UNITED STATES DEPARTMENT OF COMMERCE
The Assistant Secretary for Communications and Information
Washington, D.C. 20230

January 4, 2010

The Honorable Julius Genachowski
Chairman
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

Re: National Broadband Plan, GN Doc. No. 09-51

Dear Chairman Genachowski:

The National Telecommunications and Information Administration (NTIA) welcomes the opportunity to express the Administration's views on the development of the National Broadband Plan. The Commission's fundamental challenge is to promote the unregulated, market-driven innovation that has been the hallmark of the Internet economy, while also encouraging continued investment in and deployment of the open communications networks on which that economy rests. Achieving this balance is vital in order to realize the Administration's over-riding goal of connecting all Americans to the Internet at broadband speeds and assuring continued innovation in Internet content and services for consumers, businesses, and all levels of government. This letter presents the Administration's views on the proper balance between regulation and market forces in the Internet environment. Our views are informed by the *ex parte* filing in this proceeding of the Antitrust Division of the United States Department of Justice analyzing the competitive dynamics in the broadband Internet access marketplace.[1]

In less than two decades, the Internet has transformed the way in which Americans gather and disseminate information, engage with their government and the political process, manage their social relationships, work, and shop. In 2008, about 190 million Americans spent, on average, more than 60 hours a month on the Internet at home or at work.[2] Similarly, the Internet has helped businesses expand and streamline their supply chains; find, market, and serve customers; and reduce costs and increase productivity. The benefits to the U.S. economy are substantial: one study estimated that the advertising-supported portions of the Internet alone directly and indirectly employ some three million people and create approximately $444 billion in value annually.[3]

The Internet also has sharply reduced barriers to entry and spurred innovation in markets ranging from retail to new media. It provides a communications platform that has enabled virtually anyone with a good idea or an interesting point of view to find and build a customer

[1] *Ex Parte* Submission of the United States Department of Justice in GN Docket No. 09-51 (filed Jan. 4, 2010) (*DOJ Ex Parte*).
[2] J. Deighton, J. Quelch, Hamilton Consultants, Inc., "Economic Value of the Advertising-Supported Internet Ecosystem, at 24-25 (June 2009) ("Economic Value"), http://www.iab.net/media/file/Economic-Value-Report.pdf (citing estimates from Nielsen Online, comScore Media Metrix, Harris Interactive, and eMarketer).
[3] *Id*. at 4.

base or an audience. Jeff Bezos launched Amazon as a crude website in July 1995; in 2008, the company had total sales in excess of $19 billion and nearly 21,000 employees.[4] Google was founded a decade ago in a Silicon Valley garage; in 2007 the firm earned more than $16 billion and had more than 15,000 employees.[5]

The experiences of those two companies are not unique. The Internet has enabled hundreds of other firms to create and to participate in an ever-changing, intensely competitive service and application marketplace that piques and satisfies the interests of American consumers. It is not surprising, then, that Congress more than a decade ago declared that the "vibrant and competitive" Internet marketplace should be "unfettered by Federal or State regulation."[6]

The Internet's innovation ecosystem is built on, and thus depends upon, a communications infrastructure operating at broadband speeds, with robust bi-directional service. Indeed, the social and economic fruits of the Internet economy are the result of a virtuous cycle of innovation and growth between that ecosystem and the underlying infrastructure – the infrastructure enabling the development and dissemination of Internet-based services and applications, with the demand and use of those services and applications by consumers and businesses driving improvements in the infrastructure which, in turn, support further innovation in services and applications. And, of course, rivalry among the various firms providing broadband services also has expanded the availability and capabilities of that underlying infrastructure.

The National Broadband Plan has a vital role to play in realizing the Administration's vision to spur continued innovation in our information-driven society; a more accessible, transparent, and democratic government; and a new wave of technology-driven innovation that will enrich our economic life and make the United States more competitive in global markets.[7] The Plan properly focuses on the development of that broadband infrastructure. The Commission's task is to seek maximum reliance on market forces where possible and deploy government oversight where needed. We must identify policies that both promote "faster and more widely available broadband" infrastructure and, in the words of President Obama, "preserve the fairness and openness that led to the flourishing of the Internet in the first place."[8]

Many Residential Subscribers Currently Lack Choices in Broadband Providers

The United States has benefited from rapid growth of broadband Internet access services over the past decade. The Commission's most recent figures record some 88.4 million

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[4] *See Amazon.com 2008 Annual Report* at 4, 19 (Apr. 2009), http://phx.corporate-ir.net/External.File?item=UGFyZW50SUQ9MjAyN3xDaGlsZElEPS0xfFR5cGU9Mw==&t=1; Christine Frey and John Cook, "How Amazon.com survived, thrived and turned profit," *Seattle Post-Intelligencer*, Jan. 28, 2004, *available at* http://www.seattlepi.com/business/158315_amazon28.html.

