Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

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

FURTHER COMMENTS OF VONAGE HOLDINGS CORP.

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Dated: October 12, 2010

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Executive Summary

Vonage files these further comments in response to the Public Notice issued by the Commission seeking to expand the record on the application of open Internet rules to "Specialized Services" and wireless mobile platforms. As Vonage described in its comments and reply comments on these topics, innovation and competition enabled by the open Internet have generated tremendous economic and social benefits. Yet, market consolidation resulting in decreased levels of competition in the broadband market increases the risk that broadband network operators could engage in conduct that would put the tremendous economic and social benefits generated by the open Internet at risk. In order to ensure that innovation and competition continue to flourish on the open Internet, the Commission must adopt its proposed rules as equitably as possible across various broadband access platforms.

With respect to Specialized Services in particular, Vonage urges the Commission to proceed cautiously to ensure that any exemption granted does not undermine the Commission's goals of promoting innovation and competition. To limit the potential negative impacts that such an exemption may create, the Commission should consider defining broadband Internet access service clearly and broadly and thereby circumscribing any exemption for Specialized Services that do not otherwise meet the Commission's definition; requiring providers of Specialized Services to offer broadband Internet access service as a separate, stand-alone service offering; and requiring a broadband network service provider to offer Specialized Services to competitors at the same prices and terms as it provides them to affiliates. In this regard, Vonage provides several suggested modifications to the proposed definitions of "Broadband Internet Access" and "Specialized Service" to clarify the types of services that should be covered by the FCC's proposed rules in the first place, and to limit any Specialized Service exemption.

Vonage also believes that open Internet principles should apply equally across all broadband access platforms, including wireless services. Consumers increasingly expect that mobile wireless broadband access devices that offer Internet connectivity will deliver a full web experience to all forms of content, applications, and other Internet-based services. Failing to apply the

same principles to wireless broadband networks as applied to wired broadband networks would frustrate those consumer expectations, weaken inter-modal innovation and competition, and hinder the Commission's long-standing goal of technology neutrality. Further, the Commission has ample authority to impose such requirements under Title III of the Act.

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FURTHER COMMENTS OF VONAGE HOLDINGS CORP.

I. INTRODUCTION

Vonage Holdings Corporation ("Vonage") files these Further Comments in response to the Public Notice issued by the Federal Communications Commission ("FCC" or "Commission") in the above-referenced proceeding on the Commission's development of rules to preserve an open Internet.[1]

As discussed further herein, given their fundamental importance to American social, economic, and political activity, the proposed rules should apply with equal force to all forms of broadband Internet access service. First, the Commission should proceed cautiously with respect to Specialized Services. Without clear boundaries on what services should be included in this category, broadband network providers could position their voice and video services as "Specialized," exempting them from the Commission's proposed principles. Second, mobile wireless broadband access services should be subject to the same rules as wireline broadband access services. Consumers using wireless broadband services expect to reach applications and content of their choosing; they do not expect the provider to limit or preclude access because the device

[1] *Further Inquiry Into Two Under-Developed Issues in the Open Internet Proceeding*, GN Docket No. 09-191 & WC Docket No. 07-92, DA 10-1667 (rel. Sept. 1, 2010) ("Public Notice"). The Public Notice seeks to update the record under the 2009 Notice of Proposed Rulemaking in the above referenced dockets. *See Preserving the Open Internet, Broadband Industry Practices*, Notice of Proposed Rulemaking, GN Docket No. 09-191 & WC Docket No. 07-92, FCC 09-93 (rel. Oct. 22, 2009) ("NPRM").

in question happens to be wireless. Vonage understands that differences exist between wireline and wireless networks, but the proposed rules provide flexibility with respect to "reasonable network management" that can account for such differences. If different network management practices are indeed required in light of the ways in which wireless networks operate, this carve-out should offer adequate protection for the network operator.

II. BACKGROUND ON THE CODIFICATION OF THE OPEN INTERNET PRINCIPLES

A. Vonage Supports Codification of the Open Internet Principles With Certain Clarifications

In Vonage's comments and reply comments in this proceeding,[2] the company emphasized its support for the adoption of the four *Internet Policy Statement* principles, with minor modifications, as formal rules, and agreed with the Commission that doing so would further the Commission's goals of promoting innovation and competition and protecting users. Specifically, Vonage has recommended that the Commission modify each of the first three principles to clarify that a provider of broadband Internet access service "may not prevent *or hinder*" users from obtaining lawful content or applications or attaching lawful devices to the network, which will better capture the harm to consumers that the Commission designed these principles to prevent: degradation of service as well as a complete loss of service.

