

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

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In the Matter of)	
)	
Economic Issues in Broadband Competition)	GN Docket No. 09-51
)	
A National Broadband Plan for Our Future)	
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***EX PARTE* SUBMISSION
OF THE UNITED STATES DEPARTMENT OF JUSTICE**

I. Introduction

This filing responds to a Federal Communications Commission (“FCC” or “Commission”) Notice of Inquiry (“NOI”),¹ released on August 7, 2009, requesting comments to assist in the development of a national broadband plan to be submitted to Congress by February 17, 2010. The United States Department of Justice (“Department”), as a federal agency responsible for enforcing the antitrust laws and promoting competition, has significant expertise in telecommunications issues and has participated in prior Commission proceedings that addressed the role of competition in telecommunications. In these comments, the Department

¹ Notice of Inquiry, *In re A National Broadband Plan for Our Future*, 24 F.C.C.R. 4342, ¶ 6 (2009), available at <http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-09-31A1.pdf> (“FCC Broadband NOI”).

seeks to provide the Commission with the benefit of insights and perspectives that arise from this experience.

Over the last thirty years, the Department has helped to facilitate the transformation of the telecommunications industry, either directly in its role as an agency that enforces the antitrust laws or indirectly in its role as competition policy advocate and statutory respondent in cases involving appeals of Commission orders under the Hobbs Act.² Thus, from the critical decisions involved in resolution of the AT&T antitrust litigation and the implementation of that consent decree to the decisions related to the design of the wireless telecommunications marketplace and the implementation of the Telecommunications Act of 1996, the Department has played a vital role.³ Similarly, with respect to its merger review authority, the Department has evaluated a series of transactions that have reshaped the telecommunications marketplace, including with regard to the evolving roles of broadband Internet access and wireless services.⁴ In addition, the

² Hobbs Anti-Racketeering Act, 18 U.S.C. § 1951.

³ See, e.g., *United States v. American Telephone & Telegraph Co.*, 552 F. Supp. 131 (D.D.C. 1982), *aff'd sub nom. Maryland v. United States*, 460 U.S. 1001 (1983) (Modification of Final Judgment requiring Bell System break-up); Reply Comments of the United States Department of Justice, *In re Amendment of the Commission's Rules To Establish New Personal Communications Services*, FCC Gen. Docket No. 90-314, E.T. Docket No. 92-100 (Jan. 19, 1993) (addressing competition between cellular and PCS providers and allocation of PCS spectrum to promote competition); Evaluation of the U.S. Department of Justice, *In re Application by SBC Communications Inc., Southwestern Bell Telephone Company, and Southwestern Bell Communications Services, Inc., d/b/a Southwestern Bell Long Distance for Provision of In-Region, InterLATA Services in Texas*, FCC CC Docket No. 00-4 (Feb. 14, 2000) (regarding Regional Bell Operating Company entry into long distance services under Section 271 of the Telecommunications Act). More recently, the Department participated in the Commission's initial "net neutrality" proceeding. *Ex Parte* Filing of the United States Department of Justice, *In re Broadband Industry Practices*, FCC WC Docket 07-52 (Sept. 6, 2007).

⁴ See, e.g., Press Release, U.S. Dep't of Justice, Justice Department Requires Divestitures in Verizon's Acquisition of Alltel (Oct. 30, 2008), available at < http://www.usdoj.gov/atr/public/press_releases/2008/238941.htm >; Press Release, U.S. Dep't of Justice, Justice Department Requires Divestitures in Verizon's Acquisition of MCI and SBC's Acquisition of AT&T (Oct. 27, 2005), available at < http://www.usdoj.gov/atr/public/press_releases/2005/212407.htm >; Press Release, U.S. Dep't of Justice, Justice Department Requires Divestitures in Cingular Wireless's Acquisition of AT&T Wireless (Oct. 25, 2004), available at < http://www.usdoj.gov/atr/public/press_releases/2004/205960.htm >; Press Release, U.S. Dep't of Justice, Justice Department Requires AT&T to Divest MediaOne's Interest in Road Runner Broadband Internet Access Service (May 25, 2000), available at < http://www.usdoj.gov/atr/public/press_releases/2000/4829.htm >.

Department recently issued *Voice, Video, and Broadband: The Changing Competitive Landscape and Its Impact on Consumers*, a compendium of observations and assessments regarding the changing telecommunications landscape.⁵

In many respects, the United States, like many countries around the world, is in the formative stages of deciding how to respond to the advent and increasing preeminence of broadband with regard to both wired and wireless connections. In recognition of the importance of broadband to our economy and society, Congress mandated, as part of the American Recovery and Reinvestment Act of 2009 (“Recovery Act”), that the FCC develop a national broadband plan.⁶ Among other things, that plan must analyze “the most effective and efficient mechanisms for ensuring broadband access by all people of the United States,” as well as “a detailed strategy for achieving affordability . . . and maximum utilization of broadband infrastructure”⁷ In its NOI, the Commission set forth a series of questions, including “whether multiple providers of broadband services are useful or necessary for achieving our goal of providing broadband services to unserved and underserved areas[,]” and whether it makes “a difference if the providers utilize different technological broadband platforms[.]”⁸ In this filing, the Department discusses the nature of competition in the broadband marketplace, highlights the importance of freeing up additional spectrum for broadband, and comments on the need to institute effective reporting obligations to facilitate better oversight of the marketplace by both policymakers and consumers.

⁵ U.S. Dep’t of Justice, *Voice, Video and Broadband: The Changing Competitive Landscape and Its Impact on Consumers* (Nov. 2008) (“*DOJ Voice, Video and Broadband Report*”), available at <<http://www.usdoj.gov/atr/public/reports/239284.pdf>>.

⁶ American Recovery and Reinvestment Act of 2009, Pub. L. No. 111-5, § 6001(k)(1), (2), 123 Stat.115 (2009) (codified at 47 U.S.C. § 1305).

⁷ FCC Broadband NOI ¶ 9.

II. Key Characteristics of Broadband Markets

We begin by noting some of the most salient characteristics of broadband markets for the purposes of assessing and promoting competition in them.

A. Broadband as Part of the Information Ecosystem

Broadband services are one part of a wider information technology ecosystem that ultimately delivers value to consumers. Other important elements of the ecosystem are the content and applications available, the devices that consumers use to receive, process, and display that content and those applications, and consumers' familiarity with and skill in using computers and the Internet. Two of these complementary inputs – content and devices – are undergoing substantial technological change. The third – skill – is increasing over time, especially because younger people tend to be much more computer savvy than older people.

Recognizing the roles played by complementary inputs is very important for the purpose of evaluating broadband adoption patterns. Relatively low adoption rates for a given group may reflect the relative absence of these complementary inputs, rather than a problem inherent in the supply of broadband services themselves. For example, some individuals just do not consider broadband to be valuable or relevant, in part because they are simply not accustomed to using computers.⁹ In addition, consumers who do not find existing applications and devices attractive are unlikely to subscribe to broadband services until applications are developed that suit their

⁸ *Id.* ¶ 49.

