



# PUBLIC NOTICE

**Federal Communications Commission**  
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## **CONSUMER AND GOVERNMENTAL AFFAIRS BUREAU SEEKS COMMENT ON “NEED FOR SPEED” INFORMATION FOR CONSUMERS OF BROADBAND SERVICES**

**CG Docket No. 09-158**

**Comments Due: May 26, 2011**  
**Reply Comments Due: June 16, 2011**

Consumers rely on Internet-based applications and services that place a wide range of demands on broadband networks. Some applications, like e-mail, are generally not sensitive to network performance. Other applications, such as videoconferencing and gaming, may be affected significantly by a broadband service’s speed, latency, and jitter. Consumers seeking to make informed choices between competing broadband Internet access services require information about the speed and performance required for the range of Internet applications they intend to use.<sup>1</sup> We note that the *Open Internet Order* requires broadband providers to disclose information regarding network management practices, performance, and commercial terms of broadband services.<sup>2</sup> This *Public Notice* seeks input on the particular types of “need for speed”<sup>3</sup> information that are most useful to consumers assessing which broadband service to purchase. This *Notice* is a further step in the Commission’s ongoing effort to ensure that consumers have access to the information they need about the communications services they purchase and use.<sup>4</sup>

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<sup>1</sup> For purposes of this *Public Notice*, we use “speed” to mean “data signaling rate” as defined in Federal Standard 1037C, and expressed in “bits per second.” National Communications System Technology and Standards Division, General Services Administration Information Technology Service, *Federal Standard 1037C, Telecommunications: Glossary of Telecommunication Terms* (1996).

<sup>2</sup> The *Open Internet Order* requires “that broadband providers must, at a minimum, prominently display or provide links to disclosures on a publicly available, easily accessible website that is available to current and prospective end users and edge providers as well as to the Commission, and must disclose relevant information at the point of sale. Current end users must be able to easily identify which disclosures apply to their service offering.” *Preserving the Open Internet*, GN Docket No. 09-191, et al., Report and Order, 35-36, para. 57 (2010) (*Open Internet Order*). The Commission “decline[d] to adopt a specific format for disclosures, . . . require[d] that disclosure be sufficiently clear and accessible to meet the requirements of the rule,” and stated that it would “continue to monitor compliance with this rule, and may require adherence to a particular set of best practices in the future.” *Id.* at 36, para. 58.

<sup>3</sup> We use this term to mean the full range of performance parameters—including, for example, speed, latency, and jitter—needed to accurately characterize a retail broadband Internet access service offering.

<sup>4</sup> See, e.g., FCC, *Connecting America: The National Broadband Plan* (2010), at 46 (*National Broadband Plan*) (recommending the Commission “consider a broadband service performance disclosure item”); *Consumer Information and Disclosure*, CG Docket No. 09-158, *Truth-in-Billing and Billing Format*, CC Docket No. 98-170, *IP-Enabled Services*, WC Docket No. 04-36, Notice of Inquiry, 24 FCC Red 11380, 11390, para. 26 (2009)

(continued...)

According to the most recent available data, 66 percent of American households subscribe to broadband Internet access services.<sup>5</sup> Many consumers, however, lack information about their connection's performance and its ability to support different services and activities.<sup>6</sup> Some broadband providers advertise that their offerings support certain applications, but consumers lack standardized tools to determine which speeds and other features they need for a range of services.<sup>7</sup> As noted in the *National Broadband Plan*, providing consumers with relevant information is a "proven method to promote meaningful competition and spur innovation, both of which will generate more and better consumer choices."<sup>8</sup> The lack of such information hampers consumers' ability to compare services offered by and among broadband providers.

This *Public Notice* seeks comment on the kinds of performance-related information that will be most useful to consumers when they assess which service to purchase. The Commission and many commenters have emphasized the importance of collecting input from a broad range of stakeholders on how best to educate consumers.<sup>9</sup> Here we seek input—and particularly quantitative input—on both the costs and benefits of providing relevant information to consumers.<sup>10</sup>

We expect that the input gathered in response to this *Public Notice* will encourage industry best practices. We also expect that comments will build upon the work of the voluntary group of broadband providers, application developers, equipment manufacturers, and consumer groups that have met with the

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(*Consumer Information and Disclosure NOI*) (seeking comment on ensuring consumer access to relevant information about communications services); *Open Internet Order*, 32-37, paras. 53-61; *Comment Sought on Residential Fixed Broadband Services Testing and Measurement Solution, Pleading Cycle Established*, Public Notice, 25 FCC Rcd 3836 (2010) (noting that the Commission has contracted with SamKnows, LTD to collect data on how actual fixed broadband speeds compare to advertised performance); *Comment Sought on Measurement of Mobile Broadband Network Performance and Coverage*, CG Docket No. 09-158, CC Docket No. 98-170, WC Docket No. 04-36, Public Notice, DA 10-988 (2010) (seeking comment on similar issues regarding mobile broadband).

