Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	
	)	
Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993	)	WT Docket No. 09-66
	)	
Annual Report and Analysis of Competitive Market Conditions With Respect to Mobile Wireless including Commercial Mobile Services	)	
	)	
Fostering Innovation and Investment in the Wireless Communications Market	)	GN Docket No. 09-157
	)	
A National Broadband Plan For Our Future	)	GN Docket No. 09-51

COMMENTS OF T-MOBILE USA, INC.

Thomas J. Sugrue
Kathleen O'Brien Ham
Sara F. Leibman

MORRISON & FOERSTER, LLP
2000 Pennsylvania Avenue, N.W.
Suite 6000
Washington, D.C. 20006
Voice: (202) 887-1500
Fax: (202) 887-0763

T-MOBILE USA, INC.
401 Ninth Street, N.W.
Suite 550
Washington, D.C. 20004
(202) 654-5900

September 30, 2009

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COMMENTS OF T-MOBILE USA, INC.

T-Mobile USA, Inc. ("T-Mobile") respectfully submits these comments in response to the *Notices of Inquiry* in the above-captioned proceedings.[1] The Commission seeks comment "broadly on the Commission's role in supporting and encouraging innovation and investment" as well as "any and all ideas that will foster wireless innovation."[2] Relatedly, the Commission seeks comment from carriers on "all factors that affect competitive conditions in the provision of mobile wireless service,"[3] as well as

[1] *Fostering Innovation and Investment in the Wireless Communications Market*, Notice of Inquiry, GN Docket Nos. 09-157, 09-51, FCC 09-66 (Aug. 27, 2009) ("*Innovation NOI*"); *Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993*, Notice of Inquiry, WT Docket No. 09-66, FCC 09-67 (Aug. 27, 2009) ("*Competition NOI*").

[2] *Innovation NOI* ¶¶ 6, 11.

[3] *Competition NOI* ¶ 1; *see also id.* (Statement of Commissioner Michael J. Copps) (noting that wireless technologies and services will be crucial in solving the "critical challenges" facing our country in areas including health care technology, education, and energy conservation through "smart grids").

information "on the relationship between investment and competition in the mobile wireless market."[4]

I. INTRODUCTION AND SUMMARY.

In two distinct *Notices of Inquiry*, the Commission seeks input on the steps it can take to promote wireless innovation and investment, on the one hand, and wireless competition on the other. Because these issues are so closely interrelated, they neither can, nor should, be considered in isolation. The robust competition in the wireless market drives innovation at all levels and by all players, old and new; in turn, innovation and investment promote competition, which continues to enhance consumer welfare. As a result, the factors that the Commission should consider in assessing the state of competition in the market will necessarily overlap with its review of the current state of innovation, and, by the same token, the concrete actions the Commission can and should take to facilitate and enhance innovation and investment in the market will facilitate competition.

Accordingly, T-Mobile submits these comments in response to the *Notices of Inquiry* in both the above-captioned proceedings. As we show below, today's wireless market is robustly competitive and well-functioning: Wireless usage is up; per-minute rates are down; consumers are more satisfied than ever; and new service models and technologies continue to promote change and advancement in this dynamic and constantly evolving market. Innovation, both at the core and at the edge of the wireless platform, has accelerated in recent years. There is simply no comparison between the market portrayed in the Commission's CMRS competition reports of even just five years

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[4] *Competition NOI* ¶ 29.

ago, and the market as it exists today. Today's service, technology and equipment options are comparatively dizzying — and the capabilities and applications offered to wireless customers today were virtually unimagined then. Since the 2005 report, for example, monthly SMS traffic has more than quadrupled from 9.76 billion messages per month to more than 48 billion monthly, the number of wireless subscribers able to access the Internet at broadband speeds has increased more than 700 percent, and wireless applications have evolved from text and photo messaging, customized ringtones, and games, to the tens of thousands of applications available through online "stores" and over the Internet.[5] In short, with little involvement by regulators at any level, the wireless market has presented consumers with unprecedented advances in service, choice, and quality.