[5] "Economic Value," *supra* note 2, at 38.

[6] 47 U.S.C. § 230(b)(2) (1996).

[7] *See generally* Office of Science and Technology Policy, "Technology," http://www.ostp.gov/cs/issues/technology.

[8] Remarks by the President on Innovation and Sustainable Growth, Hudson Valley Community College, Troy, NY, Sept. 21, 2009, http://www.whitehouse.gov/the_press_office/Remarks-by-the-President-on-Innovation-and-Sustainable-Growth-at-Hudson-Valley-Community-College (President's Remarks).

broadband lines in service as of July 2008, as compared to less than 2 million in December 1999.[9] More than one-half of those lines provide transmission speeds of 2.5 megabits per second (Mbps) downstream.[10]

Yet, these impressive national figures obscure the fact that locally, where residential consumers make their purchasing decisions, they frequently have limited, and often no, choice among broadband Internet access service providers. The Commission's recent Broadband Status Report indicates that "[a]t most 2 providers of fixed broadband services will pass most homes."[11] Furthermore, "50-80% of homes may get speeds they need only from one provider."[12] Thus, even in areas where two wireline networks are deployed, consumers seeking to use the most bandwidth-intensive applications (*e.g.*, high-quality, streaming video) may only have a single viable choice of provider.[13]

The economics of providing wireline broadband Internet access service suggest that market forces alone may not produce additional entry. Fixed broadband infrastructure, unlike the Internet-based services and applications that ride upon it, involves very substantial sunk costs and rather low marginal costs associated with adoption and usage by incremental households.[14] Because of the large fixed and sunk costs of wireline networks, it is likely that additional wired competitors will enter only those markets with the greatest density of users.[15]

A key question looking forward is whether emerging "fourth generation" (4G) wireless services will have price and performance characteristics that might make them a viable alternative to wireline services for a significant number of customers.[16] Although early

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[9] *See* "High-Speed Services for Internet Access: Status as of June 30, 2008," Table 4 (July 2009) (*2009 Report*), http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-292191A1.pdf; "High-Speed Services for Internet Access: Status as of June 30, 2001," Table 2 (Feb. 2002), http://www.fcc.gov/Bureaus/Common_Carrier/Reports/FCC-State_Link/IAD/hspd0202.pdf . The statistics are for "advanced" service lines, which support transmission speeds of at least 200 kilobits per second in both directions. Given the evolution of the market over the last decade, that seems a reasonable minimum benchmark for identifying "broadband" services. The Commission recently used the term "basic broadband" to refer to services with an information transfer rate greater than 768 kilobits per second (kbps) and less than 1.5 megabits per second in at least one direction. *See Development of Nationwide Broadband Data to Evaluate Reasonable and Timely Deployment of Advanced Services to All Americans*, Report and Order and Further Notice of Proposed Rulemaking, 23 FCC Rcd 9691, 9701, n.66, *recon.*, 23 FCC Rcd 9800 (2008). For purposes of its Broadband Technology Opportunities Program, NTIA defines "broadband" to include services offering two-way data transmission at speeds of at least 768 kbps downstream and at least 200 kbps upstream. *See Notice of Funds Availability (NOFA) and Solicitation of Applications, Broadband Technology Opportunities Program and Broadband Initiatives Program*, 74 Fed. Reg. 33104, 33108 (2009), *available at* http://www.ntia.doc.gov/frnotices/2009/FR_BBNOFA_090709.pdf.

[10] *2009 Report*, *supra* note 9, Table 5.

[11] "Commission Open Meeting Presentation on the Status of the Commission's Processes for Development of a National Broadband Plan," at 135 (Sept. 29, 2009), http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-293742A1.pdf.

[12] *Id*. In other words, although there may be multiple providers of above-dialup speeds in a community, many of them will not offer speeds sufficient to support the services and applications that most users demand.

[13] *See DOJ Ex Parte*, at 13.

[14] Additionally, the costs of that infrastructure can be shared to a considerable degree with other services, notably multichannel video and traditional voice services.