⁹ See FCC National Broadband Plan, September Commission Meeting at 84 (Sept. 29, 2009) (reporting reasons for non-adoption of broadband as lack of relevance (50%), price (19%), availability (17%), and usability (13%)) (“*FCC Broadband Status Report*”), available at < http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-293742A1.pdf >; see also *id.* at 82 (reporting that low-adoption groups are those with less education, those with less income, those living in rural areas, the elderly, and the disabled). According to the report, 63% of households have adopted broadband, 33% have access but have not adopted broadband, and 4% do not have access, while adoption among the 54 million Americans with disabilities is only 30.8% (vs. 63.6% overall). *Id.* at 81, 142.

needs. In formulating policies to encourage the adoption and affordability of services, the FCC needs to consider not only the number and characteristics of existing and future providers but also how these complementary inputs impact the goals the FCC seeks to achieve.

B. Heterogeneous Demands for Broadband

When evaluating competition, the Department begins by evaluating consumer demand for certain goods or services. Here, this involves asking what users are willing to pay for various broadband services. This necessitates distinguishing between institutional and consumer users. For purposes of this filing, the Department will focus on and address broadband use by households.¹⁰ Assessing the extent of broadband competition should be done with an eye toward how various consumers use broadband service.

Consumer demand for broadband is variegated, depending upon the set of underlying applications desired by the user. For example, services that provide only 200 and 300 kilobits per second (“kbps”) are apparently unsuitable for streaming video,¹¹ and therefore are not acceptable substitutes for services providing bandwidth levels of 1 megabit per second (“Mbps”), 2 Mbps, or 5-10 Mbps — let alone 20-50 Mbps.

On the other hand, a wireless broadband service may constitute a “good enough” substitute for those customers who use broadband only for purposes requiring limited bandwidth.¹² Some have suggested that given the popularity of streaming video any service that

¹⁰ Many of the benefits of broadband derive from usage by businesses and other institutions such as schools, libraries, hospitals, and government entities. *See, e.g., FCC Broadband Status Report* at 93-132. Although the same principles of competition apply to those categories of customers, their needs are not explicitly addressed in this filing.

¹¹ This speed purportedly is not even sufficient to watch the lowest quality video on YouTube.com, which lists 500+ kbps as a minimum requirement. YouTube.com, YouTube Help, Getting Started: System Requirements, *available at* < <http://www.google.com/support/youtube/bin/answer.py?hl=en&answer=78358> > (last visited Oct. 20, 2009).

¹² *See, e.g., Andrew Odlyzko, The Many Paradoxes of Broadband*, First Monday, Sept. 1, 2003, at 8, *available at*

offers actual speeds of 3-4 Mbps could compete in the marketplace today.¹³ As streaming video becomes more and more popular, demand for faster, more reliable broadband connections will grow. In the near term, it appears reasonable to expect that most consumer demand will be met by services offering actual speeds of 3-4 Mbps.¹⁴ Over the long term, consumers may demand substantially greater speeds to take advantage of newer applications, such as HD video streaming.

In any industry subject to significant technological change, it is important that the evaluation of competition be forward-looking rather than based on static definitions of products and services. Insight can best be gained by looking at product life cycles, the replacement of older technologies by newer ones, and the barriers facing suppliers that offer those newer technologies. In the case of broadband services, it is clear that the market is shifting generally in the direction of faster speeds and additional mobility.

Because broadband markets are dynamic, it is important to track broadband deployment and adoption in various speed “bands,” and, in so doing, to evaluate carefully actual speeds rather than advertised speeds or speeds under ideal conditions. The Commission itself has noted that there can be significant gaps between advertised and actual speeds.¹⁵

< <http://firstmonday.org/htbin/cgiwrap/bin/ojs/index.php/fm/article/view/1072/992> >.

¹³ See, e.g., Robert Atkinson & Phil Weiser, *A Roundtable on the End of Scarcity, Open Architecture, and the Future of Broadband Competition Policy 3* (The Information Technology & Innovation Foundation, June 2009) (noting that roundtable participants indicated that most consumers typically need Internet service speeds between 3-4 Mbps), available at < <http://www.itif.org/files/EndofScarcity.pdf> >.

¹⁴ The Commission itself notes that e-mail, browsing, and video streaming can be handled well at speeds of 2-4 Mbps. *FCC Broadband Status Report* at 27.

¹⁵ *Id.* at 26.

C. Broadband Services Are Significantly Differentiated

Broadband services differ along a number of dimensions: the speed actually delivered, the reliability of the underlying network, and whether the service is fixed or mobile. In addition to these dimensions of product differentiation, we observe in the market, and will continue to see, variation in pricing and terms of service, such as usage limitations or alternative pricing models.

In markets such as this, with differentiated products subject to large economies of scale (relative to the size of the market), the Department does not expect to see a large number of suppliers. Nor do we expect prices to be equated with incremental costs. If they were, suppliers could not earn a normal, risk-adjusted rate of return on their investments in R&D and infrastructure.

D. Broadband Competition Varies by Locale

Ultimately what matters for any given consumer is the set of broadband offerings available to that consumer, including their technical characteristics and the commercial terms and conditions on which they are offered. Competitive conditions vary considerably for consumers in different geographic locales. We commend the FCC for having begun to collect information on broadband deployment and adoption at a finer level of geographic granularity, and for considering whether to collect even more detailed data in the future.¹⁶

For wireline broadband, where the service is delivered to the customer's home, it is typically quite useful to aggregate customers facing very similar competitive conditions for the purpose of measuring market shares.

E. Wireline vs. Wireless Broadband Services

Wireless may be a very attractive alternative for consumers who greatly value mobility and for consumers who do not place much value on the highest speeds (e.g., consumers who do not want advanced services, such as HD video streaming). It appears to offer the most promising prospect for additional competition in areas where user density or other factors are likely to limit the construction of additional broadband wireline infrastructure.

We do not yet know, however, whether wireless broadband offerings will be able to exert a significant degree of competitive constraint on cable modem, DSL or fiber optic-based services. Emerging fourth generation (“4G”) services may well provide an alternative sufficient to lead a significant set of customers to elect a wireless rather than wireline broadband service. Clearwire is just now deploying its WiMax network and Verizon Wireless has announced plans to begin offering Long-Term Evolution (“LTE”) technology in 2010.¹⁷ Clearwire has launched its service in approximately 25 markets, offering broadband services with speeds of between 3-6 Mbps, and, according to some sources, is winning over some DSL subscribers.¹⁸ Assuming

¹⁶ See FCC Broadband NOI ¶ 61 (noting that the Commission has begun to collect data at the Census Tract level); cf. *FCC Broadband Status Report* at 32-33 (indicating that data at the Census Block level is necessary for full analysis as it is “100 times more granular than Census tract[.]” data).

¹⁷ *LTE Standard Nailed Down as Carriers Carefully Plan Deployments*, Comm. Daily, Sept. 1, 2009, at 4-5 (reporting that AT&T will be conducting LTE trials in 2010 and US Cellular will build out LTE over the next 3-4 years); Press Release, Verizon Wireless Updates Specifications for 4G LTE 700 MHz Devices (Aug. 21, 2009), available at < <http://news.vzw.com/news/2009/08/pr2009-08-21.html> >; Verizon Wireless, LTE Innovation Center, Verizon Wireless LTE Network (“Verizon Wireless will be the first in the U.S. and among the first in the world to launch LTE, starting with 25 to 30 markets in mid- to late 2010.”), available at < <https://www.lte.vzw.com/AboutLTE/VerizonWirelessLTENetwork/tabid/6003/Default.aspx> > (last visited Oct. 20, 2009).