To preserve the innovation and competition that are thriving in this vibrant market, the Commission must ensure that wireless carriers have the fundamental building block they need to keep offering services — spectrum. There can be no robust development at the "edge" unless there is sufficient spectrum at the core; without that, the wireless platform on which *all* wireless innovation rests will begin to founder and eventually degrade. As CTIA recommends, the Commission should commit to allocating and auctioning an additional 800 MHz of spectrum for commercial mobile broadband use

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[5] *Cf. 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*, Thirteenth Report, 24 FCC Rcd 6185, 6191-93, 6268-69 (2009) ("*Thirteenth Annual Report on Wireless Competition*") *and Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993,* Tenth Report, 20 FCC Rcd 15908 (2005) ("*Tenth Annual Report on Wireless Competition*").

throughout the United States.[6] T-Mobile recognizes that the identification and allocation process is complicated and time-consuming. However, given the urgent need for additional commercial bandwidth in the United States, T-Mobile urges the Commission and the National Telecommunications and Information Administration ("NTIA") to work together to reallocate for commercial use and auction within the next two to three years at least 25 MHz of contiguous spectrum located in the 1755-1800 MHz government band, which can be paired with the existing commercial allocation of 25 MHz at 2155-2180 MHz (the "extended" AWS-3 band). This "down payment" totaling 50 MHz of commercial spectrum in the near-term, to be followed by the rest of the new commercial allocation by 2015, would ensure that the United States will have access to sufficient spectrum, an essential ingredient for our continued leadership in innovation and technological advances.

The Commission should take targeted measures to resolve market problems with certain other key inputs for wireless services. Because reasonable roaming agreements are critical to the competitive provision of national wireless services, the Commission should eliminate the home market exclusion to its automatic roaming rules. In addition, the Commission should extend the automatic roaming rule to data to allow consumers access to the same broadband services (2G and 3G) while traveling as they have at home. It has become clear in recent years that, absent Commission oversight, roaming will not

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[6] *See* Ex Parte Letter from Christopher Guttman-McCabe, V.P., Regulatory Affairs, CTIA – The Wireless Ass'n, to Chairman Julius Genachowski, and Commissioners Copps, McDowell, Clyburn, and Baker, FCC, GN Docket No. 09-51, at 1-3 (Sept. 29, 2009) ("CTIA September 29 ex parte").

be provided at reasonable rates, terms, and conditions, or may be withheld altogether, diminishing competition at the retail level and harming consumers.

Similarly, given that backhaul facilities are essential to the provision of mobile services, the Commission should improve its oversight of the special access services provided by the incumbent local exchange carriers ("ILECs"). In many parts of the United States, especially rural areas, ILEC special access is the only available form of backhaul, and current regulation is inadequate to protect special access customers such as independent wireless providers.

The Commission should also take two focused, but important, steps to help streamline the process of siting wireless network facilities, a source of delay that hinders the deployment of innovative and competitive services. First, the Commission should adopt a federal "shot clock," as proposed by CTIA, to limit the lengthy state and local processes for considering zoning and permitting applications for towers and cell sites. Second, the Commission should reform the pole attachment rules to simplify wireless providers' use of poles and conduits owned by others.

T-Mobile believes that, other than the foregoing measures needed to target limited problems in wholesale marketplace, the continued vibrancy of the wireless market relies to a significant extent on a carefully crafted and light regulatory approach. As noted, the wireless market and companion wireless applications and broadband markets have flourished and expanded in the absence of prescriptive regulation. Despite claims to the contrary from a vocal minority, there have been few problems in these markets, and none that merit heavy-handed regulatory intervention. There is a real risk that prescriptive rules would cramp and distort this dynamic and unpredictable market, depressing

innovation and, over time, reducing competition rather than enhancing it. In particular, "net neutrality" rules that make it impracticable for wireless providers to offer adequate, secure, and reliable bandwidth to their customers will make it impossible for wireless consumers to enjoy the benefits that core *or* edge innovators hope to deliver over that bandwidth.