<sup>5</sup> Aaron Smith, *Home Broadband 2010*, 5, (Pew Internet & American Life Project, 2010) available at <http://www.pewinternet.org/~media/Files/Reports/2010/Home%20broadband%202010.pdf>

<sup>6</sup> Eighty percent of broadband consumers do not know what speed they have purchased. John Horrigan and Ellen Satterwhite, *Americans' Perspectives on Online Connection Speeds for Home and Mobile Devices*, 1, (Federal Communications Commission, 2010), at [http://hraunfoss.fcc.gov/edocs\\_public/attachmatch/DOC-298516A1.doc](http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-298516A1.doc).

<sup>7</sup> New America Foundation Comments in re *NBP PN #24*, filed Dec. 14, 2009, at 2; Dharma Dailey et al., Social Science Research Council, *Broadband Adoption in Low-Income Communities*, 25 (2010) ("No one seemed sure that they were getting what they are paying for (for example, if they were getting the speed that they should) . . .").

<sup>8</sup> *National Broadband Plan* at 44.

<sup>9</sup> See generally *Comment Sought on Broadband Measurement and Consumer Transparency of Fixed Residential and Small Business Services in the United States—NBP Public Notice #24*, GN Docket Nos. 09-51, 09-47, 09-137, 24 FCC Rcd 14120 (2009) (*NBP PN #24*); Verizon Comments in re *NBP PN #24* filed Dec. 14, 2009, at 1; AT&T Comments in re *NBP PN #24*, filed Dec. 16, 2009, at 1; New America Foundation Comments in re *NBP PN #24*, filed Dec. 14, 2009, at 2; Time Warner Cable Comments in re *NBP PN #24*, filed Dec. 14, 2009, at 1.

<sup>10</sup> See generally *NBP PN #24*

Commission to help guide its broadband speed and performance testing process, and work towards standardized measurements and disclosures.<sup>11</sup>

Specifically, we seek information on the following:

1. What are the most important service characteristics that consumers need to consider to determine their broadband performance requirements?<sup>12</sup> Are there specific characteristics—such as latency, jitter, and peak hour performance—that may be particularly important to consumers using certain kinds of applications? How should consumers be informed of the impact of features that offer users short-term speed increases?<sup>13</sup>
2. Taking into consideration costs and benefits, what is the most effective way to ensure that broadband providers inform consumers about broadband performance needs? Are voluntary standards regarding methods and formats for the disclosure of performance information the most effective way to ensure that consumers are informed? If so, how should such standards be developed? Would mandatory methods or formats be more effective?
3. What is the best way to present information regarding broadband performance needs in a concise, cost-effective manner that facilitates informed consumer choice? We have appended to this *Notice* an exhibit from a *National Broadband Plan* technical paper that presents one possible approach.<sup>14</sup> We seek comment on this approach, and invite commenters to provide others. Are there disclosures from other sectors that could be useful models for educating consumers about broadband performance needs, such as nutrition labeling on food products, fuel efficiency guides for automobiles, or energy efficiency labels for household appliances?<sup>15</sup>
4. Given the dynamic nature of broadband performance and consumer needs, how often should “need for speed” information be updated to stay current?

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<sup>11</sup> February 16, 2011 Collaborative Meeting Ex Parte (filed Feb. 23, 2011); January 26, 2011 Collaborative Meeting Ex Parte (rec. Feb. 4, 2011); November 17, 2010 Collaborative Meeting Ex Parte (rec. Dec. 1, 2011); October 20, 2010 Collaborative Meeting Ex Parte (rec. Dec. 1, 2010); September 29, 2010 Collaborative Meeting Ex Parte (rec. Oct. 8, 2010); September 8, 2010 Collaborative Meeting Ex Parte (rec. Sept. 9, 2010). In addition, the Commission has conducted several open meetings on these topics. October 21, 2010 Open Meeting Ex Parte (rec. Dec. 1, 2010); July 28, 2010 Open Meeting Ex Parte (rec. Aug. 25, 2010); July 7, 2010 Open Meeting Ex Parte (rec. Jul. 21, 2010). Presentations to these groups and meeting attendees appear as attachments to the filings.