¹⁸ Press Release, Clearwire Launches Retail and Expands Sales for CLEAR(TM) 4G Mobile Internet Service in Chicago (Dec. 1, 2009), available at < <http://newsroom.clearwire.com/phoenix.zhtml?c=214419&p=irol-newsArticle&ID=1360317&highlight=>>; Stephen Lawson, *Sprint Willing to Fill Clearwire’s Coffers*, PC World (Sept. 17, 2009), available at < http://www.pcworld.com/businesscenter/article/172179/sprint_willing_to_fill_clearwires_coffers.html >; Comcast COO says wireless Internet snags DSL users, Associated Press (Aug. 6, 2009), available at < <http://www.cnn.com/id/32318015> >; Peter Wayner, *With WiMax, Walking on*

these speeds are already available, Clearwire would appear to be in a position to attract some wireline broadband subscribers, with its monthly rates ranging from \$25 to \$45 and no usage caps.¹⁹ As for LTE-based services, they are not yet being offered, but Verizon Wireless expects to provide typical download speeds of 5-12 Mbps.²⁰

Wireline and wireless broadband services have fundamentally different cost structures. This has implications for evaluating broadband competition. Within a given locale, wireline broadband involves very substantial sunk costs to reach a customer's location and rather low marginal costs to provide incremental services to connected households. Additionally, the costs of wireline broadband can be shared to a considerable degree with those of providing other services, e.g., multichannel video programming distribution ("MVPD") and wireline telephony, to the extent all the services are provided over the same infrastructure. In contrast, wireless

the Wireless Side in Baltimore, N.Y. Times, July 30, 2009 (reviewing Clearwire's service in Baltimore, Maryland), available at < <http://www.nytimes.com/2009/07/30/technology/personaltech/30basics.html> >.

¹⁹ See Clear.com, Clear Services, The Plans (Sept. 9, 2009) (advertising residential plans), available at < https://www.clear.com/shop/clear_services.php?changezip=1&page=mobile_internet >. In addition to Clearwire, there are other WiMax providers. These providers focus on rural areas, often receiving grants under a Department of Agriculture program, but their services have yet to be rolled out or are inferior. For example, Open Range Communications is leasing ATC spectrum from GlobalStar to serve over 500 rural communities, and plans to build out over the next five years. Press Release, *Open Range Communications Secures \$374 Million to Deploy Wireless Broadband Services to 546 Rural Communities* (Jan. 9, 2009), available at < http://www.openrangecomm.com/pr/pr_022009.html >. Open Range offers services at speeds of 1.5 Mbps/512kbps for \$40 per month. *Open Range Communications to Bring Affordable, Portable, Wireless High-Speed Broadband to Over 500 Rural Communities and Six Million Citizens Across the United States*, Business Wire (Oct. 22, 2007), available at < http://www.businesswire.com/portal/site/home/permalink/?ndmViewId=news_view&newsId=20071022006575&newsLang=en >. Lariat.net offers a wireless service with speeds of up to 11 Mbps, but guarantees only 200 kbps, for \$30 per month. LARIAT.NET Wireless Broadband, *A Full Spectrum of Residential and Business Services, "No Nonsense" Rate Schedule*, available at < <http://www.lariat.net/rates.html> > (last visited Oct. 20, 2009). Metro PCS has also acquired spectrum to build a 4G network. Marguerite Reardon, *Report: Deutsche Telecom looks for 4G Partners in U.S.*, CNET News, Signal Strength (Sept. 23, 2009), available at < http://news.cnet.com/8301-30686_3-10360188-266.html?part=rss&subj=news&tag=2547-1_3-0-20 >.

²⁰ Reply Comments of Verizon and Verizon Wireless, *In re A National Broadband Plan for Our Future*, FCC GN Docket No. 09-51, at 7 (July 29, 2009) (Verizon's 4G LTE network, which will begin offering service in 2010, will provide peak download speeds of up to 50-60 Mbps, and average downstream speeds of 5-12 Mbps), available at < http://fjallfoss.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=7019917666 >; Verizon Wireless LTE Innovation Center, About LTE, Verizon Wireless LTE Network (average data upload speeds of 2-5 Mbps),

broadband involves much smaller sunk costs associated with serving a given customer, but more substantial long-term marginal costs of expanding capacity in a given locale to serve more customers or to accommodate increased usage. Wireless data services may be provided over the same infrastructure and spectrum used to provide wireless voice service.

It is premature to predict whether the wireless broadband firms will be able to discipline the behavior of the established wireline providers, but early developments are mildly encouraging. Notably, the fact that some customers are willing to abandon the established wireline providers for a wireless carrier suggests that the two offerings may become part of a broader marketplace.²¹ Within the next several years, however, the limits of wireless broadband will be tested, including the actual delivered speeds, adequacy of in-building coverage, and ability of the networks to accommodate large numbers of users.²²

In addition, unanswered questions remain as to whether these services will be offered at prices and on terms that make them attractive to wireline users.²³ The LTE standard has only

available at < <https://www.lte.vzw.com/AboutLTE/VerizonWirelessLTENetwork/tabid/6003/Default.aspx> > (last visited Oct. 20, 2009).

²¹ See *Comcast COO says wireless Internet snags DSL users*, Associated Press (Aug. 6, 2009), available at <<http://finance.yahoo.com/news/Comcast-COO-says-wireless-apf-126231909.html?x=0&.v=1>>.

²² See, e.g., Press Release, AT&T Strengthens 3G Wireless Broadband Coverage In and Around Atlanta (Aug. 11, 2009) (noting use of 850 MHz spectrum to achieve better in-building coverage), available at <<http://www.att.com/gen/press-room?pid=4800&cdvn=news&newsarticleid=27036>>; Jenna Wortham, *Customers Angered as iPhones Overload AT&T*, N.Y. Times, Sept. 2, 2009 (recounting complaints of very slow speeds on AT&T's 3G network), available at <<http://www.nytimes.com/2009/09/03/technology/companies/03att.html?emc=eta1>>; Jon Fortt, *Bandwidth Hogs -- iPhones and Other Smartphones*, Fortune Brainstorm Tech (Aug. 28, 2009) (noting that from 2008 to 2010 mobile data will grow by a factor of six), available at <<http://brainstormtech.blogs.fortune.cnn.com/2009/08/28/bandwidth-hogs-iphone-and-other-smartphones/>>.

²³ For example, many wireless data services currently have monthly usage caps, unlike wireline services, which generally allow unlimited usage. See Thirteenth Report, *In re Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993*, 24 F.C.C.R. 6185, ¶¶ 119-122 (2009) (“FCC 13th CMRS Report”), available at <http://hraunfoss.fcc.gov/edocs_public/attachmatch/DA-09-54A1.pdf>; but see Christopher Rhoads & Niraj Sheth, *Carriers Eye Pay-As-You Go Internet*, Wall St. J., Oct. 21, 2009, at B5 (noting that usage limits have not yet been imposed, but that several carriers are considering and testing usage caps, which they may implement by raising flat-rate pricing or charging by usage).

just been finalized,²⁴ and the likely pricing of these services is unclear. In addition, two of the major providers of these services (Verizon and AT&T) also offer wireline services in major portions of the country, raising the question of whether they will position their LTE services as replacements for wireline services, either within the regions where they provide wireline services or elsewhere.