II. THE WIRELESS MARKET IS WELL-FUNCTIONING, ROBUSTLY COMPETITIVE, AND CHARACTERIZED BY WIDESPREAD INNOVATION.

A. Competition in the Wireless Market Has Fostered Innovation in All Sectors of the Network.

Years of a cautious, light-handed regulatory approach in the wireless market have produced precisely the result the academics and others predict: Competition is robust, and innovation is boundless. As former Vice President Al Gore noted just last year, the U.S. has the "most competitive wireless industry of any nation in the world" with less consolidation and more competition than its counterparts, and "because of competition, we are seeing a continued pulse of investment to expand the capacity of broadband networks."[7] Or as one recent article explained, "The regulatory freedom that wireless carriers and handset makers enjoy has fueled exponential technological innovation in a market that is nowhere near mature. And as the wireless industry continues to develop, consumer choice initiatives are quickly becoming essential competitive tools for the firms

[7] *See* Ex Parte Letter from Christopher Guttman-McCabe, V.P., Regulatory Affairs, CTIA – The Wireless Ass'n, to Marlene H. Dortch, Sec'y, FCC, GN Docket No. 09-51, WC Docket No. 07-52, RM-11361, at 1 (May 12, 2009) ("CTIA May 12 ex parte") (quoting statement of Former Vice President Al Gore from April 2008).

leading the way."[8] In today's difficult economic climate, the wireless industry stands out as a source of increased investment and a driver of economic growth. In the past ten years, the "[e]conomic contributions of wireless services have grown significantly faster than the rest of the U.S. economy, averaging over 16% growth v. less than 3% growth for the remainder of the economy."[9] Moreover, in 2007, "U.S. wireless services delivered nearly $100 billion in 'value added' contributions to the U.S. Gross Domestic Product."[10]

Almost two decades ago, the Commission concluded that a market with *two* facilities-based wireless service providers in each market was sufficiently competitive to preclude the need for Commission intervention and protective regulatory measures.[11] By that standard, today's market is highly competitive. Efforts to portray the market as somehow broken are distorting one of America's finest market success stories of recent years. There are *scores* of providers offering wireless services to consumers, and the market has flourished in ways that exceed anyone's expectations. For example:

- **U.S. consumers have a broad selection of competing carriers.** Four *national* carriers compete in the U.S. market,[12] along with more than 150

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[8] Michael T. Hoeker, Note, *From* Carterfone *to the iPhone: Consumer Choice in the Wireless Telecommunications Marketplace*, 17 COMMLAW CONSPECTUS 187, 215 (2008-2009) ("*Carterfone to iPhone*").

[9] *See Wireless' Impact on the U.S. Economy*, at 2, *att. to* Ex Parte Letter from Christopher Guttman-McCabe, V.P., Regulatory Affairs, CTIA – The Wireless Ass'n, to Marlene H. Dortch, Sec'y, FCC, GN Docket No. 09-51, WT Docket Nos. 08-165, 08-166, 08-167, 09-66 (Aug. 14, 2009) *available at* http://fjallfoss.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=7019935311 ("CTIA August 14 ex parte").

[10] *Id.*

[11] *See Bundling of Cellular Customer Premises Equipment and Cellular Service*, Report and Order, 7 FCC Rcd 4028, 4029 ("*Cellular Bundling Order*").

[12] *See Thirteenth Annual Report on Wireless Competition*, 24 FCC Rcd at 6199-200; Comments of T-Mobile, *Skype Communications S.A.R.L. Petition to Confirm a*

other facilities-based regional and smaller wireless carriers.[13] More than 95% of the U.S. population can choose from among at least 3 competing carriers.[14]

- **MVNOs.** MVNOs have become a significant force in the marketplace. As of last year, more than 50 MVNOs were providing service to U.S. customers.[15]

- **The U.S. wireless market is the most competitive international market of the 26 OECD countries.** The U.S. boasts the most competitive and least concentrated wireless market of any of the 26 Organization for Economic Cooperation and Development ("OECD") countries. The supposed "concentration" in the U.S. market pales in comparison to the very real concentration in 23 of the 26 OECD countries — where the top four carriers control a full 100% of the market.[16]

- **The U.S. wireless market provides consumers with tremendous quality and value.** The cost for wireless service in the U.S. continues to drop. The FCC's January 2009 Wireless Competition report found that the average cost per Minute of Use ("MOU") has dropped to $.06 in 2007, down from $.07 in 2006 and $.10 in 2003.[17]