[15] *See DOJ Ex Parte* at 9, 13. It is conceivable that some less densely populated areas may possess certain characteristics (*e.g.*, high income levels) that could attract and sustain multiple wireline providers.

[16] Satellite service does not appear likely to provide significant competition to other broadband technologies for the

projections from industry are encouraging, it is premature to predict when, or even whether, these wireless broadband services will provide the competitive alternatives that can benefit consumers of all services, including wireline. The fact that some wireline customers seem willing to switch to wireless service suggests that the two offerings could become part of a broader marketplace. [17]

The next several years will test the limits of wireless broadband, including the adequacy of in-building coverage and the ability of wireless networks to accommodate large numbers of data-intensive users. It remains to be seen, for example, whether WiMax and Long Term Evolution (LTE) technology services will be offered at prices and on terms (*e.g.*, speed and quality) that make them attractive to wireline users. The Commission also must keep in mind that the two largest US wireless providers, Verizon and AT&T, also offer wireline services in major portions of the country, raising the question of whether these providers will market these services as replacements for wireline services, either within the region where they provide wireline services or at all.[18] Finally, we need to be mindful of how future developments in the applications and Internet services markets can affect demand for broadband. Are there "killer" applications on the horizon that will be supported by wireline providers but not wireless?

Possible Policy Responses

Two aspects of local broadband service markets require careful public policy attention. First, in many areas, the broadband market is highly concentrated. And second, the major broadband providers also offer services that are subject to competition from services and applications that rely on broadband facilities to reach prospective customers. Broadband service providers have an incentive to use their control over those underlying facilities to advantage their value-added services or to disadvantage competitive alternatives.[19] In the absence of robust broadband competition, those providers may be able profitably to act on those incentives to the detriment of consumers and competition. The Commission should explore ways to understand and address these concerns.

Promoting Competition

The surest way to deter undesirable conduct by incumbent broadband service providers is to increase local broadband Internet access service competition, because of the competitive

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vast majority of Americans. *See id.* at 12 n.27.

[17] *See id.* at 10-11.

[18] *See id.* at 8, 10-11.

[19] *See, e.g., Formal Complaint of Free Press and Public Knowledge Against Comcast Corp. for Secretly Degrading Peer-to-Peer Applications,* Memorandum Opinion and Order, 23 FCC 13028, 13030, ¶ 5 (2008), *appeal pending,* No. 08-1291 (D.C. Cir. filed Sept. 4, 2008) ("Peer-to-peer applications [such as those with which Comcast had interfered] have become a competitive threat to cable operators such as Comcast because Internet users have the opportunity to view high-quality video . . . that they might otherwise watch (and pay for) on cable television. Such video distribution poses a particular competitive threat to Comcast's video-on-demand ("VOD") service."); *id.* at 13055, ¶ 47 ("Moreover, Comcast's practice selectively blocks and impedes the use of particular applications, and we believe that such disparate treatment poses significant risks of anticompetitive abuse."); *Madison River Communications, LLC*, Order, 20 FCC Rcd 4295 (2005) (telephone company blocked transmission of VoIP alternative to its voice offerings).

market's demonstrated power to lower prices, improve service, and spur innovation.[20] The Commission, of course, has a long-held preference for advancing regulatory goals through structural regulation designed to expand competition in communications markets.[21] Given the projections of explosive growth in wireless bandwidth requirements, a primary tool for promoting broadband competition should be to make more spectrum available for broadband wireless services.[22] The Administration supports exploring both commercial and government spectrum available for reallocation, and favors a spectrum inventory to determine how radio frequencies are currently being used and by whom. The Commission and NTIA also should explore ways to create incentives for more efficient use of limited spectrum resources, such as dynamic or opportunistic frequency sharing arrangements in both licensed and unlicensed uses. NTIA also supports research and development that leads to innovative new spectrum access technologies, because these can spur a new round of innovation that will increase domestic spectrum efficiency through sharing and opportunistic use. New and more efficiently used spectrum can make a significant contribution to a more competitive broadband Internet access marketplace. Wireless services for Internet access are tending toward smaller and smaller cell sites, each of which requires connection to national backbone networks. Therefore, along with providing new spectrum for broadband uses, it will remain important for the Commission to assure competitive access to high capacity wireline backhaul facilities.