If wireline providers charge more for service packages that involve greater speeds and/or higher usage limits, consumers purchasing these packages may not enjoy the benefits of competition from wireless broadband, or may do so only indirectly to the extent that consumers as a whole display a willingness to substitute slower wireless service for faster wireline service.

F. Policy Levers

We do not find it especially helpful to define some abstract notion of whether or not broadband markets are “competitive.” Such a dichotomy makes little sense in the presence of large economies of scale, which preclude having many small suppliers and thus often lead to oligopolistic market structures. The operative question in competition policy is whether there are policy levers that can be used to produce superior outcomes, not whether the market resembles the textbook model of perfect competition. In highly concentrated markets, the policy levers often include: (a) merger control policies; (b) limits on business practices that thwart innovation (e.g., by blocking interconnection); and (c) public policies that affirmatively lower entry barriers facing new entrants and new technologies.

²⁴ See *LTE Standard Nailed Down as Carriers Carefully Plan Deployments*, Comm. Daily, Sept. 1, 2009, at 4-5.

III. Framework for Evaluating Broadband Competition

A. *Relevant Antitrust Markets*

Section 4 of the NOI requests information on the proper methodology for determining relevant markets in order to evaluate the current state of competition.²⁵ As emphasized above, the touchstone for this inquiry should be the functional experience from the perspective of the customer, not the particular technology used by the provider. Thus, when the Department evaluates a “market” for antitrust purposes, it assesses the extent to which customers view various services as substitutes.²⁶ As noted above, broadband offerings are differentiated by, among other things, the reliability of the underlying network, the actual speeds delivered, the pricing plans offered, and the limits placed on the amount of bandwidth that can be utilized without incurring additional charges or risking restrictions on service.²⁷

As the Department explains in the *Horizontal Merger Guidelines*, markets are defined both in terms of relevant product and geographic area.²⁸ Broadband markets are local in nature as customers can choose only among providers that serve their neighborhoods, and the providers and service offerings differ from one area to another.

²⁵ FCC Broadband NOI ¶ 35.

²⁶ U.S. Dep’t of Justice & Fed. Trade Comm’n, *Horizontal Merger Guidelines* §§ 1.0, 1.11 (rev. ed. Apr. 8, 1997) (“*Horizontal Merger Guidelines*”), available at <<http://www.atrnet.gov/policies/mergers>>.

²⁷ Satellite service does not appear likely to provide significant competition to other broadband technologies for the vast majority of Americans. Satellite suffers from several serious competitive disadvantages: (a) the inherent problem of latency, which makes it far less suitable for a range of applications (especially streaming audio and video); (b) costly bandwidth due to limited transponder capacity, which renders the provision of speeds in the range of 1-4 Mbps rather expensive (\$80 per month for 1.5 Mbps); and (c) relatively expensive devices to receive satellite transmissions, although these prices may fall over time. *See, e.g.*, SkyWay USA (1.5 Mbps for \$79.95/mo.), available at <<https://secure.skywayusa.com/index.php>> (follow “View service plans” link; then use drop-down menu to access offerings and pricing) (last visited Oct. 20, 2009); WildBlue (same), available at <<http://www.wildblue.com/getWildblue/availability.jsp>> (follow zip code prompt to access offerings and pricings) (last visited Oct. 20, 2009).

²⁸ *Horizontal Merger Guidelines* §§ 1.0, 1.1, 1.2.

Both the incumbent telephone and cable companies are offering wired broadband services across most of the country, using fiber-optic, cable modem, and DSL services as the principal modes of providing residential consumers with broadband access. What is less clear is the degree to which wireless broadband services will provide additional competition in broadband markets going forward.

The Department recommends that the Commission develop a classification for evaluating the degree of competition in different broadband markets using a method of analysis similar to that set forth in the *Horizontal Merger Guidelines*. In part, this could involve measuring market concentration in various local markets using the Herfindahl-Hirschman Index (“HHI”). Such measurements might be calculated separately for services with differing capabilities, and such classifications might shift over time as demand migrates to applications requiring faster speeds.

B. Likely Market Structures

We focus here on competition policy for those areas that already have or will have two wireline providers – i.e., most of the country in terms of population.²⁹

The enormous sunk cost of wireline broadband networks makes it unlikely that additional wired broadband competitors will enter many geographic areas other than those with the greatest density of users. According to the *FCC Broadband Status Report*, “[a]t most 2 providers of

²⁹ *FCC Broadband Status Report* at 81 (indicating that approximately 96% of American households have broadband access); see also Comments of United States Telecom Association, *In re A National Broadband Plan for Our Future*, FCC GN Docket No. 09-51, at 3-4 (June 8, 2009) (asserting that 80% of U.S. households have access to wireline broadband services provided both by telephone and cable companies), available at <http://fjallfoss.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=6520220030>; cf. FCC, Industry Analysis and Technology Division, Wireline Competition Bureau, *High-Speed Services for Internet Access: Status as of June 30, 2008*, tbl.16 (July 2009) (reporting that as of June 30, 2008, 87% and 67% of zip codes had at least one ADSL and at least one cable modem broadband provider, respectively), available at <http://www.fcc.gov/Daily_Releases/Daily_Business/2009/db0723/DOC-292191A1.pdf>.

fixed broadband services will pass most homes.”³⁰ Unfortunately, even in areas where two wireline networks are deployed, consumers seeking to use the most bandwidth-intensive applications may not have more than a single viable choice. The *FCC Broadband Status Report* goes on to state, “50-80% of homes may get [the] speeds they need from only one provider.”³¹ If this proves to be supported by further data, it will be highly significant, and rather discouraging, in terms of effective broadband competition in the years ahead.

Wireless services have at least two advantages that may make them viable and effective for many consumers. First, as noted above, the sunk costs associated with deploying these networks are far less than those for wireline facilities, because they do not require a dedicated connection to the customer.³² Second, wireless services can be marketed as “one-stop” services that meet residential as well as mobile broadband needs, whereas wireline broadband connections cannot offer mobility. As noted above, however, it remains to be seen whether these advantages will be sufficient to establish wireless services as a reasonable alternative to wired connections for a significant number of consumers.

³⁰ *FCC Broadband Status Report* at 135.

³¹ *Id.*

³² Various comments responding to the FCC Broadband NOI have recognized that wireless technologies have inherent economic advantages over wireline in providing broadband service to rural areas. *See, e.g.,* Clearwire Comments, *In re A National Broadband Plan for Our Future*, FCC GN Docket 09-51, at 3 (June 8, 2009), available at <http://fjallfoss.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=6520219919>; Comments of PCIA – The Wireless Infrastructure Association and the DAS Forum, *In re A National Broadband Plan for Our Future*, FCC GN Docket 09-51, at 3 (June 8, 2009), available at <http://fjallfoss.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=6520220181>; Comments of Wireless Internet Service Providers Association, *In re A National Broadband Plan for Our Future*, FCC GN Docket 09-51, at 15 (June 8, 2009) (rural installation of wireless broadband may cost less than \$1,000 per user, whereas fiber may cost more than \$20,000 per user), available at <http://fjallfoss.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=6520219944>; *cf. DOJ Voice, Video and Broadband Report* at 31-34 (Nov. 2008) (discussing economic conditions affecting the development of competition in telecommunications sector).