Vonage also supports adoption of the proposed nondiscrimination principle, which will promote the Commission's goals while retaining flexibility to minimize the potential harm to broadband service providers. The nondiscrimination principle will ensure that broadband network providers do not diminish the dynamic innovation process taking place at the edge of the network and determine winners and losers in the content, application and service markets by granting preferential access to favored content, application and service providers. The proposed

[2] Vonage hereby incorporates by reference its prior filings in this proceeding. *See* Comments of Vonage Holdings Corp., GN Docket No. 09-191, WC Docket No. 07-52 (filed Jan. 14, 2010) ("Vonage Comments"), Reply Comments of Vonage Holdings Corp., GN Docket No. 09-191, WC Docket No. 07-52 (filed Apr. 26, 2010) ("Vonage Reply Comments").

nondiscrimination rule will also promote competition because it will prevent broadband providers from supporting their own or favored applications, content, or services over competing applications, content, or services.[3]

Additionally, Vonage supports the Commission's transparency principle with minor modifications to make clear that it does not exempt reasonable network management from the requirement that network operators inform customers about their relevant business practices. This principle will protect the interests of consumers by giving them information to make informed purchasing decisions for broadband services, and will also promote innovation by giving content, application, and service providers the information necessary to tailor their products to work most effectively with existing network management practices.

Vonage likewise supports the Commission's proposed definition of "reasonable network management." The proposed reasonable network management definition will further the Commission's goals of promoting innovation and competition and protecting consumers' interests, and will be flexible enough to balance concerns raised over service quality management.

B. The Commission Has Authority to Codify the Open Internet Principles

As Vonage pointed out in its comments in the Broadband Framework proceeding,[4] the Commission retains authority to impose open Internet rules on broadband access service providers. The decision issued by the United States Court of Appeals for the District of Columbia Circuit in *Comcast Corp v. FCC* does not preclude the Commission from imposing reasonable regulations on Internet access network management practices. The court's decision leaves the Commission free to develop a stronger tether to its statutory responsibilities in exercising such

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[3] As part of its proposed rules, the Commission should also adopt an explicit prohibition on the imposition of *any* "access charges" in connection with broadband Internet access services. It would undermine, if not gut, the proposed rules if a network operator could impose charges on application and content providers for access to the operator's subscribers, and would extend a model that is already in the process of being phased out in the world of the public switched telephone network.

[4] *See Framework for Broadband Internet Services*, Comments of Vonage Holdings Corp., GN Docket No. 10-127 (filed July 15, 2010); *Framework for Broadband Internet Services*, Reply Comments of Vonage Holdings Corp., GN Docket No. 10-127 (filed Aug. 12, 2010).

ancillary authority. As Vonage has previously discussed, there are several substantive statutory responsibilities that support adoption of Internet access network management rules. For example, the practices of broadband Internet access network operators can have a significant effect on the public switched telephone network and the regulated services provided over it, thus establishing ancillary authority connected to Title II. Similarly, there is good reason to view Internet access network management rules as ancillary to the Commission's Title III authority over broadcast operations, and the Commission's Title III authority over spectrum used to provide mobile services is so broad that it is not clear that reliance upon *ancillary* authority is needed to regulate management of that spectrum. The Commission should also find that Section 254 grants it sufficient authority to establish a universal service support mechanism for broadband service.[5]

III. THE COMMISSION SHOULD PROCEED CAUTIOUSLY ON SPECIALIZED SERVICES

The Public Notice seeks additional comment on the application of the open Internet principles on Specialized Services.[6] Vonage supports approaches "A" (Definitional Clarity), "B" (Truth in Advertising) and "D" (Non-exclusivity for Specialized Services) set forth by the Commission in the Public Notice. Adoption of these three approaches should ensure: 1) any exemption for Specialized Services does not swallow the rule; 2) broadband access service provider market power does not result in consumer harm; and 3) competition is not diminished through exclusivity arrangements.

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[5] The Commission should also make clear that any reclassification applies *only* to broadband transmission services and does not extend to applications or content that are delivered or operate over broadband. It also essential under whatever approach the Commission takes (ancillary authority or reclassification) to establish exclusive federal jurisdiction and to preempt the field with respect to regulation of broadband Internet access services. The Commission's efforts to determine the appropriate level of regulatory oversight over broadband access services would be undermined to the extent that States and localities are left free to impose incremental (and varying) degrees of regulation on these services.

[6] *See* Public Notice, at 2-4.

A. The Commission Must Ensure That An Exemption For Specialized Services Does Not Swallow the Rule

Without clear limitations on what services should be included the category of Specialized Services, broadband network providers could position their voice and video services as "Specialized," exempting them from the Commission's proposed principles. As noted by the Commission, the open Internet protections could be weakened if providers can easily offer services that are substantially similar to broadband Internet access services, but not subject the protections afforded broadband Internet access services. In this regard, Vonage supports the Commission's approach "A" in the Public Notice of using definitional clarity to ensure that providers can not bypass the open Internet protections through self-designation. The Commission should define broadband Internet access service clearly, apply open Internet rules broadly to all forms of broadband Internet access service (as discussed further below), and specify that Specialized Services would only be those services with a different scope or purpose than broadband Internet access service, which do not meet the definition of broadband Internet access service. Such a definition must be circumscribed, clear, and designed only to capture those services that do not substantially provide broadband Internet access service.

