

**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554**

In the Matter of

Vuze, Inc. Petition to Establish Rules  
Governing Network Management Practices  
by Broadband Network Operators

WC Docket No. 07-52

**COMMENTS OF VONAGE HOLDINGS CORP.**

With over 2.3 million subscribers, Vonage is the leading provider of stand-alone interconnected VoIP service in the United States.<sup>1</sup> As a stand-alone interconnected VoIP provider, Vonage does not offer broadband connectivity to its subscribers – instead, Vonage subscribers purchase their broadband connections separately from third parties. Typically, Vonage subscribers purchase their broadband services from cable companies or telecommunications carriers that themselves offer voice services in competition with Vonage’s service. Vonage is therefore critically interested in ensuring that its competitors do not use “reasonable network management”<sup>2</sup> as a pretext to degrade the performance of Vonage’s service.

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<sup>1</sup> Vonage Ex Parte Re: E911 Requirements for IP-Enabled Service Providers, WC Docket No. 05-196 (filed February 4, 2008).

<sup>2</sup> *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*, Policy Statement, CC Docket No. 02-33; CC Docket No. 01-337; CC Docket Nos. 95-20, 98-10; GN Docket No. 00-185; CS Docket No. 02-52, 20 FCC Rcd 14986, at n. 15 (2005) (“*Internet Policy Statement*”).

Recent reports of network operators' efforts to block or degrade certain Internet applications<sup>3</sup> demonstrate that clear and enforceable limits on network operators' discretion are needed to enable competition and ensure continued freedom to innovate. But there are even more critical interests at stake for Vonage subscribers, as their Vonage service may be their only way to make a 911 call in times of emergency. The Commission must therefore make it clear that any so-called network management practice that blocks or materially degrades services or applications that provide access to 911 is presumptively unreasonable.

As the Commission has recognized, the Internet "has had a profound impact on American life," bringing consumers and the public "a forum for a true diversity of political discourse, unique opportunities for cultural development, and myriad avenues for intellectual activity," and serving as "an engine for productivity growth and cost savings."<sup>4</sup> Scholars echo the Commission's conclusions, documenting billions of dollars of cost savings and dramatic increases in productivity driven by adoption of the Internet and related technology,<sup>5</sup> and explaining that "[n]o modern phenomenon better

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<sup>3</sup> See *Vuze, Inc. Petition to Establish Rules Governing Network Management Practices by Broadband Network Operators*, Vuze Petition for Rulemaking, WC Docket 07-52, at 9-13 (filed Nov. 14, 2007) ("Vuze Petition"); *Free Press et al. Petition for Declaratory Ruling that Degrading an Internet Application Violates the FCC's Internet Policy Statement and Does Not Meet an Exception for "Reasonable Network Management,"* Free Press Petition for Declaratory Ruling, CC Docket Nos. 02-33, 01-337, 95-20, 98-10, GN Docket No. 00-185, CS Docket No. 02-52, WC Docket No. 07-52, at 7-11 (filed Nov. 1, 2007) ("Free Press Petition").

<sup>4</sup> *Internet Policy Statement* at ¶ 1.

<sup>5</sup> Hal Varian et al., *The Net Impact Study* (Jan. 2002), (available at [http://www.netimpactstudy.com/nis\\_2002.html](http://www.netimpactstudy.com/nis_2002.html)); see also Robert Crandall et al., *The Effects of Broadband Deployment on Output and Employment: A Cross-Sectional Analysis of U.S. Data*, The Brookings Institution (July 2007) (finding that "for every one percentage point increase in broadband penetration in a state, employment is predicted to increase by 0.2 to 0.3 percent per year") (available at [http://www.brookings.edu/~media/Files/rc/reports/2007/06labor\\_crandall/200706litan.pdf](http://www.brookings.edu/~media/Files/rc/reports/2007/06labor_crandall/200706litan.pdf)); Bill D. Herman, *Opening Bottlenecks: On Behalf of Mandated Network Neutrality*, 59 Fed. Comm. L.J. 103, 109 (2006) ("As neutral and therefore controlled platforms, both the Internet generally and the Web specifically have spawned a dazzling rate and range of innovation.").

demonstrates the importance of free resources to innovation and creativity than the Internet.”<sup>6</sup>

Today the barriers to entry for an entrepreneur or content creator are low, as the Internet provides an opportunity for all innovators to distribute their ideas far and wide at little expense.<sup>7</sup> This open platform has been an immensely powerful driver of social and economic benefits, bringing information, community, and educational and economic opportunity to anyone with a broadband connection. The diversity of content, services and applications available over the Internet today demonstrates the benefits of open Internet access, and highlights the importance ensuring that this platform remains open to all.<sup>8</sup>

The Commission has already taken an important step to implement our national policy of “preserve[ing] the vibrant and competitive free market” for and “promot[ing] the continued development of the Internet” by adopting its Internet Policy Statement.<sup>9</sup> This statement articulates critical principles that, if codified and enforced, can “ensure that broadband networks are widely deployed, open, affordable, and accessible to all

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<sup>6</sup> Lawrence Lessig, *The Future of Ideas* at 14 (First ed., Random House) (2001) (available at [http://thefutureofideas.s3.amazonaws.com/lessig\\_FOI.pdf](http://thefutureofideas.s3.amazonaws.com/lessig_FOI.pdf)); see also Yochai Benkler, *The Wealth of Networks* at 1-2 (2006) (discussing the emergence of a “new information environment” and its potential to “achieve improvements in human development everywhere”).