C. Consumer Benefits from Additional Competition

Based in large part on its extensive experience in evaluating horizontal mergers, the Department starts from the presumption that in highly concentrated markets consumers can be significantly harmed when the number of strong competitors declines from four to three, or three to two. This same experience teaches us that consumers can enjoy substantial *benefits* when the number of strong competitors rises from two to three, or three to four, especially if the additional competitor offers products based on a new and distinct technology. Developments in both the MVPD and the wireless markets over the past 15 years underscore this point.

1. Direct Broadcast Satellite Service

The entry of two national direct broadcast satellite (“DBS”) providers — DirecTV and the DISH Network³³ — as well as wireline overbuilders and, more recently, the telephone companies, has changed the dynamics of competition in the MVPD market. Until the mid-1990s, the cable incumbents dominated the MVPD industry, facing little competition. Soon thereafter, they began to face competition nationwide from the DBS providers and, in a limited number of local areas, from overbuilders.³⁴ The evidence suggests that DBS providers, which are differentiated from the incumbent cable companies by their technology and other factors, do

³³ In 1994, DirecTV offered the first high-power DBS service, through which subscribers could receive hundreds of channels via a dish no larger than a pizza. In 1996, EchoStar launched its high-power DISH Network. By the end of 1996, there were 4.3 million DBS subscribers, and by June 2000 there were 12.9 million. Seventh Annual Report, *In re Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming*, 16 F.C.C.R. 6005, tbl.C-1 (2001), available at < <http://www.fcc.gov/Bureaus/Cable/Reports/fcc01001.pdf> >.

³⁴ These firms attempted to overbuild the incumbent cable network with a second network, relying on fiber-optics and/or coaxial cable. The overbuilders initially focused on offering video, and on serving high-density, high-income areas, but as technology and business models evolved, they also began providing broadband Internet and telephone service and hence became known as broadband service providers (“BSPs”). Thirteenth Report, *In re Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming*, 24 F.C.C.R. 542, ¶ 100 (2009) (“*FCC 13th MVPD Report*”), available at < http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-07-206A1.pdf >. By 2006, the BSPs had 1.4 million customers. *Id.* tbl.B-1.

not significantly discipline the *prices* charged by cable companies.³⁵ However, the advent of DBS competition, which introduced digital delivery systems, has spurred cable companies to upgrade their facilities to include more channels, video-on-demand, HD programming, and personal video recorders.³⁶ Similarly, there is strong evidence that DBS has also challenged cable providers on the customer service front.³⁷ Competition from overbuilders and telephone companies, which appear to be closer substitutes for traditional cable service than DBS providers, appears to be constraining price to a greater degree as well as promoting quality improvements.³⁸

³⁵ See, e.g., Report on Cable Industry Prices, *In re Implementation of Section 3 of the Cable Television Consumer Protection and Competition Act of 1992 Statistical Report on Average Rates for Basic Service, Cable Programming Service, and Equipment*, 24 F.C.C.R. 259, ¶ 3 (2009) (“It does not appear from these results that DBS effectively constrains cable prices.”) (“*FCC 2009 Cable Price Report*”), available at < http://hraunfoss.fcc.gov/edocs_public/attachmatch/DA-09-53A1.pdf >; see also Gov’t Accountability Off., *Telecommunications: Direct Broadcast Satellite Subscribership Has Grown Rapidly, but Varies across Different Types of Markets*, GAO-05-257, at 33 (Apr. 2005) (“GAO 2005 Study”), available at < <http://www.gao.gov/new.items/d05257.pdf> >.

³⁶ As a cable industry official noted in this regard: “Evidence of a highly competitive marketplace can be found not only in the choices available to consumers, but also [in] how cable operators and their competitors have reacted. When DBS began to offer consumers an alternative with more channels, more pay-per-view movies, and digital audio and video, cable operators embarked on a \$100 billion, nationwide upgrade of their facilities. With additional capacity and digital capability, cable operators began to offer new tiers of digital programming, along with video-on-demand and digital video recording capability. Cable expanded its video services to offer high definition television programming. Cable also increased the quality and diversity of its programming and pioneered commercial high-speed Internet service.” Statement of Daniel L. Brenner, Senior Vice President, Law and Regulatory Policy, National Cable & Telecommunications Association, FCC Open Commission Meeting, at 3-4 (Feb. 10, 2006), available at < <http://www.fcc.gov/realaudio/presentations/2006/021006/brenner.pdf> >; see also *GAO 2005 Study* at 9-10 (finding that DBS penetration was more than 20% greater in areas where cable systems did not provide advanced services such as digital cable, cable modem, and telephone services, and that from 2001 to 2004 the percentage of cable systems that did not provide any advanced services fell from 18% to only 3%).

³⁷ See, e.g., Brian Santo, *Telco, DBS kicking cable butt in customer satisfaction*, CEDMagazine.com (Oct. 7, 2009), available at < <http://abcd-media.com/portal/wts/cgmc70bDATaq4E4qkf6VicmS-vqxa> >.

³⁸ *FCC 2009 Cable Price Report* ¶ 3 & chart 1-a (as of January 1, 2008, prices were 10.1% lower in communities served by a second cable operator than they were in noncompetitive communities); see also *FCC 13th MVPD Report* ¶ 45 (stating prices charged by cable systems where the FCC has not made an effective competition finding were 20.6% higher than the prices charged by cable systems facing competition from a second cable operator). Charter has responded to new entry by improving customer service, adding more programming channels and services, and rolling out enhanced products (e.g., HD). *DOJ Voice, Video and Broadband Report* at 48 (Comments of Grier C. Raclin); see also *id.* (noting that entry by telephone companies has prompted the cable companies to make competitive investment responses, including offering more HD channels and more VOD (Comments of Hal J. Singer)).

2. Personal Communications Systems

The history of competition in the mobile wireless market suggests that the entry of additional providers has resulted in consumers paying less, receiving new features and better handsets, and enjoying higher quality service. Originally, the FCC licensed two cellular providers in each area of the country. Subsequently, it determined that the duopoly nature of the market made it less than fully competitive and, in the early 1990s, it allocated additional spectrum for Personal Communication System (“PCS”) services in order to ensure that at least three new competitors could serve every area.³⁹ As a result of this new entry, mobile wireless users saw a substantial increase in the variety of pricing plans, lower per-minute prices, the introduction of newer generations of technology, and new features and functionality (texting, Internet access, smartphones).

As to pricing, the arrival of PCS providers was accompanied by AT&T Wireless’s introduction of the first digital one rate (“DOR”) plan in 1998⁴⁰ and the first family plan in 1999.⁴¹ In 2001, Cingular improved its DOR plan by including unlimited night and weekend minutes.⁴² In general, the industry began focusing on non-business customers by offering lower-

³⁹ First Report, *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*, 10 F.C.C.R. 8844, ¶ 4 (1995), available at < <http://wireless.fcc.gov/auctions/data/papersAndStudies/fc95317.pdf> >.