Specifically, Vonage proposes the following definition of "Broadband Internet Access," which modifies the proposed language[7] to make clear those types of services that should and should not be covered by the Commission's proposed rules (additional language in italics):

> "Broadband Internet Access. *The provision or resale of access to a transmission medium that provides* Internet Protocol data transmission between an end user and the Internet. *For purposes of this definition, broadband Internet access does not include (i)* dial-up access requiring an end user to initiate a call across the public switched telephone network to establish a connection, *(ii) Internet Protocol-based applications, services, and content that utilize data transmission, but do not provide a transmission medium, and (iii) Specialized Services*."

[7] *See* NPRM, at 65.

This proposed modification will ensure that only broadband "access," and not content, applications, or other IP-based services that do not include a transmission medium will be subject to the Commission's proposed rules. It also excludes by reference specialized broadband transmission services.

The next issue to consider is how to define "specialized broadband transmission services" to set appropriate limits on any such exclusion from the above-proposed definition. Absent specific limits on the scope of Specialized Services, the Commission may inadvertently create a loophole that would allow providers to guarantee that their most basic service offerings receive higher service quality and prioritization over competitor services, especially those provided from the network edge. If broadband network providers have unfettered ability to designate their services as "Specialized," competing services would not be able to match the quality of service offered by the broadband network providers, which would reduce competition and innovation in the service market. Vonage, therefore, offers the following proposed definition of "Specialized Service:"[8]

> *<u>Specialized Service</u>. Any communication service by wire or radio that:*
> *(a) provides broadband data transmission:*
> *(i) between an end user and a limited group of parties or endpoints; or*
> *(ii) for a limited set of purposes or applications;*
> *(b) is not intended, marketed, or widely used as a substitute for broadband Internet access service, either individually or together with other managed or specialized services offered by the same provider; and*
> *(c) either:*
> *(i) does not traverse the public Internet at all; or*
> *(ii) is allocated bandwidth on last-mile transmission facilities that is separate from bandwidth allocated to broadband Internet access service, such that usage spikes for the managed or specialized service do not affect the amount of last-mile bandwidth available for broadband Internet access service, and only to the extent the provider also offers a broadband Internet access service that complies with Part 8 of the Commission's rules and that can be purchased on a stand-alone basis by an end user without hav-*

[8] *See* Comments of Center for Democracy & Technology, GN Docket No. 09-191 & WC Docket No. 07-52, at 49 (filed Jan. 14, 2010). Vonage's proposed definition of Specialized Broadband Transmission Service modifies the proposal previously offered by CDT in this docket.

ing to purchase any other products or services as a condition of that purchase.

This proposed definition is clear, and is limited to those services that either do not compete with broadband Internet access services, or, if they do, are subject to a stand-alone broadband Internet access service obligation to ensure that broadband Internet access service providers do not use the exemption as a means to evade the Commission's proposed open Internet rules.

B. An Exemption for Specialized Services Could Undermine Innovation and Competition

Any broad exemption for Specialized Services could undermine innovation and competition in the Internet access service and network edge application markets. For example, potential innovators in areas where broadband network providers offer Specialized Services would know that they would be at a technological disadvantage to the broadband network providers' services, and will therefore have less incentive to develop new products and services and innovate. Absent specific limits, broadband network operators may be able to create Specialized Services by adding an additional service element to an otherwise "base" product, thereby allowing the service provider to gain an advantage over competing services and applications provided on the open Internet. Incentives to innovate even in areas where broadband network providers do not currently offer Specialized Services could also be negatively impacted because potential innovators will recognize that if they create a successful service or application for use on the open Internet, a broadband network provider can copy the service or application and position it as a Specialized Service, thereby giving itself a competitive advantage over the original innovator. Finally, a broad exemption for Specialized Services could also undermine competition. Much like Microsoft incorporating ancillary products such as Internet browsers into their operating systems, broadband network operators may be able to create Specialized Services by adding an additional service element to an otherwise "base" product, thereby allowing the network service

provider to gain an advantage over competing services and applications provided on the open Internet.[9]