<sup>7</sup> See, e.g., Lawrence Lessig, *In Support of Network Neutrality*, 3 ISJLP 185, 188 (2007) (“Indeed, if you consider some of the most important innovations in this history of the Internet—from the development of the World Wide Web by a Swiss researcher at CERN, to the first peer-to-peer instant messaging chat service, ICQ, developed by a young Israeli, to the first web based (or HTML-based) email, HoTMaiL, developed by an Indian immigrant – these are all innovations by kids or non-Americans, outsiders to the network owners.”).

<sup>8</sup> See, e.g., Herman *supra* n. 5 at 114 (explaining that a neutral broadband network encourages innovation by “permit[ing] innovators to plan based on stable expectations”).

<sup>9</sup> 47 U.S.C. § 230(b).

customers.”<sup>10</sup> The Commission has also demonstrated its commitment to enforcement by investigating claims of VoIP port blocking, albeit by exercising Title II authority that is no longer applicable to many wireline broadband services.<sup>11</sup>

Unfortunately, the incidents cited in Vuze’s Petition suggest that the Commission’s efforts have been insufficient to deter harmful and unreasonably discriminatory conduct by network operators.<sup>12</sup> Allowing network operators to artificially restrict the market for new content, applications and services by failing to codify and enforce the principles in the FCC’s Internet Policy Statement will put the social and economic benefits of an open Internet at risk.<sup>13</sup> Perhaps most troubling, it appears that network operators are taking steps to conceal certain network management practices,<sup>14</sup> making it even more difficult for the Commission, consumers, and competitors to detect and respond if and when those practices are unreasonable.<sup>15</sup>

Network operators need not rely on clandestine or unreasonable practices to successfully manage (and recover the costs of) their networks. Tiered bandwidth pricing, for example, offers a simple way to ensure that users with a high demand for bandwidth

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<sup>10</sup> *Internet Policy Statement* at ¶ 4.

<sup>11</sup> *Madison River Communications, LLC and affiliated companies*, Order, 20 FCC Rcd 4295 (2005).

<sup>12</sup> See *Vuze Petition* at 9-13; *Free Press Petition* at 7-14; see also *Petition of Public Knowledge et al. for Declaratory Ruling Stating Text Messaging and Short Codes are Title II Services or are Title I Services Subject to Section 202 Nondiscrimination Rules*, WTB Docket 08-07, at 3-6 (filed Dec. 11, 2007) (“*Public Knowledge Petition*”).

<sup>13</sup> See Barbara van Schewick, *Towards an Economic Framework for Network Neutrality Regulation*, 5 J. on Telecomm. & High Tech. L. 329, 378 (2007) (“[T]he threat of discrimination reduces the amount of application-level innovation.”); See Herman, *Opening Bottlenecks*, *supra* note 5, at 110 (“Threats to network neutrality could reduce the level and variety of online innovation.”).

<sup>14</sup> *Free Press Petition* at 11-14.

<sup>15</sup> *Id.*

bear the true cost of that demand.<sup>16</sup> The Commission should take steps to encourage transparent pricing practices, and ensure that consumers are provided with clear and accurate notice of material limits to their broadband service.<sup>17</sup> At minimum, the Commission should require operators to disclose to their customers circumstances in which bandwidth provided may not equal advertised speeds, and should presume that network management practices that are not disclosed in this manner are not reasonable.<sup>18</sup>

Network operators that offer services like voice or video in competition with application providers may have incentives to operate their networks in a manner that blocks or materially<sup>19</sup> degrades the performance of competing applications.<sup>20</sup> For this

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<sup>16</sup> Stephen Lawson, IDG News Service, *Time Warner to Try Tiered Cable Pricing*, (Jan. 18, 2008) (available at <http://www.pcworld.com/article/id,141500-page,1/article.html>). Other providers are reportedly considering this approach. Catherine Holahan, *Time Warner's Pricing Paradox*, BusinessWeek (Jan. 18, 2008), [http://www.businessweek.com/technology/content/jan2008/tc20080118\\_598544.htm](http://www.businessweek.com/technology/content/jan2008/tc20080118_598544.htm) See also Herman, *Opening Bottlenecks*, *supra* note 5, at 141-146 (arguing that usage-sensitive pricing is a more efficient means of addressing bandwidth congestion than network management).

<sup>17</sup> For example, some operators (such as satellite providers) may simply lack the bandwidth to support certain applications over their broadband networks. Where technical limitations require nondiscriminatory limits on certain applications, those limits should be disclosed to consumers.