⁴⁰ Fourth Report, *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*, 14 F.C.C.R. 10,145, 10,155 (1999) (“FCC Fourth CMRS Report”), available at < <http://wireless.fcc.gov/auctions/data/papersAndStudies/fc99136.pdf> >. Digital one rate plans offer large quantities of minutes for a fixed monthly rate, and long distance and roaming anywhere in the country for no additional charge.

⁴¹ Fifth Report, *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*, 15 F.C.C.R. 17,660, 17,676 (2000) (“FCC Fifth CMRS Report”), available at < <http://wireless.fcc.gov/auctions/data/papersAndStudies/fc000289.pdf> >. Family plans allow users to make unlimited calls to family members on the same account and, in some cases, to and from the family’s home phone within certain areas.

⁴² Seventh Report, *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*, 17 F.C.C.R.

priced plans, some of which were intended to compete directly with wireline services.⁴³ Later, providers offered additional enhancements to pricing plans, including free mobile-to-mobile calls to subscribers using the same carrier,⁴⁴ unlimited calls to a “circle” of friends, and roll-over minutes. As a result, consumers seem to be paying less on a per-minute basis for voice services and are using their mobile wireless devices more. The average wireless revenue per minute has declined from about 37 cents in 1997 to 6 cents in 2007, and average monthly minutes of use have increased from about 100 to almost 800 over the same period.⁴⁵

PCS providers entered the market using digital technology that allowed higher quality sound and more efficient use of spectrum. With the greater capacity available on these networks, PCS providers were able to offer large buckets of minutes, free enhanced services (e.g., caller ID, voice-mail), and early wireless data services.⁴⁶ In anticipation of competition from the PCS providers, the existing cellular providers upgraded their facilities in order to offer comparable services.⁴⁷

12,985, 13,014 (2002) (“*FCC Seventh CMRS Report*”), available at < http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-02-179A1.pdf >.

⁴³ See Second Report, *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*, 12 F.C.C.R. 11,266, 11,313-16 (1997) (noting PCS providers introduced plans without long-term contract requirements in order to differentiate themselves from cellular providers), available at < <http://wireless.fcc.gov/auctions/data/papersAndStudies/fc9775.pdf> >; Sixth Report, *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*, 16 F.C.C.R. 13,350, 13,382 (2001) (“*FCC Sixth CMRS Report*”) (noting Leap’s offering of an unlimited local calling plan for a low, flat rate), available at < http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-01-192A1.pdf >.

⁴⁴ AT&T introduced the first such plan in 2004. Ninth Report, *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*, 19 F.C.C.R. 20,597, ¶ 114 (2004) (“*FCC Ninth CMRS Report*”), available at < http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-04-216A1.pdf >.

⁴⁵ *FCC 13th CMRS Report* at 6276 tbl.12.

⁴⁶ *FCC Sixth CMRS Report* at 13,361.

⁴⁷ See *FCC Fourth CMRS Report* at 10,173-74; *FCC Fifth CMRS Report* at 17,686.

Improvement Act,⁵⁴ the Commission is already gathering detailed information on broadband deployment and subscribership, including technologies used and speeds actually delivered to consumers.⁵⁵ Although this data collection is critical, the Commission should expand its efforts to include an assessment of the nature and extent of competition in each local broadband market.

For example, additional detail on the pricing plans being offered, and on subscriptions to those plans, will be invaluable for the purpose of assessing broadband competition. This information can be used to compare competition across locales, not only in terms of the number of providers and their market shares, but also in terms of the prices they charge for various broadband services. Because the broadband market is always evolving, more granular price and product data will facilitate the tracking of prices, terms, and conditions over time for a number of popular plans offered in a given locale. In principle, by looking across geographic areas, and by relying on data measuring how demand and cost conditions vary across locales, this information can be used to estimate the benefits consumers enjoy from additional broadband competition. In short, we commend the Commission for gathering more detailed information on infrastructure, availability, and actual speeds delivered to customers and recommend that this effort go further to facilitate more effective market monitoring.

⁵⁴ Pub. L. No. 110-385, § 103, 122 Stat. 4096, 4096-98 (2008) (codified at 47 U.S.C. §§ 1302, 1303).

⁵⁵ Notice of Inquiry, *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, as Amended by the Broadband Data Improvement Act*, FCC Docket No. 09-137 et al., ¶¶ 13-31 (rel. Aug. 7, 2009), 2009 WL 2431975, available at < http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-09-65A1.pdf >; see also FCC Broadband NOI ¶ 29 & n.35 (seeking comment on how to enhance the collection and analysis of data pursuant to the BDIA).

IV. Promoting Broadband Competition

We now address several “policy levers” that the Commission might employ to promote and enhance broadband competition: (a) allocation of additional spectrum, (b) disclosure, and (c) other forms of regulation.

A. Spectrum

In its NOI, the Commission has specifically asked about various possible changes to wireless service policies and how they would affect broadband deployment, including access to spectrum.⁵⁶ Given the potential of wireless services to reach underserved areas and to provide an alternative to wireline broadband providers in other areas, the Commission’s primary tool for promoting broadband competition should be freeing up spectrum. Although there may be other constraints on the ability of providers such as Clearwire, T-Mobile, Sprint, and new start-ups to develop and deploy effective wireless systems that could provide broadband services comparable to those of existing providers,⁵⁷ the scarcity of spectrum is a fundamental obstacle that the

⁵⁶ FCC Broadband NOI ¶¶ 42-46.

⁵⁷ One regulatory obstacle that can significantly delay the expansion of mobile broadband networks in specific geographic areas is the local zoning approval required for tower and antenna sitings, as recognized in several comments filed in response to the FCC Broadband NOI. *See, e.g.*, Comments of Motorola, *In re A National Broadband Plan for Our Future*, FCC GN Docket No. 09-51, at 6 n.8, 10-11 n.15 (June 8, 2009) (recommending that the Commission facilitate rapid deployment of wireless broadband by adopting tower siting rules proposed by the wireless industry), available at < http://fjallfoss.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=6520219800 >; Comments of WISPA, *In re A National Broadband Plan for Our Future*, FCC GN Docket No. 09-51, at 6, 20 (June 8, 2009) (access to tower sites is significant barrier to entry for wireless providers), available at < http://fjallfoss.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=652021994 >. In the same proceeding, mobile services providers that are not affiliated with landline telephone incumbents (e.g., Sprint, T-Mobile) as well as state authorities have raised concerns about the extent to which the high cost of special access services limits wireless network construction and overall competitiveness. *See, e.g.*, Comments of Comptel, *In re A National Broadband Plan for Our Future*, FCC GN Docket No. 09-51, at 13 (June 8, 2009) (asserting that deregulation of special access has produced supracompetitive rates), available at < http://fjallfoss.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=6520219841 >; Comments of Sprint Nextel, *In re A National Broadband Plan for Our Future*, FCC GN Docket No. 09-51, at 1-3, 8-12, 18-21 (June 2009) (contending that special access represents a market failure because facilities are overpriced and rates of return are excessive), available at < http://fjallfoss.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=6520219928 >; *see also* Dan Jones, *Sprint: Please, Sir, Can We Have Some More Ethernet Backhaul?* Light Reading’s UNStrung

Commission should address. Stated simply, without access to sufficient spectrum a firm cannot provide state-of-the-art wireless broadband services.

