even more critical with the growth of smartphones, which has increased exponentially the amount of traffic on wireless networks and created significant congestion problems.⁴² The success of smartphones depends upon the effective management of wireless networks; as AT&T's experience with the iPhone demonstrates, network congestion may prevent consumers from using their smartphones to enjoy fully the benefits of web access, messaging, social networking, and gaming. Continued growth of smartphone usage along with more multimedia consumption by mobile wireless users will increase the challenge for wireless operators. Restricting the ability of wireless broadband providers to manage their networks – which is essential to meeting the needs of all customers – would serve no one's interests.

That the proposed net neutrality rules may be applied differently to wireless broadband operators provides no comfort.⁴³ Wireless broadband operators would be left to make judgment

⁴² See William Lehr, Massachusetts Institute of Technology, *Mobile Broadband and Implications for Broadband Competition and Adoption*, at 16 (noting that “each high-end smartphone today (e.g., an iPhone or Blackberry) has the potential to deliver 30 times the traffic of a typical basic feature handset; and each mobile data card has the potential to deliver 450 times as much traffic”) (available at <http://www.broadbandforamerica.com/sites/default/themes/broadband/images/mail/LehrMobileandBroadbandCompetition.pdf>).

⁴³ *NPRM* ¶ 154.

calls on a daily basis about whether particular network management decisions comply with the proposed net neutrality rules, only to run the risk of being second-guessed by the Commission down the road. The uncertainty of how the proposed rules would apply to wireless broadband services coupled with the Commission’s “case-by-case” adjudicatory approach is fatal to the notion that the proposed rules would “provide greater predictability.”⁴⁴

IV. PROPOSED NET NEUTRALITY RULES SHOULD NOT CHILL THE DEVELOPMENT OF MANAGED SERVICES.

The *NPRM* seeks comment regarding “managed services,” which the Commission defines as “IP-based offerings (including voice and subscription video services, and certain business services provided to enterprise customers), often provided over the same networks used for broadband Internet access service, that have not been classified by the Commission.”⁴⁵ Examples include AT&T’s U-verse service, as well as potential future offerings, such as telemedicine, smart grid, or eLearning applications.

The *NPRM* acknowledges that managed services “may provide consumer benefits, including greater competition among voice and subscription video subscribers, and may lead to increased deployment of broadband networks.” The *NPRM* further indicates that it may be “inappropriate” to apply net neutrality rules to managed services, but also notes a sensitivity “to any risk that the growth of managed or specialized services might supplant or otherwise negatively affect the open Internet.”⁴⁶

Motorola believes that managed services will be a key driver of innovation and investment in broadband networks. IP-based services hold enormous promise for consumers in

⁴⁴ *Id.* ¶ 6.

⁴⁵ *Id.* ¶¶ 148-153.

⁴⁶ *Id.* ¶¶ 148-149

terms of exciting new interactive applications and other innovations. For example, Motorola is investing in a wide range of IP-based solutions for broadband providers, including smart grid technologies and various wireless broadband applications and services.

Moreover, the continued growth of managed services will advance the Commission's goal of ensuring that the open Internet remains a platform for innovation and growth -- a goal that Motorola shares. By encouraging the delivery of managed services, the Commission will create the right incentives for operators to continue to invest in and deploy next-generation broadband networks and technologies, including technologies that enable the more efficient utilization of broadband bandwidth and the allocation of more capacity to the open Internet.

In light of these public interest benefits, the Commission should pursue policies that encourage continued investment in managed services. For example, the Commission should view the term "managed services" expansively in order to accommodate changes in technology and advancements in service delivery arrangements. By contrast, the Commission should eschew government mandates in the dynamic and fast-evolving broadband market -- such as restrictions on new and innovative business models and network management techniques -- that risk chilling further investment and innovation and undermining the Commission's open Internet goals.

In addition, revenues from managed service offerings will be necessary to help defray the costs of broadband networks. Broadband service is available to more than 90 percent of households in the United States, but a substantial percentage elect not to buy the service for a variety of reasons. It is in everyone's best interest -- network providers, content providers, and Internet application and software companies -- to find ways of making broadband connections

more affordable, and managed services are one way to do so.⁴⁷ In short, broadband providers should be encouraged to offer managed services, not discouraged from doing so.

V. CONCLUSION

For the foregoing reasons, the Commission should decline to adopt the proposed net neutrality rules in the *NPRM*.

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⁴⁷ Several economists have concluded that allowing broadband providers to recover their network costs by offering managed services would inure to the benefit of end-user consumers through lower broadband prices. *See, e.g.*, J. Gregory Sidak, “A Consumer Welfare Approach to Network Neutrality Regulation of the Internet,” 2 J. of Comp. Law and Econ. 349, 464-66 (2006); Robin S. Lee & Tim Wu, *Subsidizing Creativity Through Network Design: Zero-Pricing and Net Neutrality*, 23 J. of Econ. Perspectives 23, 61, 67 (2009) (“Of course, for a given price level subsidizing content comes at the expense of *not* subsidizing users, and subsidizing users could also lead to greater consumer adoption of broadband.”).