When new spectrum becomes available for licensed uses the question will become how to assign it to broadband providers in a way that will generate the greatest benefits to the consumers of those services.[23] Under most circumstances, the best approach is to auction the new frequencies, on the theory that the highest bidder – the one with the highest private value – will also provide the greatest benefits to consumers.[24] In the presence of market power, however, the bidders with the highest private value may be incumbents intent on forestalling new entry that will compete for the incumbents' existing customer base.[25] Based on the Department of Justice's experience with other highly concentrated telecommunications markets, NTIA agrees with the Department that "there are substantial advantages to deploying newly available spectrum in order to enable additional providers to mount stronger challenges to broadband incumbents."[26]

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[20] *See, e.g., DOJ Ex Parte* at 14-19.

[21] *See, e.g., Matter of Service Rules for the 698-746, 747-762 and 777-792 MHz Bands*, Second Report and Order, 22 FCC Rcd 15289 (2007); *Implementation of Section 621(a)(1) of the Cable Communications Policy Act of 1984 as amended by the Cable Television Consumer Protection and Competition Act of 1992*, Report and Order and Further Notice of Proposed Rulemaking, 22 FCC Rcd 5101 (2006), *aff'd sub nom. Alliance for Community Media v. FCC*, 529 F.3d 763 (6th Cir. 2008) ; *MTS/WATS Market Structure*, Third Report and Order, 93 FCC 2d 241, *recon.*, 97 FCC 2d 682 (1983), *further recon.*, 97 FCC 2d 834, *aff'd in relevant part sub nom. National Ass'n of Reg. Util. Comm'rs*, 737 F.2d 1095 (D.C. Cir. 1984); *Carterfone*, Decision, 13 FCC 2d 420, *recon. denied*, *14 FCC 2d 571 (1968).*

[22] *See generally*, "Comment Sought on Spectrum for Broadband," NBP Public Notice # 6, GN Docket Nos. 09-47, *et al*. (Sept. 23, 2009), http://hraunfoss.fcc.gov/edocs_public/attachmatch/DA-09-2100A1.pdf.

[23] With advances in dynamic or opportunistic sharing technologies (*e.g.*, "smart" radios), the Commission should explore the potential for expanded unlicensed spectrum use.

[24] *See DOJ Ex Parte* at 22.

[25] *See id.* at 22-23.

[26] *See id*. at 23.

Addressing Provider Behavior

Given the slow progress in the development of vigorous competition in local broadband markets to date, the Commission should be alert to potential anticompetitive behavior by incumbent providers. We urge the Commission to examine what in many areas of the country is at best a duopoly market and to consider what, if any, level of regulation may be appropriate to govern the behavior of duopolists. In so doing, however, the Commission should eschew price regulation, whether as a means of controlling retail rates or as a means of giving entrants access to the incumbents' broadband facilities. In view of the difficulty that government has in determining efficient prices, price regulation is likely to stifle investment in broadband infrastructure or to discourage broadband service innovation.[27]

On the other hand, the Commission should examine the terms under which firms offer broadband Internet access, including policies concerning and affecting the flow of traffic over their networks. For that reason, the Administration fully supports the Commission's initiating a rulemaking to reexamine the 2005 Broadband Policy Statement.[28] NTIA expects to offer views on the issues presented in that rulemaking at the appropriate time. Those positions will be informed, in part, by NTIA's experience to date with our Broadband Technology Opportunities Program (BTOP) and the Rural Utilities Service's (RUS) Broadband Initiatives Program, which award grants for infrastructure deployment and other purposes. At Congress' direction, NTIA and RUS require all infrastructure applicants to adhere to nondiscrimination requirements akin to those outlined in the Commission's Policy Statement. For the first round of grants, NTIA and RUS have received nearly 1,500 infrastructure applications requesting more than $23 billion in funds. These applications suggest that there are a significant number of commercial and non-commercial network operators that are prepared to provide Internet access service under non-discrimination rules.

Improving Information Disclosure

As the Commission attempts to increase the amount of competition in local broadband service markets, it should seek to improve the *quality* of competition by ensuring that consumers get complete and accurate information about the broadband services available to them. In particular, the Commission should identify the types of price and service data that users need to make intelligent choices among those options.[29] In so doing, the Commission should recognize that there is a difference between merely technical disclosure, in which information is available in a technical format, and disclosure that actually informs choice. Timeliness of disclosure is also important because consumer choices must be based on current information to be meaningful. Moreover, consumers must be able to compare the choices actually available to them in their own geographic areas; data aggregated at the national or state level is of little use.

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[27] *See id*. at 28.