<sup>12</sup> The Commission has provided a non-exhaustive list of specific network practices, performance characteristics, and commercial terms that effective disclosures are likely to include. *Open Internet Order* at 33, para. 56.

<sup>13</sup> See, e.g., PowerBoost, Help & Support, Comcast Customer Central, available at <http://customer.comcast.com/Pages/FAQListViewer.aspx?topic=Internet&folder=8b2fc392-4cde-4750-ba34-051cd5feacf0>

<sup>14</sup> FCC, OBI Technical Paper No. 4, Broadband Performance 9, Exh. 9 (2010), available at [http://download.broadband.gov/plan/fcc-omnibus-broadband-initiative-\(obi\)-technical-paper-broadband-performance.pdf](http://download.broadband.gov/plan/fcc-omnibus-broadband-initiative-(obi)-technical-paper-broadband-performance.pdf).

<sup>15</sup> See *Consumer Information and Disclosure NOI*, 24 FCC Rcd at 11382, 11395-96, paras. 4, 47.

5. Once “need for speed” standards and materials are developed, what are the most effective ways to get the information into the hands of consumers?
6. How can we ensure that standardized “need for speed” information is accessible for people with disabilities? Are there certain features of broadband Internet access service that may be particularly important to consumers with disabilities and therefore should be disclosed in special ways? For example, upload speed may be of particular importance to people with hearing or speech disabilities who use video relay service.
7. A variety of factors will influence a broadband consumer’s experience. Some of those factors are in the consumer’s control, some are in the service provider’s control, and some are outside of the control of both. How can these determinants of network performance best be conveyed to consumers so that they can optimize their broadband service quality?

Pursuant to sections 1.415, 1.419 and 1.430 of the Commission’s rules, 47 C.F.R. §§ 1.415, 1.419 and 1.430, interested parties may file comments on or before **May 26, 2011**, and reply comments on or before **June 16, 2011**. All filings must reference **CG Docket No. 09-158**. Comments may be filed using: the Commission’s Electronic Comment Filing System (ECFS): <http://fjallfoss.fcc.gov/ecfs>, or by filing paper copies. Electronic filers should follow the instructions provided on the ECFS website for submitting comments. In completing the transmittal screen, commenters should include their full name, U.S. Postal Service mailing address, and CG Docket No. 09-158.

Parties who choose to file by paper must file an original and one copy of each filing. Filings can be sent by hand or messenger delivery, by commercial overnight courier, or by first-class or overnight U.S. Postal Service mail. All filings must be addressed to the Commission’s Secretary, Office of the Secretary, Federal Communications Commission. All hand-delivered or messenger-delivered paper filings for the Commission’s Secretary must be delivered to FCC Headquarters at 445 12<sup>th</sup> St., SW, Room TW-A325, Washington, DC 20554. The filing hours are 8:00 a.m. to 7:00 p.m. All hand deliveries must be held together with rubber bands or fasteners. Any envelopes must be disposed of before entering the building. Commercial overnight mail (other than U.S. Postal Service Express Mail and Priority Mail) must be sent to 9300 East Hampton Drive, Capitol Heights, MD 20743. U.S. Postal Service first-class, Express, and Priority mail must be addressed to 445 12<sup>th</sup> Street, SW, Washington, DC 20554.

A copy of this document and any subsequently filed documents in this matter will be available during regular business hours at the FCC Reference Center, Portals II, 445 12<sup>th</sup> Street, SW, Room CY-A257, Washington, D.C. 20554, (202) 418-0270. This document and any subsequently filed documents in this matter may also be purchased from the Commission’s duplicating contractor at its website, [www.bcpweb.com](http://www.bcpweb.com), or by calling 1-800-378-3160. These documents may also be found by searching ECFS (insert **CG Docket No. 09-158** into the Proceeding block).