To limit the potential negative impact on innovation and competition from exempting Specialized Services from the open Internet principles, the Commission should also adopt approaches "B" and "D" from the Public Notice; that is, require broadband network service providers to offer broadband access services on a stand-alone basis, and to offer their Specialized Services to competitors. First, a requirement to offer stand-alone broadband Internet access service will enhance competition. Vonage has long-supported the provision of stand-alone broadband services as a means to enhance competition.[10] Stand-alone broadband service allows over-the-top VoIP providers and other application service providers to compete with traditional voice providers for customer's primary lines. Stand-alone broadband service also makes it possible for customers to "cut the cord" and use only wireless service for their voice calling needs. Competition between over-the-top VoIP providers and traditional voice providers has resulted in significant direct and indirect cost savings for consumers. Cutting the cord has also typically results in substantial cost savings for consumers. Such a condition should impose no development cost or other significant burden on any network operator, but would simply ensure that a consumer who wanted to purchase a broadband service -- *and only a broadband service* -- from that network operator could do so at a reasonable rate that does not effectively compel the purchase of accompanying bundled services (such as telephone or cable television). The practice of "tying" broadband service to other services is akin to Microsoft's incorporation of Internet browser products into their operating systems. The net effect of broadband tying is to reduce the

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[9] *See generally U.S. v. Microsoft Corp.*, Dist. D.C., Civ. Action No. 98-1232 (CKK), Final Judgment (Nov. 12, 2002), *available at*: http://www.justice.gov/atr/cases/f200400/200457.pdf.

[10] *See, e.g.*, Comments of Vonage, WC Docket No. 06-122, at 22 n.49 (filed Sept. 9, 2009); Comments of Vonage, GN Docket No. 09-51, at 4-5 (filed June 8, 2009); *Ex Parte* Letter from Brendan Kasper, Vonage Holdings Corp., to Marlene H. Dortch, FCC, GN Docket No. 09-40, at Att. pp. 4-5 (filed April 13, 2009); Comments of Vonage, Docket Nos. 05-337, 96-45, 03-109, 06-122, 99-200, 96-98, 01-92, 99-68 & 04-36, at 8-11 (filed Nov. 26, 2008).

adoption of broadband and new IP technologies by making services like those offered by Vonage economically unattractive.

Further, to the extent a stand-alone broadband access provision is insufficient to ensure adequate competition, requiring broadband network providers to offer the same protected channels used to offer their own Specialized Services to competitors at the same prices and terms as it provides to itself or its affiliates could mitigate the potential harm to innovation and competition that could be created by allowing broadband network providers to provide their own services as a Specialized service.[11] To the extent the Commission deems it necessary, the ability to provide specialized services over dedicated channels could be coupled with a requirement that equivalent channels be offered to downstream application and content providers on a competitively neutral and nondiscriminatory basis. "Absent this requirement, downstream competitors will be unable to offer services whose technical quality can be directly compared with the facilities-based provider's own integrated offerings."[12]

The Commission faced a similar issue in the *Computer Inquiries* when it differentiated between "enhanced services" that combined computer processing with basic telecommunications service (*e.g.*, dial-up Internet access) from basic telecommunications transmission services. To address the potential harm from the ILECs that provided basic telecommunications transmission service favoring their own enhanced services over services provided by nonaffiliated enhanced service providers, the Commission required ILECs to offer basic service to all enhanced service providers at the same rates and terms that it offered to their own affiliated enhanced service providers.[13] Adopting approaches "B" and "D" will promote competition and deployment of new services, and will ultimately benefit consumers

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[11] *See* Economics and Technology, Inc., ETI Views and News (Sept. 2010), *available at*: http://www.econtech.com/newsletter/september2010/september2010a2.php.

[12] *Id.*

[13] *See, e.g.*, *Second Computer Inquiry*, Final Decision, 77 FCC2d 384, ¶ 231 (1980); *Policy and Rules Concerning the Interstate, Interexchange Marketplace*, Report and Order, 16 FCC Rcd. 7418, ¶ 4 (2001) (describing the Commission's access requirements under *Computer II*).

IV. REGULATION OF WIRELINE AND WIRELESS BROADBAND ACCESS SERVICES SHOULD BE TECHNOLOGY-NEUTRAL

The Public Notice seeks comment on the application of the proposed open Internet principles to wireless mobile broadband networks[14]. Vonage respectfully submits that all of the Commission's proposed principles should apply to wireline and wireless broadband networks alike. Doing so will meet several key goals: 1) the protection and promotion of consumers interests; 2) the encouragement and expansion of innovation and competition; and 3) technology neutrality. On the other hand, treating wireless broadband networks differently than wireline networks would frustrate consumer expectations, and reduce innovation and competition. Further, the Commission has ample authority to impose such requirements under Title III of the Act.

A. The Commission's Policies Should Be Governed by Consumer Expectations

The primary consideration in this proceeding must be consumer expectation: what would a consumer expect when attempting to access an application or content over the Internet from a wireless device? The answer is clear: consumers expect to be able to view and use the applications or content of their choice (or at least those within the technical capabilities of their wireless device), and they do not anticipate that the broadband service provider will limit or preclude access to Internet-based content or applications altogether because the device happens to be wireless. Indeed, "the public communications network is now a unified interconnected network,"[15] and "consumers increasingly expect similar Internet experiences across all broadband connections."[16] Far from discouraging consumers' expectations, wireless providers are doing all they can to cultivate the impression that wireless broadband Internet service is just as capable as

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[14] *See* Public Notice, at 4-6.