- **Consumers have access to a broad range of options**. Wireless consumers can choose from among a wide variety of pre- and post-paid pricing plans including voice (local and national), data, and 3G plans that vary in functionality, terms, and price.[18] For example, T-Mobile has introduced a new data plan that provides consumers unlimited email and web browsing;[19] T-Mobile also offers an array of Individual, Family, and Prepaid pricing plans, on both a contract and non-contract basis, so that customers can choose the plan that presents the best value for the subscriber. As the Commission observed in the *Thirteenth Annual Wireless Competition Report,* "The

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Consumer's Right to Use Internet Communications Software and Attach Devices to Wireless Networks, RM-11361, at 11 (Apr. 30, 2007) ("*T-Mobile Skype Comments*").

[13] *See T-Mobile Skype Comments* at 11.

[14] *See Thirteenth Annual Report on Wireless Competition*, 24 FCC Rcd at 6210, Table 1.

[15] *See id.* at 6201.

[16] *See* CTIA May 12 ex parte at 2.

[17] *See Thirteenth Annual Report on Wireless Competition*, 24 FCC Rcd at 6192.

[18] *See id.* at 6243 ("The continued rollout of differentiated pricing plans also indicates a competitive marketplace.").

[19] *See* http://www.t-mobile.com.

> continued rollout of differentiated pricing plans . . . indicates a competitive marketplace."[20]

Competition in the wireless market has provoked innovation throughout the core and the edge of the network. Providers in the market have no other choice: without continuing investment to stay one step ahead of the competition, a provider stands to lose substantial market share to churn when some other provider introduces tomorrow's "new new thing."[21] And where the new new thing is openness to *other parties'* innovations, the competitive market moves carriers to that type of offering. Thus, both provider *and* third party innovation flourish in today's competitive market.

Wireless carriers invest billions of dollars in innovative services and networks. Wireless carriers invest billions each year to improve the coverage, capacity, and quality of the wireless service they provide. In 2008 alone, U.S. wireless carriers invested over $20 billion in their operational systems, resulting in a total investment of more than $90 billion over the last four years (in addition to wireless carriers' substantial investment in spectrum).[22] Moreover, despite the difficult economic climate, wireless providers remain committed to investing in innovation. AT&T and Verizon Wireless reportedly "plan to spend as much as $35 billion combined in 2009,"[23] and T-Mobile is spending $5 billion this year to upgrade its 3G network. This investment and innovation has resulted in the

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[20] *Thirteenth Annual Report on Wireless Competition*, 24 FCC Rcd at 6243.

[21] *See generally* MICHAEL LEWIS, THE NEW NEW THING: A SILICON VALLEY STORY (2000).

[22] Comments of CTIA – The Wireless Ass'n at 14-15, *A National Broadband Plan for Our Future*, GN Docket Nos. 09-51, 09-47, 09-137 (Aug. 31, 2009).

[23] Jeffry Bartash, *Carriers Still Pouring Billions Into Mobile Networks*, Dow Jones Newservices (Sept. 22, 2009).

rapid expansion of wireless broadband availability. The FCC's most recent numbers show that more than 92 percent of the U.S. population lives in census blocks with at least one mobile broadband provider;[24] as we discuss below, T-Mobile and other carriers are rapidly investing in and deploying new 4G technologies throughout the country.

Competition among carriers has spurred innovation by handset and equipment manufacturers. As carriers look for ways to differentiate themselves in a competitive market, they seek out partners and products that offer consumers new and better choices. The result has been an explosion in handsets, netbooks, and other equipment: At least 33 handset manufacturers compete in the U.S. mobile device market and have produced more than 630 different handsets and wireless devices for use in the U.S. wireless market.[25] And, in the last two years, some of the most advanced handsets in the world have been launched in the U.S., including the T-Mobile myTouch™ 3G, the T-Mobile G1™ with Google™, Apple's iPhone 3G, Samsung's Instinct, the Motorola Cliq™, four new Research in Motion Blackberry devices, and the Palm Pre.[26] Moreover, devices such as smartphones, aircards, and netbooks provide consumers with increasingly dynamic access to the Internet on mobile devices.[27] Thus, it should come as no surprise that the

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[24] *Thirteenth Annual Wireless Competition Report,* 24 FCC Rcd at 6193.

