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# What's The Scorecard? A Review of Current Efforts to Define Broadband Services

By James N. Horwood and Ruben D. Gomez

**E**veryone generally agrees that promoting more widespread deployment of broadband services is an important public policy goal. But to have a meaningful goal, “broadband” must be appropriately defined. No shortage of activity exists – in Congress, state legislatures, the Federal Communications Commission (“FCC” or “Commission”) or among the public-at-large – regarding efforts to develop a more useful and modern definition of broadband. An immediate reason for this activity is the need to improve the FCC’s current data-gathering methodology for assessing the availability of broadband service. For many, however, the quest for the “right” definition is a necessary step in developing a cohesive national policy for promoting broadband availability. What is a local government to make of this noise? What special considerations should the FCC have in mind as it revisits a definition that is believed by most to have far outlived its usefulness? The Commission needs to adopt a 21st century definition to replace the 20th century definition now in place.

## FCC Proceedings

The Commission currently defines broadband by reference to its “high speed services” and “advanced services” definitions. The Commission defines “high speed services” as services providing data rates in excess of 200 kbps in at least one direction; “advanced services” refers to the subset of high-speed services offering data rates in excess of 200 kbps in both download and upload directions. The definition was adopted in 1999, a time when delivery capability, applicable technologies, and consumer expectations were very different from today.<sup>1</sup> At 200 kbps, the current standard assumes transmission rates far slower than what is now generally available. Part of the challenge in revising operational definitions for broadband centers on identifying the suitable benchmarks to be used by government decision makers.

The FCC squarely identified the question of defining appropriate broadband benchmarks in two recent proceedings. On April 16, 2007, the Commission issued a Notice of Proposed Rulemaking (“NPRM”) seeking comments on “how the Commission can continue to acquire the information it needs to develop and maintain appropriate broadband policies.”<sup>2</sup> Among other things, the NPRM asked whether the Commission should modify the speed tier currently used on Form 477, perhaps the principal source of broadband information for the Commission. Form 477 contains “speed” categories where providers

report the maximum transfer rates they are *making available* to broadband customers (they are not required to measure the actual information transfer rate experienced by end users). The NPRM also asked whether Form 477 would benefit from a “higher or more varied” measurement of broadband speed.

On April 16, 2007, the Commission also issued its Fifth Notice of Inquiry (“Fifth NOI”) required by Section 706 of the Telecommunications Act of 1996, into “whether advanced telecommunications capability is being deployed to all Americans in a reasonable and timely fashion.”<sup>3</sup> The Fifth NOI, linked to the NPRM, recognized rapid technological changes in the marketplace, and sought feedback on how to define “advanced telecommunications capability.” The Fifth NOI asked whether the current definition should be revised to require a speed higher than 200 kbps in one or both directions. There is no real dispute that the answer is “yes.” But at what speed?

There is widespread (though not unanimous) support for the position that any future definition must reflect a standard high enough to capture today’s higher speeds. Senator Rockefeller has suggested that next-generation broadband services in the United States may offer 100 mbps connections in each direction.<sup>4</sup> Comcast, for example, has announced that its next generation of cable modems will allow customers to download at speeds of 150 mbps.<sup>5</sup>

Verizon continues to roll out its fiber technology capable of delivering download speeds of 50 mbps today and expected to offer up to 100 mbps in the future.<sup>6</sup> By comparison, consumers in South Korea and Japan today routinely access broadband connections with speeds up to 100 mbps.