[15] Comments of the National Association of State Utility Consumer Advocates, GN Docket No. 09-191, WC Docket No. 07-52 (filed Jan. 14, 2010) ("NASUCA Comments"), at 24.

[16] Comments of Skype Communications S.A.R.L., GN Docket No. 09-191, WC Docket No. 07-52 (filed Jan. 14, 2010) ("Skype Comments"), at 5; *see also* Comments of the Open Internet Coalition, GN Docket No. 09-191, WC Docket No. 07-52 (filed Jan. 14, 2010) ("Open Internet Comments"), at 36-37; FCC, Connecting America: The National Broadband Plan at § 5.1, p. 77 (2010) ("National Broadband Plan") ("These new devices drive higher data usage per subscriber, as users engage with data-intensive social networking applications and user-generated video content.")

wireline.[17] Given consumer expectations and the converging experience for wired and wireless broadband Internet service, the Commission should apply its proposed rules to wireless broadband Internet services to the same extent as they are imposed on wireline broadband Internet access services.[18] Treating wireless broadband networks differently than wireline providers would frustrate consumer expectations.

Further, applying the "Any Device" principle to wireless networks will generate substantial consumer benefits. To date the Commission has allowed wireless providers to maintain substantial control over devices used on their networks. Though wireless carriers often attempt to justify restrictions based on the need to "manage their networks," many of their restrictions are overbroad and anti-competitive.[19] Contrast the wireless market with the post-*Carterfone* wireline telecommunications market,[20] which unleashed a wave of innovation that led to the creation of new consumer devices such as fax machines, answering machines, and modems. Similar to the telephone network at the time of the *Carterfone* decision, wireless network operators today dictate which devices, applications, and services can be used over their network. As a result, compared to the rest of the world, the United States device market has fewer choices, and in many cases, the network operators in the United States disable advanced features on the devices that are available in other markets, to the detriment of consumers.[21]

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[17] *See, e.g.*, Vonage Comments, at 29 (describing mobile wireless service advertisements likening consumer wireline and wireless Internet experiences).

[18] *See* National Broadband Plan at § 3.1, p. 17 ("Video, television (TV) and broadband are converging in the home and on mobile handsets.")

[19] *See generally* Letter to Acting Chairman Michael J. Copps, FCC, from Ben Scott, Policy Director and Chris Riley, Policy Counsel, Free Press, WC Docket No. 07-52, 2 (Apr. 3, 2009) *available at*: http://fjallfoss.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=6520205185 ("Free Press April 9, 2009 Letter") (requesting FCC investigation into wireless carrier practices, including those undertaken with respect to Skype's mobile application).

[20] *Use of the Carterfone Device in Message Toll Telephone Service*, 13 FCC 2d 420 (1968).

[21] *See, e.g.*, Reply Comments of Skype Communications S.A.R.L., WT Docket No. 09-66 (filed Oct. 22, 2009) (noting the significant competitive disparities between the U.S. CMRS marketplace and other OECD markets).

B. Application of the Open Internet Principles to Wireless Broadband Access Services Will Promote Competition, Innovation and Regulatory Neutrality

Opponents to the application of the proposed rules to wireless service do not offer any convincing rationale for their position. They primarily argue that the proposed rules are unnecessary because the competitive market will address any potential harms to consumers.[22] As an initial matter, the wireless market has been subject to striking consolidation, and is largely shared among a small handful of operators.[23] The barriers to facilities-based entry into the wireless market are high given the need for sufficient spectrum[24] and associated infrastructure deployment costs.[25] In fact, the Commission found in 2006 that only 4 "nationwide" mobile telephone operators served nearly 87% of American subscribers – with AT&T and Verizon alone serving more than half of all Americans as of that date.[26] The numbers released in 2010 paint a similar

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[22] *See* Comments of Verizon and Verizon Wireless, GN Docket No. 09-191, WC Docket No. 07-52, at 59-60 (filed Jan. 14, 2010) ("[T]he wireless marketplace has been moving toward greater openness – driven not by regulation, but market forces and customer demands."); Comments of AT&T Inc., GN Docket No. 09-191, WC Docket No. 07-52, 143 (filed Jan. 14, 2010) ("AT&T Comments") ("… [W]ireless carriers now actively promote the very features, services, and applications that regulation advocates claimed were endangered.").

[23] *See Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993*, Annual Report and Analysis of Competitive Market Conditions with Respect to Commercial Mobile Services, WT Docket No. 07-71, Twelfth Report, 23 FCC Rcd 2241, 2254-2256 (2008), ¶¶ 18-19 ("2008 CMRS Market Report").