[25] *See* Ex Parte Letter from Christopher Guttman-McCabe, V.P, Regulatory Affairs, CTIA – The Wireless Ass'n, to Marlene H. Dortch, Sec'y, FCC,, WT Docket No. 08-27, RM-11361 (Mar. 20, 2008) ("CTIA March 20 ex parte").

[26] *See* Comments of CTIA – The Wireless Ass'n at 7, *A National Broadband Plan for Our Future*, GN Docket No. 09-51 (June 8, 2009) ("*CTIA Broadband Comments*").

[27] *Id.* at 3.

U.S. boasts a higher percentage of consumers actively using mobile Internet capabilities than its international counterparts.[28]

Third party innovation at the edge has likewise exploded. Five years ago, simple games and ringtones were at the cutting edge of wireless applications. Today, consumers can choose among tens of thousands of wireless applications from a range of online application stores, including the Android Market, the iTunes App Store, and the Palm Software Store.[29] In the past year alone, consumers have downloaded about 2 billion applications for use on wireless devices.[30] And, competition has now produced an even "edgier" development: with the T-Mobile G1™, the T-Mobile myTouch™ 3G, and the Motorola Cliq™, wireless end users can develop and download their *own* applications to run on the devices.[31]

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[28] *See* Report, *Critical Mass: The Worldwide State of the Mobile Web*, Nielsen Mobile, at 2, 4 (July 2008), *available at* http://nielsenmobile.com/documents/CriticalMass.pdf (last visited Sept. 30, 2009).

[29] *CTIA Broadband Comments* at 7.

[30] *See, e.g.*, Apple Press Release, *Apple's App Store Downloads Top Two Billion: More Than 85,000 Apps Now Available for iPhone & iPod Touch* (Sept. 28, 2009), *available at* http://www.apple.com/pr/library/2009/09/28appstore.html (last visited Sept. 30, 2009).

[31] *See* Reply Comments of T-Mobile at 7-8, *Rural Cellular Association Petition for Rulemaking Regarding Exclusivity Arrangements Between Commercial Wireless Carriers and Handset Manufacturers*, RM-11497 (Feb. 20, 2009) ("*T-Mobile RCA Handset Comments*"); *see also* Android Developers, *What is Android?*, *available at* http://developer.android.com/guide/basics/what-is-android.html (last visited Sept. 30, 2009).

B. T-Mobile's Efforts and Achievements Illustrate How Competition Drives Providers To Invest in, Commit To, and Promote Innovation.

T-Mobile has responded to the highly competitive, spectrum constrained, churn-heavy wireless market by investing in tomorrow's developments to win customer loyalty. This has caused T-Mobile to invest in and commit to open platforms, which in turn promote innovation by others. For example:

T-Mobile is a leader in development and deployment of advanced mobile broadband services. As the Commission notes, "Fourth Generation (4G) wireless networks may represent the most significant advance in wireless communications in a decade, and will be the first converged platform architecture to be deployed, capable of supporting voice, video, and data services."[32] T-Mobile continues to aggressively expand the reach of its mobile broadband network to reach "more of the consumers in the U.S., driving new competition, and . . . a lot of innovation."[33] T-Mobile will have HSPA+ up and running on a *nationwide* basis by 2010, which could make it the operator with the highest data speeds in the largest footprint. T-Mobile's investment in 3G will ensure that over 300 million Americans have access to high speed wireless broadband in the very near term.[34]

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[32] *Innovation NOI* ¶ 50.

[33] *See* National Broadband Plan Workshop: Wireless Broadband Deployment Tr., GN Docket 09-51, at 12 (Aug. 12, 2009) ("Aug. 12 Wireless Tr.") (Comments of Neville Ray, T-Mobile USA, Inc.). Transcripts of other workshops mentioned herein are available in GN Docket No. 09-51 and are short-cited by the date and topic of the workshop.