[28] *See Preserving the Open Internet*, Notice of Proposed Rulemaking, GN Docket No. 09-191, FCC 09-93 (rel. Oct. 22, 2009), http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-09-93A1.pdf . *See also Appropriate Framework for Broadband Access to the Internet Over Wireline Facilities*, Policy Statement, 20 FCC Rcd 14986 (2005).

[29] *See DOJ Ex Parte*, at 24-25 (discussing, among other things, the difference between advertised ("up to") transmission speeds and actual average speeds).. The Commission should take care to ensure that information disclosure does not facilitate price collusion or limit the ability of providers to compete on price. *Id*. at 27.

The Commission should also recognize that consumers are not the only ones that need timely and accurate information about the capabilities and characteristics of broadband services. Developers of devices, services and applications need basic information about the way that broadband networks operate so that developers can ensure that their products will work effectively and efficiently on those networks. As importantly, developers need information about how broadband networks change to ensure compatibility over time. NTIA therefore recommends that, in addition to prescribing service disclosure requirements for the benefit of consumers, the Commission should adopt network disclosure rules to promote innovation in devices, services, and applications.

Improved Collection and Mapping of Broadband Service Data

As noted, markets for broadband services are local in nature. Market conditions, however, vary substantially from one region to another, with differences in deployment patterns across geographic areas, as well as divergences in the speeds, prices, and quality of available services. Sound policymaking requires reliable, consistent, and systematic data that depict these variations among local broadband markets.

NTIA currently is working to collect broadband data and to make it publicly available. Pursuant to the Broadband Data Improvement Act (BDIA), and with funding provided by the American Recovery and Reinvestment Act (Recovery Act), NTIA is awarding grants to state-designated entities to collect comprehensive data on broadband availability and adoption in each State.[30] NTIA will use the data collected to develop a national broadband map that will be publicly available by February 2011.[31] And, consistent with the BDIA, the Commission is also gathering detailed information on broadband deployment and subscribership, including technologies used and maximum speeds available to consumers.[32] NTIA agrees with the Department of Justice that the Commission should expand its data collection effort to include an assessment of the nature and extent of competition in each local broadband market.[33]

Conclusion

It is vital to the U.S. economy and society "to preserve an open Internet in which all Americans can participate and benefit."[34] The National Broadband Plan is critical to that effort because broadband services provide the indispensable pathways for Internet communications. As noted above, the Commission's task is to identify policies that will continue the beneficial

[30] *See* BDIA, Pub. L. No. 110-385, Tit. I, § 106, 122 Stat. 4099-4102; American Recovery and Reinvestment Act of 2009, Pub. L. No. 111-5, Div. A, Tit. II, 123 Stat. 115, 128; NTIA, *State Broadband Data and Development Grant Program*, 74 Fed. Reg. 32545 (2009) (*NTIA Broadband Data NOFA*), http://www.ntia.doc.gov/frnotices/2009/FR_BroadbandMappingNOFA_090708.pdf.
[31] *See NTIA Broadband Data NOFA*, *supra*, 74 Fed. Reg. at 32546.
[32] *See* BDIA, *supra* note 30, Tit. I, § 103, 122 Stat. 4096, 4096-4098 (2008); *Development of Nationwide Broadband Data to Evaluate Reasonable and Timely Deployment of Advanced Services to All Americans, Improvement of Wireless Broadband Subscribership Data, and Development of Data on Interconnected Voice over Internet Protocol (VoIP) Subscribership*, Report and Order and Further Notice of Proposed Rulemaking, 23 FCC Rcd 9691, *recon*., 23 FCC Rcd 9800 (2008).
[33] *See DOJ Ex Parte*, at 19-20.
[34] President's Remarks, *supra* note 8.

interaction between the communications infrastructure and the Internet superstructure – policies that promote efficient investment in broadband networks and services, while ensuring that those facilities are operated in ways that will fuel the next stage of innovation at the Internet "edge." The Commission should work to expand competition in local broadband Internet access services, in order to reduce prices, improve quality, and spur innovation. It should promote information disclosure by broadband service providers that can both spur competition and assist consumers. Finally, NTIA encourages the Commission to continue in its balanced, deliberative approach to addressing the potential for discriminatory and anticompetitive behavior by broadband service providers while the broadband services market continues to develop.

Respectfully submitted,

/s/ Lawrence E. Strickling

Lawrence E. Strickling

cc: The Honorable Michael J. Copps
The Honorable Robert M. McDowell
The Honorable Mignon L. Clyburn
The Honorable Meredith Attwell Baker
Marlene H. Dortch, Secretary