[24] *See Fostering Innovation and Investment in the Wireless Communications Market*, GN Docket No. 09-157, *A National Broadband Plan for our Future*, GN Docket No. 09-51, Notice of Inquiry, 24 FCC Rcd 11322, 11327, ¶ 25 (2009) ("One of the most complex challenges for promoting innovation in the wireless sector is making sufficient spectrum available – both in terms of frequency bands and amount of bandwidth – to support new services and new applications.")

[25] *Id*. at 11337-11340, ¶¶ 49-53. The National Broadband Plan lays plain the impact of such consolidation and the barriers to entry on the mobile broadband market: as of November 2009, "approximately 77% of the U.S. population lived in an area served by three or more 3G service providers, 12% lived in an area served by two, and 9% lived in an area served by one. About 2% lived in an area with no provider." National Broadband Plan at § 4.1, p. 39 (citations omitted). The National Broadband Plan cautions that "[t]hese measures likely overstate the coverage actually experienced by consumers, since American Roamer reports *advertised* coverage as reported by many carriers who all use different definitions of coverage." *Id*. (emphasis in original).

[26] CMRS Market Report, 23 FCC Rcd at 2254-2256, ¶¶ 18-19; *see also Sky Terra Communications, Inc., Transferor, and Harbinger Capital Partners Funds, Transferee, Applications for Consent to Transfer of Control of SkyTerra Subsidiary, LLC*, IB Docket No. 08-184, FCC File Nos. ITC-T/C-20080822-00397, *et al*., Memorandum Opinion and Order and Declaratory Ruling, ¶¶ 68-73 (rel. Mar. 26, 2010)

picture, and show that concentration in the wireless market continues to increase, up 6.5% between 2007 and 2008 using the Herfindahl-Hirschman Index (HHI) index.[27]

Thus, there is little threat to the existing nationwide wireless carriers, and the remnants of true "competition" that exist today have failed to deter wireless operators from discriminating against certain applications and content or from injecting onerous and potentially anticompetitive terms into their retail service contracts.[28] Even facilities-based competition may not address discrimination where providers have a shared interest and equal ability to exclude rival content, applications, or portals.[29]

The Commission should apply the proposed open Internet principles to all broadband platforms equally as doing so would be consistent with the FCC's goal of a unified regulatory regime for all like services. Communications regulatory policy should be technology-neutral. The Commission has classified wireless broadband services as Title I "information services,"[30] just like DSL,[31] cable modem,[32] and broadband over power line,[33] and noted that such a classifi-

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(imposing a series of conditions on transactions between the applicants and "the two largest terrestrial providers of CMRS and broadband services" in the interest of realizing benefits from "added competition" from a 4G network).

[27] *See Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993*, Annual Report and Analysis of Competitive Market Conditions with Respect to Commercial Mobile Services, WT Docket No. 07-71, Fourteenth Report, ¶ 51 (2010) ("2010 CMRS Market Report").

[28] *See* Comments of Google Inc., GN Docket No. 09-191, WC Docket No. 07-52 (filed Jan. 14, 2010) ("Google Comments").

[29] Skype Comments, at 10-11 (citing Schewick, Towards an Economic Framework for Network Neutrality Regulation).

[30] *Appropriate Regulatory Treatment for Broadband Access to the Internet Over Wireless Networks*, Declaratory Ruling, WT Docket No. 07-53, FCC 07-30, ¶ 2 (rel. Mar. 23, 2007) ("Wireless Broadband Order").

[31] *Appropriate Framework for Broadband Access to the Internet over Wireline Facilities; Universal Service Obligations of Broadband Providers; Review of Regulatory Requirements for Incumbent LEC Broadband Telecommunications Services; Computer III Further Remand Proceedings: Bell Operating Company Provision of Enhanced Services; 1998 Biennial Regulatory Review - Review of Computer III and ONA Safeguards and Requirements; Conditional Petition of the Verizon Telephone Companies for Forbearance Under 47 USC §160(c) with Regard to Broadband Services Provided via Fiber to the Premises; Petition of the Verizon Telephone Companies for Declaratory Ruling or, Alternatively, for Interim Waiver with Regard to Broadband Services Provided via Fiber to the Premises; Consumer*

cation "furthers [the Commission's] efforts to establish a consistent regulatory framework across broadband platforms by regulating like services in a similar manner."[34] By affirming that the proposed principles apply to all networks, including wireless networks, the Commission would further this important policy of technological neutrality.

C. The Commission Has the Authority to Apply Open Internet Principles to Wireless Services that Provide Broadband Internet Access

Aside from the ancillary authority that the Commission holds to impose the open Internet rules on broadband Internet access providers, Title III confers substantial authority upon the FCC with respect to the spectrum used to provide mobile services. Specifically, the Commission's holds broad authority with respect to the licensing of such spectrum under Section 301,[35] which states that the purpose of the Act is "to maintain the control of the United States over all the channels of radio transmission; and to provide for the use of such channels, not the ownership thereof, by persons for limited periods of time, under licenses granted by Federal authority… ."[36] Section 303 further clarifies the Commission's role in this statutory objective, and establishes that the Commission *shall*

> as public convenience, interest, or necessity requires … [p]rescribe the nature of the service to be rendered by each class of licensed stations and each station within any class; … [m]ake such regulations not inconsistent with law as it may deem necessary to prevent

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Protection in the Broadband Era, Report and Order and Notice of Proposed Rulemaking, 20 FCC Rcd 14853 (2005).