Revising the current 200 kbps standard, however, may require more than merely raising the definitional speed. The Fifth NOI also asked whether any other attributes, besides transmission speed, might be relevant to a proper definition for broadband. There is no question that a full measure of consumers’ broadband access requires considerations of *quality* and *quantity* of service.<sup>7</sup> The Commission’s Fourth Report to Congress (rel. Sep. 9, 2004) described how the first-generation definition of broadband at 200 kbps “can download image-rich web pages without waiting ...” and permits users to “play interactive games, use VoIP applications, listen to on-line music, and compressed video clips.”<sup>8</sup> Several comments submitted in the Fifth NOI emphasized that first-generation speeds satisfied the needs of many residential end users who might decline a more expensive, faster alternative. From a quantity or “numbers tell the story” perspective, the practical suggestion is that if the definitional speed is raised higher than 200 kbps, any already-satisfied consumers (at 200 kbps downstream) will not be captured under the higher standard, and the Commission risks

<sup>1</sup> *In re Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, and Possible Steps to Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996*, Report, 14 FCC Rcd 2398 (1999) at 2406, ¶ 20.

<sup>2</sup> *In re Development of Nationwide Broadband Data to Evaluate Reasonable and Timely Deployment of Advanced Services to All Americans, Improvement of Wireless Broadband Subscriber Data, and Development of Data on Interconnected Voice over Internet Protocol (VoIP) Subscriber Data*, Docket No. 07-38, Notice of Proposed Rulemaking, 22 FCC Rcd 7760 (2007) (“NPRM”) at 7760, ¶ 1.

<sup>3</sup> *In re Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, and Possible Steps to Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996*, Docket No. 07-45, Notice of Inquiry, 22 FCC Rcd 7816 (2007) (“Fifth NOI”), at 7816, ¶ 1.

<sup>4</sup> S. Res. 191, 110th Cong. (as introduced and referred to the S. Comm. on Commerce, Science, and Transp., May 8, 2007).

<sup>5</sup> NATOA Comments filed in Docket 07-45 (May 16, 2007) (“NATOA Comments”) at 7; Verizon Comments filed in Docket 07-45 (May 16, 2007) (“Verizon Comments”) at 14, n.40 (discussing Comcast’s presentation at the May 2007 NCTA show).

<sup>6</sup> Verizon Comments at 7.

<sup>7</sup> See NATOA Comments at 6-9.

<sup>8</sup> *Availability of Advanced Telecommunications Capability in the United States, Fourth Report to Congress*, 19 FCC Rcd 20540 (2004) at 20551-20553.

undercounting (if 200 kbps is the “right” speed) when assessing market penetration and broadband deployment.

Alternatively, if *quality* of service provision ranks most highly among the criteria, then speed still needs to be weighed more than other attributes because a faster definitional speed permits the use of higher-grade technologies (e.g., video conferencing, telemedicine). The practical appeal of a quality-seeking standard is that it will prod broadband providers to offer better, faster services in line with what most countries in Asia and Europe are experiencing. This will benefit those consumers and local governments currently receiving “high speed” services at the 200 kbps standard that are poised to take advantage of faster broadband connections.

Stepping back for a moment, any number of possible definitions would represent a stark improvement over the 200 kbps standard. Part of the problem with shaping a new definitional standard, however, is the critical lack of reliable data collected by government on broadband deployment. One commonly cited example of the flawed methodology used by the Commission centers on the use of postal zip codes to track broadband penetration: a measure under which the presence of just one subscriber permits a provider to report that broadband is available throughout that zip code area. An undercurrent common to the shaping of any definitional proposal therefore focuses attention on the need for better data-gathering by the FCC. In light of this, the Commission needs to revise its current definitional standard in the context of several ongoing legislative efforts to encourage broadband deployment.

### Legislative Activity

Two pending bills in particular seek to strengthen the Commission’s data

gathering methodologies. Senator Inouye (D-HI), Chairman of the Senate Commerce, Science and Transportation Committee, introduced S.1492, a bill to “improve the quality of Federal and State data regarding the availability and quality of broadband services and to promote the deployment of affordable broadband services to all parts of the Nation.” S.1492 received Committee approval in July 2007. Its companion bill in the House, the Broadband Census of America Act (Committee Print) introduced by Rep. Markey (D-MA), Chairman of the House Subcommittee on Telecommunications and the Internet, was given initial approval on October 10, 2007, and is ready for consideration by the full House Energy and Commerce Committee. It provides for “a comprehensive nationwide inventory of existing broadband service” and calls for a national broadband inventory map and directs the Commission to conduct surveys on speed, availability and other attributes of their broadband services. Rep. Markey’s bill also authorizes \$12 million per year to carry out provisions of this legislation (with no less than \$8 million to be reserved for grants to states and local governments).