[34] Lynette Luna, *Will T-Mobile USA become the dark horse mobile broadband leader?*, Fierce Broadband Wireless (Sept. 22, 2009) *available at* http://www.fiercewireless.com/story/will-t-mobile-usa-be-dark-horse-mobile-broadband-leader/2009-09-21?utm_medium=rss&utm_source=rss&cmp-id=OTC-RSS-FW0.

Open Handset Alliance. T-Mobile is a founding member of the Open Handset Alliance, a group of 47 technology and mobile companies with the shared goal of accelerating innovation in the wireless market and offering consumers a richer, less expensive wireless experience.[35] Another Alliance member, Google, developed Android, the first complete, open, and free mobile platform,[36] and T-Mobile was the first U.S. carrier to offer a smartphone operating on Google's Android platform—the T-Mobile G1™. The innovative G1™ leverages the open Android platform to allow subscribers to create or download new applications directly to their wireless devices. T-Mobile also recently released the innovative T-Mobile myTouch™ 3G and Motorola Cliq™, and plans to offer additional Android devices in the near future. Other wireless carriers in the U.S. and overseas similarly have begun to embrace the ease by which Android-driven devices allow developers to create applications and wireless subscribers to control their mobile experience. There are now more than 10,000 applications available from the ever-growing Android Market.[37]

The Creation Center. T-Mobile's commitment to innovation is further exemplified by T-Mobile's Creation Center. The Creation Center is T-Mobile's advanced product and service design group, which focuses on developing innovative services to promote the wireless user experience. Engineers and developers in the Creation Center focus on designing innovative, next-generation services and applications that set T-Mobile apart from its competition. As the marketplace evolves, T-Mobile has

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35 *See* http://www.openhandsetalliance.com/.

36 *Id.*

37 *See* http://www.android.com/market/.

committed growing resources to research and development and has a increasing number of patents pending (with its first-ever having recently been granted), reflecting this dynamic business.

T-Mobile @Home and Unlicensed Mobile Access (UMA). With T-Mobile's innovative UMA and @Home services, customers can enjoy unlimited nationwide calling from their mobile and home telephones.[38] Many of T-Mobile's handsets incorporate Wi-Fi and UMA technology, which allows calls to be placed over either T-Mobile's traditional GSM network or any available Wi-Fi network, with seamless handoff between the two. Thus, a customer can begin a conversation on her home Wi-Fi network, continue it on T-Mobile's licensed network as she travels, and finish it on a Wi-Fi HotSpot when she stops for coffee. Consumers likewise benefit from the ability to complete calls where a wireless signal may be unavailable, such as deep within a building. Customers also can plug their landline telephones into specialized T-Mobile @Home routers and enjoy an unlimited nationwide calling alternative to traditional wireline telephone service providers.

Smart Grid Development. Consistent with the Administration's commitment to smart grid technology for energy conservation, T-Mobile has teamed with Echelon Corp to develop a wireless smart grid system using advanced metering infrastructure ("AMI"). T-Mobile and Echelon are creating smart meters that utilize an embedded T-Mobile SIM within a cellular radio module to enable the meters to communicate back to a power utility over T-Mobile's wireless network. There are significant cost, security, and reliability advantages to using public communications networks with licensed spectrum

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[38] *See T-Mobile Skype Comments* at 33*; see also* http://www.t-mobile.com.

for smart grid systems rather than private networks with unlicensed spectrum. Of course, broad deployment of wireless AMI will require sufficient spectrum as well as additional engineering and technological development.[39]

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In short, competition is alive and well in the wireless market and, as a result, innovation is thriving. The thousands of independent application providers, search engines, equipment manufacturers, and content providers that have developed around the edge of the wireless ecosystem exist only because competition forces wireless carriers to invest in and expand their markets and develop the platform on which all these businesses thrive. And these thriving businesses in turn spur network providers to invest in continued innovation and expansion.

III. CONTINUED WIRELESS INNOVATION AND COMPETITION DEPEND ON PROMPT ALLOCATION OF MORE SPECTRUM FOR LICENSED COMMERCIAL USE AND IMPROVED OVERSIGHT OF OTHER INPUTS ESSENTIAL FOR MOBILE SERVICE.