[32] *Inquiry Concerning High-Speed Access to the Internet Over Cable and Other Facilities; Internet Over Cable Declaratory Ruling; Appropriate Regulatory Treatment for Broadband Access to the Internet Over Cable Facilities*, Declaratory Ruling and Notice of Proposed Rulemaking, 17 FCC Rcd 4798 (2002).

[33] *United Power Line Council's Petition for Declaratory Ruling Regarding the Classification of Broadband over Power Line Internet Access Service as an Information Service*, WC Docket No. 06-10, Memorandum Opinion and Order, 21 FCC Rcd 13281 (2006).

[34] *Id.*

[35] 47 U.S.C. § 301.

[36] *Id*.

> interference between stations and to carry out the provisions of this Act; [s]tudy new uses for radio, provide for experimental uses of frequencies, and generally encourage the larger and more effective use of radio in the public interest; … [and] have the authority to prescribe the qualifications of station operators, to classify them according to the duties to be performed, to fix the forms of such licenses, and to issue them to persons who are found to be qualified … .[37]

The Commission determined in its *Internet Policy Statement* that reasonable boundaries on Internet access network management are necessary to ensure that the public interest (in the form of consumer expectations and demands) is satisfied through access to the applications, media, and content of each consumer's choosing.[38] The broad delegations of jurisdiction in Sections 301 and 303 over the licensing and use of radio spectrum should provide the Commission with ample *direct* authority to compel those who make use of such spectrum to adhere to network management requirements in doing so (for whatever purpose and without reference to whether it is a "telecommunications" or "information" service).[39] Alternatively, and at the very least, the Commission should find that it has ancillary authority aimed at ensuring that the Commission's Title III responsibilities with respect to the licensing of wireless spectrum and

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[37] *Id*. at §§ 303(b), (f), (g), and (l)(1).

[38] In fact, as the Commission noted in the *Internet Policy Statement*, Congress has made it an affirmative policy of the United States under Section 230 of the Act "to preserve the vibrant and competitive free market that presently exists for the Internet" and "to promote the continued development of the Internet." *See Appropriate Framework for Broadband Access to the Internet over Wireline Facilities; Review of Regulatory Requirements for Incumbent LEC Broadband Telecommunications Services; Computer III Further Remand Proceedings: Bell Operating Company Provision of Enhanced Services; 1998 Biennial Regulatory Review–Review of Computer III and ONA Safeguards and Requirements; Inquiry Concerning High-Speed Access to the Internet Over Cable and Other Facilities; Internet Over Cable Declaratory Ruling; Appropriate Regulatory Treatment for Broadband Access to the Internet Over Cable Facilities*; CC Docket Nos. 02-33, 01-337, 95-20 & 98-10, GN Docket No. 00-185, CS Docket No. 02-52, Policy Statement, 20 FCC Rcd 14986, ¶ 2 (2005) ("*Internet Policy Statement*") (quoting 47 U.S.C. 230(b)(1) and (2)).

[39] *See National Ass'n. of Regulatory Utility Comm'rs v. FCC*, 525 F.2d 630, 636 (D.C. Cir. 1976) (finding that Section 303 imposes "a broad public convenience, interest, or necessity standard. In cases of such broad delegations to expert agencies, the standard of review is that of the reasonableness of the conclusions reached.") (citations omitted).

ensuring "more effective use" of that spectrum are not undermined through unreasonable or discriminatory practices adopted in the guise of "network management."[40]

D. Reasonable Network Management Practices May Differ Among Broadband Internet Access Platforms

Wireless providers claim that consumer expectations and the objective of inter-modal neutrality must be subordinated to the technical requirements associated with operating a wireless network. These anti-competitive positions should be viewed with skepticism. Claims that "wireless is special" more often than not reflect a desire to protect a business model, and do not promote the public interest.[41] Moreover, such arguments largely ignore the flexibility of the Commission's proposed carve-out for "reasonable network management." The reasonable network management exemption affords the flexibility needed for wireless carriers to meet wireless-specific technical challenges. Vonage agrees that "technical characteristics of wireless networks could justify network management practices that differ from those used by wireline broadband services," and that "the [Commission's proposed open Internet Rules] appropriately takes into account such differences."[42] For example, if the potential for congestion in a shared, spectrum-dependent wireless environment calls for a different network management technique than would apply in a "last mile" wireline context,[43] nothing in the rule should preclude a

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[40] Just as the National Broadband Plan concludes that "[t]he growth of wireless broadband will be constrained if government does not make spectrum available to enable network expansion and technology upgrades," *see* National Broadband Plan at § 5.1, p. 77, the "effective use" of existing spectrum would be undermined if network operators are able to favor certain content or applications over others without a reasonable basis for doing so.