<sup>18</sup> See Concurring Statement of Commissioner Jon Liebowitz Regarding the Staff Report: "Broadband Connectivity Competition Policy," (available at <http://www.ftc.gov/speeches/leibowitz/V070000statement.pdf>) (noting that failure to disclose "material terms" of Internet access service such as actual connection speed or carrier interference with applications or services "could be considered 'unfair or deceptive' in violation of the FTC Act"). In spoken remarks, Commissioner Liebowitz has been even more firm, explaining that "failure to disclose such material terms and conditions [as slowing down or interfering with applications or services] should be considered unfair, deceptive, in violation of the FTC Act." Federal Trade Commission Workshop: Broadband Connectivity Competition Policy, Transcript at 142 (Feb. 13, 2007) (available at [http://www.ftc.gov/opp/workshops/broadband/transcript\\_070213.pdf](http://www.ftc.gov/opp/workshops/broadband/transcript_070213.pdf)).

<sup>19</sup> Because the process of packetizing and transmitting information generally degrades that information, only practices that "materially" degrade applications or services should be considered unreasonable. What is material will, of course, depend on the context – a 30 second delay in the receipt of an email might not be material, while a 30 second delay in the receipt of a 911 call would be.

<sup>20</sup> See van Schewick, *Economic Framework*, *supra* note 13, at 342-378 (discussing the economic rationale for discrimination or degradation by the network operator). See also, Tim Wu, *The Broadband Debate, A User's Guide*, 3 J. on Telecomm. & High Tech L. 69, 86-87 (2004) (explaining existing firms' incentives to prevent competition); Jon M. Peha, *The Benefits and Risks of Mandating Network Neutrality, and the Quest for a Balanced Policy*, 34<sup>th</sup> Telecommunications Policy Research Conference, at 9, 21 (Sept. 2006) (explaining that "[i]n the absence of competition, . . . market leaders may prefer to stifle innovation

reason, the Commission should subject network management practices that interfere with competitors to particularly careful scrutiny by adopting a rebuttable presumption that network management that results in the blocking or material degradation of a service or application that competes with a service offered by the network operator (or its affiliate) is not reasonable. Such a presumption is particularly appropriate in the context of network management, where the information necessary to demonstrate that a particular practice is reasonable is largely in the hands of the network operator.

Finally, the Commission should recognize the special harm that would arise if network management were to interfere with the reliable delivery of 911 calls. The Commission has a “longstanding and continuing commitment to a nationwide communications system that promotes the safety and welfare of all Americans.”<sup>21</sup> Consistent with this commitment, and with its forceful pursuit of reliable 911 service nationwide,<sup>22</sup> the Commission should make clear that it will not permit network operators to manage their networks in a manner that limits 911 access. Specifically, the Commission should adopt a rebuttable presumption that network management that results in the blocking or material degradation of interconnected VoIP service (or any other Internet service subject to 911 and E911 obligations under the Commission’s rules) is not reasonable.

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indefinitely” and concluding that “[p]olicymakers should pay particular attention to any attempts to protect legacy services”).

<sup>21</sup> *IP-Enabled Services; E911 Requirements for IP-Enabled Service Providers*, First Report and Order and Notice of Proposed Rule Making, 20 FCC Rcd 10245, 10248 (¶ 5) (2005) (“*VoIP 911 Order*”).

<sup>22</sup> See, e.g., *VoIP 911 Order; Wireless E911 Location Accuracy Requirements; Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems; Association of Public-Safety Communications Officials-International, Inc. Request for Declaratory Ruling; 911 Requirements for IP-Enabled Service Providers*, Report and Order, 22 FCC Rcd 20105 (2007)..

The incidents cited by Vuze and others strongly suggest that the Commission must take further steps to ensure that network operators respect the principles articulated in the *Internet Policy Statement*. Confirming the Commission's commitment to nondiscriminatory network operation, furthermore, will provide certainty in this regard and thereby encourage continued innovation and investment in Internet services and applications. It is therefore time for the Commission to codify the principles in its Internet Policy Statement and place clear and enforceable limits on "reasonable network management." Because of the importance of enabling consumers to make informed choices in the marketplace, network operators' potential incentives to discriminate against competitors, and the heightened risk to public safety posed by unreasonable discrimination against voice applications that enable 911 calling, the Commission should,

in addition to codifying the principles in its Internet Policy Statement, take the following steps:

- (1) Require network operators to disclose in their terms of use and on their public websites prominently and in plain language the circumstances in which advertised bandwidth may not be available or may in some way be limited, and adopt a rebuttable presumption that any network management practice that is not disclosed in this manner is not reasonable.
- (2) Adopt a rebuttable presumption that network management that results in the blocking or material degradation of a service or application that competes with a service offered by the network operator (or its affiliate) is not reasonable.
- (3) Adopt a rebuttable presumption that network management that results in the blocking or material degradation of interconnected VoIP service (or any other Internet service subject to 911 and E911 obligations under the Commission's rules) is not reasonable.

Respectfully submitted,



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