The unparalleled record of mobile competition and innovation discussed above can only continue if independent wireless providers like T-Mobile are able to obtain the inputs they need to develop and deploy new services based on mobile broadband. The *Competition NOI* and *Innovation NOI* recognize the importance of these key inputs.[40] Without ready access to such inputs, the continued ability of new entrants and competitors of the largest wireless providers to offer the innovative services and

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[39] *See* Ex Parte Letter from Kathleen O'Brien Ham, V.P., Fed. Regulatory Affairs, T-Mobile, to Marlene H. Dortch, Sec'y, FCC, GN Docket No. 09-51 (Sept. 23, 2009).

[40] *See Competition NOI* ¶¶ 23-26; *cf. Innovation NOI* ¶¶ 29-54.

applications that will benefit U.S. consumers and the U.S. economy in the 21st Century will be severely hampered.

In contrast to the robust competition that exists today for retail mobile services, there is extensive evidence in pending Commission proceedings about market and regulatory problems with several important wireless inputs:

- Access to spectrum,[41]
- Discriminatory roaming practices,[42]
- Lax regulation of ILEC special access services used for backhaul,[43] and
- Cumbersome tower siting and pole attachment processes.[44]

By taking narrowly-targeted actions to address these obstacles, the Commission will promote the ongoing development of wireless competition and innovation without engaging in broad-brush regulation of the wireless market itself.

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[41] *See, e.g.*, Comments of T-Mobile at 13-18, *A National Broadband Plan for Our Future*, GN Docket No. 09-51 (June 8, 2009) ("*T-Mobile Broadband Comments*"); Workshop Response of T-Mobile at 4-6, *A National Broadband Plan for Our Future*, GN Docket No. 09-51 (Sept. 15, 2009).

[42] *See, e.g.*, Petition for Partial Reconsideration of T-Mobile, *Reexamination of Roaming Obligations of Commercial Mobile Radio Service Providers*, WT Docket No. 05-265 (Oct. 1, 2007).

[43] *See, e.g.*, Comments of T-Mobile, *Special Access Rates for Price Cap Local Exchange Carriers*, WC Docket No. 05-25, RM-10593 (Aug. 8, 2007) ("*T-Mobile Special Access Comments*").

[44] *See, e.g.,* Comments of T-Mobile, *Petition for Declaratory Ruling to Clarify Provisions of Section 332(c)(7)(B) to Ensure Timely Siting Review and to Preempt under Section 253 State and Local Ordinances that Classify All Wireless Siting Proposals as Requiring a Variance*, WT Docket No. 08-165 (Sept. 29, 2008) ("*T-Mobile Comments on CTIA Shot Clock PDR*"); Comments of T-Mobile, *Implementation of Section 224 of the Act; Amendment of the Commission's Rule and Policies Governing Pole Attachments*, WC Docket No. 07-245, RM-11293, RM-11303 (Mar. 7, 2008).

A. Access to Additional Spectrum Is Critical to Wireless Innovation and Competition.

Providing the marketplace with additional licensed spectrum is the single most important step that the Commission could take to both preserve and stimulate mobile innovation and competition. T-Mobile is heartened that the Commission has recognized the importance of this issue by requesting public comment in NBP Public Notice #6 on the need for spectrum for broadband.[45]

As CTIA explained in the National Broadband Plan proceeding, "[w]ithout additional capacity, the continued innovation wireless consumers are enjoying may be at risk as innovation at the network edge is a direct result of investment and innovation in the network core and in wireless devices."[46] Neville Ray, T-Mobile's Senior Vice President of Engineering Operations, similarly highlighted the need for additional spectrum at a staff workshop for the National Broadband Plan:

> [O]ne of the key issues that we see…specifically in the U.S., is that the ongoing deployment and success of wireless broadband deployment hinges on more spectrum being made available in a number of bands. If you look at the penetration rates of spectrum that's available for commercial services today in the U.S., it's extremely high. The demand from consumers is ever-growing and ever-burgeoning…As an example, the G1 product that we launched last year is consuming over 300 megabits per month. It's phone-like…but driving extreme usage on the network.[47]

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[45] *See* FCC Public Notice, *Comment Sought On Spectrum For Broadband, NBP Public Notice # 6*, GN Docket Nos. 09-47, 09-51, 09-137, DA 09-2100 (Sept. 23, 2009).