Reallocating spectrum that is being underutilized would encourage the deployment of wireless services and could help to make such services more competitive with wireline offerings. First, an increase in the amount of spectrum that firms could devote to broadband would lower the cost of providing wireless broadband services and encourage entry. Second, more spectrum would allow providers to increase the capacity and reliability of their offerings, thereby bringing them closer to cable modem and fiber-based broadband. Third, the increased capacity in the systems would help support new applications. We urge the Commission to give priority to making more spectrum available to wireless broadband providers so as to maximize their potential to compete against the established wireline ones.⁵⁸ According to the *FCC Broadband Status Report*, there is no time to spare, given the exploding demand for broadband mobile use, the long lags historically experienced in allocating spectrum to new uses, and the danger that “the spectrum pipeline is drying up.”⁵⁹

The Department endorses several general principles regarding the reallocation of spectrum to promote competition.⁶⁰ As an initial matter, reallocation of a given portion of the spectrum should be considered when the total value of that spectrum is significantly greater in a

(Sept. 22, 2009) (discussing Sprint’s need for backhaul and alternative sources including Ethernet, pseudowire, and the Clearwire network), available at < http://www.unstrung.com/document.asp?doc_id=182159& >.

⁵⁸ As the FCC notes, there is “[i]ndustry consensus that more spectrum is needed to meet future requirements.” *FCC Broadband Status Report* at 135.

⁵⁹ *Id.* at 63, 66, 71, 73, 74.

⁶⁰ We do not specifically address here the mechanisms used to free up spectrum previously used by, or assigned to, specific entities, including any transitional issues that might accompany concerns about unfair windfalls. In principle, if the spectrum has higher total value in a new use, the old users can be compensated for the spectrum by the new users. However, the transactions costs associated with providing such compensation may not be small. In all events, it would be beneficial to permit existing users of spectrum to deploy it for new (and more valuable) uses, either by themselves or in collaboration with others (such as through secondary market leasing arrangements).

new use than in its existing use, after accounting for transition costs. Since different portions of the spectrum have different current uses and different physical properties, this comparison must be repeated for each specific portion of the spectrum under consideration.

Once new spectrum is identified and freed up for broadband, there remains the issue of how to assign it to individual providers. The goal in assigning licenses to any such new spectrum designated for commercial services should be to ensure that it generates the greatest ultimate benefits to the consumers of those services. When market power is not an issue, the best way to pursue this goal in allocating new resources is typically to auction them off, on the theory that the highest bidder, i.e., the one with the highest private value, will also generate the greatest benefits to consumers. But that approach can go wrong in the presence of strong wireline or wireless incumbents, since the private value for incumbents in a given locale includes not only the revenue from use of the spectrum but also any benefits gained by preventing rivals from eroding the incumbents' existing businesses. The latter might be called "foreclosure value" as distinct from "use value." The total private value of spectrum to any given provider is the sum of these two types of value. However, the "foreclosure value" does not reflect consumer value; to the contrary, it represents the private value of forestalling entry that threatens to inject additional competition into the market.

In an established oligopoly with large margins between the price and the incremental cost of existing broadband services, the foreclosure value for incumbents in a given locale could be very high. In theory, one could run an auction in which incumbents' bids were discounted (for the purpose of determining who wins, not how much they pay) to reflect foreclosure value, if this value could be measured with reasonable accuracy. An extreme version of this is to run an auction in which some (or even all) of the available spectrum is simply not made available to

incumbents.⁶¹ However, this approach would be unwise if the use value of the new spectrum is greatest in the hands of incumbents, or if there are less restrictive means of accomplishing the desired policy goal (e.g., limiting the total amount of spectrum in an auction which an incumbent may obtain).

Based on the Department's experience with other highly concentrated telecommunications markets, and more generally, there are substantial advantages to deploying newly available spectrum in order to enable additional providers to mount stronger challenges to broadband incumbents. Absent evidence that the incumbents have a high use value (e.g., they are already using their existing spectrum licenses effectively and their networks are still capacity constrained), we would normally expect the highest use value for new spectrum to come from actual or potential rivals who are strong in adjacent product markets and/or adjacent geographic markets and also have relevant expertise.

Even if the incumbents have a high use value, that observation strengthens the case for reallocating more spectrum to the services in question and underscores the need to facilitate greater access to this valuable resource. In addition, to identify spectrum that could be freed up and made available for use by wireless broadband providers, the FCC could spur greater use of secondary markets in spectrum. Among other strategies that the agency might employ are improvement of its register of spectrum holders and encouragement of the disclosure of the terms on which licensees have been willing to provide access to their licensed spectrum.⁶²

⁶¹ Excluding an incumbent from the auction is economically equivalent to discounting its bids to zero for the purpose of determining the winner of the auction.

⁶² For a development of these two suggestions, see Philip J. Weiser, *The Untapped Promise of Wireless Spectrum*, available at < http://www.brookings.edu/~media/Files/rc/papers/2008/07_wireless_weiser/07_wireless_weiser.pdf >.

B. Transparency

Consumers need access to up-to-date information on broadband services in making intelligent choices about the options available to them in the market. Timeliness is important since consumer choices must be based on current information in order to be meaningful. Moreover, consumers must be able to compare the choices available to them in their own geographic areas; data aggregated at the national or state level is of little use. Additionally, it is important that information about speeds and other terms be accurate.⁶³ The Commission is uniquely situated to ensure more effective public disclosure of such data and should use its authority to do so. To the extent it does so, private parties, non-profits, and researchers can creatively use such information to provide not only greater awareness of the options available, but also valuable insights and analyses.⁶⁴

A fundamental challenge for consumers is that of understanding the nature of broadband service offerings. The difficulty that average consumers have in comparing such offers limits head-to-head price competition. Comparisons become even more difficult when broadband services are sold in bundles with other telecommunications services.⁶⁵

One attractive policy alternative for the Commission is to seek to improve the *quality* of competition by ensuring that consumers get better information about their choices, so that they can compare offers and select the broadband service that best suits their needs. Notably, the

⁶³ For a development of how such a model would operate, see Philip J. Weiser, *The Next Frontier for Network Neutrality*, 60 Admin. L. Rev. 273, 290-301 (2008).

⁶⁴ The ability of government to share raw data with the public and enable it to be used effectively is addressed in Government 3.0, The Silicon Flatiron Roundtable Series on Entrepreneurship, Innovation and Public Policy, Rep. No. 8 (Therese Kerfoot, Rapporteur, Aug. 2009), available at < <http://www.silicon-flatirons.org/documents/publications/report/KerfootGovernment3.0.pdf> >.

⁶⁵ *DOJ Voice, Video and Broadband Report* at 52-54 (discussing perspectives on the difficulties faced by alternative broadband technologies), 57-60 (discussing reasons for bundling).