Other bills provide incentives for greater broadband deployment. Sen. Durbin (D-IL) introduced S.1190, a bill “to promote the deployment and adoption of telecommunications services and information technologies.” Otherwise known as the “Connect the Nation Act” it “provides for grants to develop and implement statewide initiatives to identify and track the availability and adoption of broadband services within each state.” Its companion bill in the House, H.R.3627, was introduced by Rep. Space (D-OH). Sen. Clinton (D-NY) has introduced S.1032, which creates an office of rural broadband initiatives to administer loans and

serve as a clearinghouse for ideas on advancing broadband deployment at the state-local level; its companion bill in the House, H.R. 2174, was introduced by Rep. Salazar (D-CO).

### Conclusion

Hindsight suggests that a singular focus on the speed of connections as the defining characteristic of broadband is a relic of the Commission’s previous Section 706 reports to Congress. At the time, speed was the single defining attribute marking the transition from dial-up to broadband internet access. Rapidly evolving technology has changed the focus. Now the challenge is to establish criteria that will be meaningful in today’s evolving broadband landscape. An improved data-gathering methodology will ease that task by allowing government and other stakeholders to make decisions based on reliable broadband availability data. The goal of any Commission standard, though, should remain constant in one fundamental respect: to adopt definitions and establish reporting categories that enhance the total public benefit rather than simply minimizing the potential data-gathering and reporting burden on any individual broadband provider or government agency. The standard – especially one that will possibly set the default baseline for efforts well underway to develop a cohesive national broadband policy – should recognize that although private transactions may correct deficiencies overlooked by the current or eventual Commission standard (as some private industry actors suggest), they may not always solve the problem. In fact, to the extent that broadband phone and cable providers enjoy a degree of duopoly power, less incentive may exist for them to roll out services (and make the infrastructure investments necessary) to exceed what is (for them) the cozy current standard.

<sup>9</sup> GovTrack.us. S. 1190—110th Congress (2007): Connect The Nation Act, *GovTrack.us (database of federal legislation)* <<http://www.govtrack.us/congress/bill.xpd?bill=s110-1190&tab=summary>> (accessed Oct 17, 2007).

This is why the Commission needs to be guided by objectives that are neither excessively aspirational nor complacent.

These objectives will depend on the purpose for the standard (or standards). A floor, or baseline, for downstream delivery (to provide entertainment and information) may be one goal, while a more robust standard for both upstream and downstream delivery would be a more appropriate goal for communication between users. Regardless of what precise speed the Commission settles upon, it should underpin a workable standard that will lend itself to driving realistic assessments of broadband's progress. By this measure, Japan's and South Korea's broadband levels are probably too aspirational as a baseline standard today. But those levels are relevant to those who want to be able to have a system that provides robust educational, business development, and medical opportunities.<sup>10</sup> The linchpin of any future revised definition is to allow for periodic review to refresh and revise the definition as technology breakthroughs and consumer expectations continue to

evolve. Said another way, the standard should never remain as static as it has since 1999, when 200 kbps was first adopted by the Commission (and which remains unchanged even though it is hopelessly outdated).

The Commission needs to continue to recognize the unprecedented benefits of broadband at the local level and consider as well the special challenges that routinely face local governments trying to take advantage of improved technology. ■

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<sup>10</sup> Senate Resolution 191 discussed earlier would "establish[] a national next-generation broadband network goal to bring, by 2015, universal and attainable access to networks with the capability of transmitting data at 100 megabits per second, bidirectionally ..."