In the *Consumer Information and Disclosure NOI*, the Commission designated the *ex parte* status of the proceeding as “permit-but-disclose.” Therefore, any presentations related to this *Public Notice* will also be designated as such.<sup>16</sup>

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<sup>16</sup> Pursuant to 47 C.F.R. § 1.1200 *et. seq.*, this matter shall be treated as a “permit-but-disclose” proceeding in accordance with the Commission’s *ex parte* rules. Persons making oral *ex parte* presentations are reminded that memoranda summarizing the presentations must contain summaries of the substance of the presentations and not merely a listing of the subjects discussed. More than a one or two sentence description of the views and arguments presented is generally required. Other rules pertaining to oral and written *ex parte* presentations in permit-but-disclose proceedings are set forth in 47 C.F.R. § 1.1206 (b).

To request materials in accessible formats for people with disabilities (Braille, large print, electronic files, audio format), send an e-mail to [fcc504@fcc.gov](mailto:fcc504@fcc.gov) or call the Consumer and Governmental Affairs Bureau at (202) 418-0530 (voice), (202) 418-0432 (TTY).

For further information, please contact Ellen Satterwhite, Consumer and Governmental Affairs Bureau, at (202) 418-3626 or [ellen.satterwhite@fcc.gov](mailto:ellen.satterwhite@fcc.gov).

**- FCC -**

## APPENDIX

### Example of “Need For Speed” Information Presentation<sup>17</sup>

	Content type	Example applications/ content providers	Actual download speed demands (Mbps)	
<b>Non real-time</b>	<ul style="list-style-type: none"> <li>Basic download (or upload) usage</li> </ul>	<ul style="list-style-type: none"> <li>Basic email, E-book download</li> <li>Web-browsing, job search, government website access</li> </ul>	0.1-0.3 <i>(Speed impacts down/up time and render)</i>	
	<ul style="list-style-type: none"> <li>Large download (or upload) usage</li> </ul>	<ul style="list-style-type: none"> <li>Advanced web browsing, iTunes</li> <li>Social Networking, P2P, etc</li> <li>Medical Records download/ sharing</li> </ul>	0.5-5+ <i>(Speed impacts down/up time and render)</i>	
<b>Near-real-time</b>	<ul style="list-style-type: none"> <li>Streamed audio</li> </ul>	<ul style="list-style-type: none"> <li>PBS, Rhapsody</li> </ul>	0.1-0.3	
	<ul style="list-style-type: none"> <li>Basic streamed video</li> </ul>	<ul style="list-style-type: none"> <li>Consumer generated education videos</li> </ul>	0.3-0.5	
	<ul style="list-style-type: none"> <li>SD-quality streamed video</li> </ul>	<ul style="list-style-type: none"> <li>Streamed classroom lectures</li> <li>Hulu</li> </ul>	1-5	
	<ul style="list-style-type: none"> <li>HD-quality streamed video</li> </ul>	<ul style="list-style-type: none"> <li>Broadcast quality HDTV</li> <li>HD streamed University lecture</li> </ul>	5-10+	
<b>Real-time</b>	<ul style="list-style-type: none"> <li>Voice over the Internet (VOIP)</li> </ul>	<ul style="list-style-type: none"> <li>Skype, Vonage</li> </ul>	0.1-0.3	Symm.
	<ul style="list-style-type: none"> <li>Basic interaction</li> </ul>	<ul style="list-style-type: none"> <li>Aleks (Online interactive education)</li> <li>Pogo online games</li> </ul>	0.3-0.5	Symm.
	<ul style="list-style-type: none"> <li>Video-conference + VOIP</li> </ul>	<ul style="list-style-type: none"> <li>Lower definition telemedicine</li> </ul>	0.6-1.0	Symm.
	<ul style="list-style-type: none"> <li>IP TV</li> </ul>	<ul style="list-style-type: none"> <li>IPTV</li> </ul>	1-5+	Symm.
	<ul style="list-style-type: none"> <li>2-way advanced video interaction</li> </ul>	<ul style="list-style-type: none"> <li>Real-time interactive experiences &amp; gaming</li> </ul>	2-5+	Symm.
	<ul style="list-style-type: none"> <li>Enhanced video teleconferencing (HD quality or similar)</li> </ul>	<ul style="list-style-type: none"> <li>Video teleconference and TeleLearning</li> <li>HD Telemedicine (diagnostic imaging)</li> </ul>	5-10+	Symm.

Sources: FCC analysis, California Broadband Task Force report, Adtran FCC submission, Speedmatters.com report, Technet Broadband Primer, ITIF report March 2009, Discussions with content providers

<sup>17</sup> We note that the division of applications into real time, near real-time, and non-real time can imply performance factors such as latency, jitter, etc., that are not directly addressed by this chart.