Commission should address carriers' frequent claims to provide broadband connectivity "up to" particular levels of bandwidth without disclosing average speeds. On that point, the United Kingdom's Ofcom recently worked with private analysts to study the broadband speeds claimed by various operators and the actual results in usage, and found that the actual average speeds are a little above half of the advertised "up to" speeds, varying somewhat by provider.⁶⁶ The Commission recently acknowledged this and similar studies.⁶⁷

In other countries, regulatory authorities already have begun to address consumer information concerns.⁶⁸ For example, the Irish telecommunications authority, ComReg, provides consumers with the ability to compare available choices for stand-alone broadband, voice telephone, and wireless services, as well as double-play bundles of broadband and telephone services.⁶⁹ In addition to its efforts noted above, Ofcom has adopted a somewhat different

⁶⁶ See Press Release, Ofcom reveals UK's real broadband speeds (July 28, 2009), available at < <http://www.ofcom.org.uk/consumer/2009/07/ofcom-reveals-uk%e2%80%99s-real-broadband-speeds> >; see also Ofcom, *UK broadband speeds 2009: Consumers' experience of fixed-line broadband performance* (July 29, 2009) (full report), available at < http://www.ofcom.org.uk/research/telecoms/reports/broadband_speeds/?lang=default >. The European Commission has recognized that in addition to telecommunications regulators in the United Kingdom, those in several other countries, including France, Greece, Hungary, Latvia, and Spain have taken steps to provide consumers with safeguards for broadband service delivery, such as codes of practice, voluntary agreements with industry, and measures on quality of service, including clear requirements for broadband speeds. Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, *Progress Report on the Single European Electronic Communications Market 2008 (14th Report)*, COM(2009) 140 final, SEC(2009) 376, at 15 (Mar. 24, 2009) ("EC 14th Report"), available at < http://ec.europa.eu/information_society/policy/ecomm/doc/implementation_enforcement/annualreports/14threport/commen.pdf >.

⁶⁷ *FCC Broadband Status Report* at 26.

⁶⁸ See Commission Staff Working Document, *accompanying the* Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, *Progress Report on the Single European Electronic Communications Market 2008 (14th Report)*, SEC(2009) 376/2 v.1 pt.1 (Corrigendum) at 42 (July 30, 2009) (identifying several European regulators that have developed price comparison tools for consumers, including those in Sweden, Lithuania, Ireland, Portugal, Denmark, and Slovenia) ("EC 14th Report Staff Document"), available at < http://ec.europa.eu/information_society/policy/ecomm/doc/implementation_enforcement/annualreports/14threport/Vol1Part1_30072009.pdf >; see also *EC 14th Report* at 15. The European Commission has observed that the Belgian regulator is continuing efforts to build a tariff simulator encompassing broadband, fixed, and mobile services, while the Polish and Romanian regulators have begun to build similar services. *EC 14th Report Staff Document* at 42.

⁶⁹ See Commission for Communications Regulation, callcosts.ie (price comparison tool), available at <

approach, reviewing and certifying price comparison tools offered by private providers.⁷⁰ In the United States, the advent of disclosure regimes in other contexts has proved very effective, e.g., nutritional labeling.⁷¹

In encouraging or mandating the provision of better information about broadband services, both in its normal data collection and publication activities, and in establishing consumer tools, the Commission should take care to ensure that it does not facilitate price collusion or limit the ability of providers to compete on price. For this reason, while the Commission may wish to promote certain standardized ways of providing price information for purposes of transparency, it should avoid restricting the ability of providers to offer new and innovative forms of service packages or pricing policies, or to discount prices to individual users from standard advertised offerings, provided that the prices are fully disclosed to consumers in a transparent manner.

<http://www.callcosts.ie/home/default.asp>.> (last visited Oct. 20, 2009).

⁷⁰ See, e.g., Press Release, Ofcom has accredited a price comparison service that allows consumers to get cheaper mobile phone deals by monitoring their online bills (May 20, 2009) (noting that Ofcom accreditation requires an independent audit confirming whether the price comparison service is accessible, accurate, transparent, comprehensive, and up-to-date), available at < <http://www.ofcom.org.uk/consumer/2009/05/mobile-deals-2> >; Press Release, Ofcom re-accredits price comparison sites (Aug. 27, 2009), available at < <http://www.ofcom.org.uk/consumer/2009/08/ofcom-re-accredits-price-comparison-sites> > (discussing three private price comparison services accredited by Ofcom, for mobile services, broadband services, and fixed line, digital TV and broadband services); see also *EC 14th Report Staff Document* at 42 (noting the United Kingdom's accreditation efforts, and the increasing use of online tools to compare tariffs is increasing in Estonia).

⁷¹ “[I]t seems natural that food manufacturers with a relatively good nutritional story to tell would disclose nutritional information. Kraft and Nabisco could then compete on nutritional value or Kraft could use nutritional information to distinguish its premium brands like Progresso. So one might think, and yet the market did not produce widespread disclosure of nutritional information until federal regulation required it. It was the regulation that created a market for nutritional information that now appears to be strong.” Ellen Goodman, *Stealth Marketing and Editorial Integrity*, 85 *Tex. L. Rev.* 83, 139 (2007) (footnote omitted); see also Archon Fung et al., *The Political Economy of Transparency: What Makes Disclosure Policies Effective?* 16-17 (Dec. 2004) (noting development of competition based on nutritional information after government regulation set forth incentives for increased disclosure), available at < http://papers.ssrn.com/sol3/papers.cfm?abstract_id=766287#PaperDownload > (follow “download” link; then follow “Stanford Law School” link).

C. Regulation

Between the ongoing deployment of wireline broadband networks, the geographic expansion of wireless broadband services (hopefully spurred by the availability of additional spectrum to broadband wireless services), and increased transparency, the Department is hopeful that the vast majority of American households will benefit from significant competition in their local broadband markets. Put differently, most regions of the United States do not appear to be natural monopolies for broadband service. Nonetheless, some locales may well have only one terrestrial provider able to offer broadband services, especially to consumers who seek to use the most bandwidth-intensive applications, e.g., video conferencing.

The Department recommends that the Commission monitor carefully those areas in which only a single provider offers — or even two providers offer — broadband service. Although enacting some form of regulation to prevent certain providers from exercising monopoly power may be tempting with regard to such areas, care must be taken to avoid stifling the infrastructure investments needed to expand broadband access. In particular, price regulation would be appropriate only where necessary to protect consumers from the exercise of monopoly power and where such regulation would not stifle incentives to invest in infrastructure deployment.⁷²

More generally, the benefits of price regulation in promoting broadband adoption depend upon the importance of *affordability* relative to other factors (e.g., lack of knowledge) in the broadband adoption decisions of consumers to whom broadband service is available, but who

⁷² This discussion relates to residential broadband services. *See supra* note 10 and accompanying text.

thus far have declined to subscribe. We encourage the Commission to continue to gather information on this important question.

V. Conclusion

Broadband is a cornerstone of growth and innovation in the 21st century economy. American citizens want and deserve the best possible services and a choice of providers. As part of the development of a broadband plan, the Commission should evaluate what strategies will best promote the development of an affordable and innovative broadband infrastructure in the United States.

These broad goals are best served by promoting competition in broadband markets. In practice, this does not mean striving for broadband markets that look like textbook markets of perfect competition, with many price-taking firms. That market structure is unsuitable for the provision of broadband services, which involve very substantial fixed and sunk costs. Rather, promoting competition is likely to take the form of enabling additional entry and expansion by wireless broadband providers, applying other appropriate policy levers, and spurring competition

among broadband providers by improving the information available to consumers about the service offerings in their areas.

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