[41] *See* Vonage Comments, at 31 (citing Letter to Acting Chairman Michael J. Copps, FCC, from Ben Scott, Policy Director and Chris Riley, Policy Counsel, Free Press, WC Docket No. 07-52, 2 (Apr. 3, 2009) (requesting FCC investigation into wireless carrier practices, including those undertaken with respect to Skype's mobile application)).

[42] Skype Comments, at 5-6.

[43] *See, e.g.*, AT&T Comments, at 157-58 (describing capacity and quality-of-service challenges that may arise in spectrum that is shared by both users and cell sites). AT&T further claims that a "reasonable network management" provision will not allow network operators to keep pace with the rapidly evolving nature of wireless technology issues and the applications and content that run across such networks. *See id*. at 168-72. But the "worst case" examples given by AT&T all appear to arise out of issues that fall squarely within the "reasonable network management" categories proposed by the Commission, such as

wireless operator from taking reasonable steps to address such concerns. In fact, there appears to be little argument that "[a]ll broadband networks are not identical," and that "[r]easonable network management should be more flexible for wireless broadband providers."[44] By recognizing the inherent differences between networks, the Commission's proposed definition of "reasonable network management" helps ensure that wireless network operators can respond to their unique technical challenges, while ensuring that they are precluded from unilaterally imposing their respective views of what constitutes an "open" Internet experience.

But while "reasonable network management" should be read flexibly, it must not become so broad as to become an exception that swallows the rule. Thus, where some temporary management techniques may be "reasonable," if made permanent those solutions may become unreasonable. For example, if wireless traffic levels consistently result in congestion on a network the solution is to add capacity or identify other engineering solutions rather than to habitually or permanently restrict traffic or deny certain kinds of access. Likewise, "reasonable network management" should be applied surgically to network congestion[45] – absent an indication of some kind of "attack" or pervasive unlawful activity, there is no need to effect a change throughout the network to address congestion arising in only one part of the network.[46]

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such as congestion and harmful traffic. Moreover, Vonage supports the joint recommendations of Google and Verizon that the Commission convene technical advisory groups to help develop best practices and navigate concerns such as those presented by AT&T. Letter from Alan Davidson, Director of Public Policy, Americas, Google, and Thomas J. Tauke, Executive Vice President, Public Affairs, Policy & Communications, Verizon, to Chairman Genachowski and Commissioners Copps, McDowell, Clyburn, and Baker, FCC, GN Docket No. 09-191, WC Docket No. 07-52, at 5-6 (filed Jan. 14, 2010).

[44] *See* Google Comments, at 81.

[45] *Id*.

[46] The Commission should also make clear that prioritizing packets more sensitive to transmission delays over packets that are not sensitive to such delays (such as e-mail, non-interactive one-way video, FTP and other file transfer applications, and other similar services) can qualify as reasonable network management, as it could improve service quality and satisfy consumer expectations. Adopting a logical order of packet priority that gives greatest priority to real-time, two-way, delay sensitive applications (*e.g.*, video conferencing, VoIP, and on-line gaming, IPTV, emergency services) and lesser priority to applications that are not as sensitive to delay (*e.g.*, peer-to-peer traffic, one-way video, email, and other data transfer protocols) can allow delay sensitive applications to run more efficiently during times of network congestion without significantly impacting less delay sensitive applications. *See* George Ou,

Finally, while the emergence of new business models that charge mobile broadband customers based on their data usage may reduce mobile broadband providers' incentives to employ more restrictive network management practices that could run afoul of open Internet principles, they also demonstrate that wireless providers are capable of handling network congestion and related problems in a reasonable manner within the framework of the Commission's open Internet principles, negating arguments against applying such rules on wireless broadband services.

V. CONCLUSION

Vonage appreciates the Commission's focus on these areas, and supports the Commission's goal of preserving the open Internet. The proposed rules, with minor modifications, will ensure that consumer interests are protected, and that competition and innovation can continue to thrive on the Internet. However, the Commission should proceed cautiously with respect to Specialized Services and ensure that any exemption for such services is coupled with protections to ensure that competition not be thwarted. Further, technology neutrality dictates that wireless services should likewise be subject to open Internet principles, although Vonage believes that given the differences inherent between wired and wireless networks, different management practices may be appropriate amongst different broadband access platforms. Vonage looks forward to working with the Commission on this endeavor, and supports the flexible framework the Commission has proposed.

Managing Broadband Networks: A Policymaker's Guide, The Information Technology and Innovation Foundation, at 23, *available at*: http://www.itif.org/index.php?id=205.

Respectfully submitted,

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Dated: October 12, 2010