[46] Reply Comments of CTIA – The Wireless Ass'n at 9, *A National Broadband Plan for Our Future,* GN Docket No. 09-51 (July 21, 2009).

[47] August 12 Wireless Tr. at 12-13.

In fact, since T-Mobile began offering its G1™ smartphone, customers of that device use 50 times the data of the average T-Mobile customer.[48]

Of course, deploying technology that improves spectral efficiency plays an important role in helping to meet customer demand, and T-Mobile and other U.S. mobile providers have both the need and the incentive to deploy those technologies and use spectrum as efficiently as possible. But, as Tom Anderson of Alcatel-Lucent noted at another staff workshop, even while the telecommunications industry works to improve spectral efficiency, spectrum usage is growing at such a rate that, without additional large blocks of spectrum, the industry will not be able to keep up.[49] At the same workshop, Scott Corson of Qualcomm asserted that a technological limit is approaching for which more spectrum is the only solution.[50]

In general, U.S. consumers use wireless service at a much higher rate than their counterparts in other countries. Nevertheless, other countries are taking more aggressive steps to add commercial mobile spectrum. Most European countries are planning to auction or allocate spectrum in the 2.5 and 2.6 GHz bands.[51] The U.K. currently has

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[48] *See T-Mobile: G1 Users Use Data in Record Numbers*, Wireless Week (Apr. 1, 2009), *available at* http://www.wirelessweek.com/News-CTIA-2009-T-Mobile-G1-Users-Data-Record-040109.aspx (last visited Sept. 30, 2009).

[49] *See* Aug. 13 Technology/Wireless Tr. at 26.

[50] *See id.* at 17-18. *See also* Cisco Visual Networking Index: Global Mobile Data Traffic Forecast Update, at 1 (Jan. 29, 2009), *available at* http://www.cisco.com/en/US/solutions/collateral/ns341/ns525/ns537/ns705/ns827/white_paper_c11-520862.pdf (last visited Sept. 28, 2009) (noting that "[g]lobally, mobile data traffic will double every year through 2013, increasing 66 times between 2008 and 2013).

[51] *See* Press Release*, Airspan Succeeds in First-Ever Multi-Band Mobile WiMAX Handover; Creating One-of-a-Kind Opportunities for Mobile WiMAX Operators* (Nov. 25, 2008), *available at* http://www.airspan.com/PR_Downloads/Press%20Release%20-%20Handover%20Freedom4%20Final.pdf.

352.8 MHz assigned for commercial wireless spectrum and has 355 MHz of spectrum suitable for commercial mobile services, including an auction of 2.6 GHz spectrum expected in 2010.[52] Spain has announced plans to begin allocating spectrum in the 2.6 GHz and 3.5 GHz bands by the end of 2009, including moving spectrum in the 900 MHz and 1800 MHz from 2G to 3G use.[53] Italy and Belgium have announced plans to sell or auction 3G spectrum, and during 2008, Scandinavian countries held several auctions in the 1.8, 2.3, 2.6 and 10 GHz bands.[54] According to CTIA, France currently has 374.6 MHz allocated for commercial wireless use and has 72 MHz of "potentially useable" spectrum in the pipeline.[55] Germany's current commercial wireless spectrum allocation sits at 305 MHz, and the country has identified 340 MHz of additional spectrum for wireless services.[56]

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[52] *See* Ex Parte Letter from Christopher Guttman-McCabe, V.P., Regulatory Affairs, CTIA – The Wireless Ass'n, to Marlene H. Dortch, Sec'y, FCC, GN Docket No. 09-51, WT Docket Nos. 08-165, 08-166, 08-167, 09-66, Attachment (Aug. 14, 2009) ("CTIA August 14 ex parte"), *available at* http://fjallfoss.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=7019935315; *See also Alvarion, MLL Telecom build mobile WiMAX trial network in UK*, Total Telecom (July 9, 2009) *available at* http://www.totaltele.com/view.aspx?C=0&ID=447108.

[53] *See Spain does U turn and moves to free up valuable spectrum for mobile*, Australian Mobile Telecommunications Association, *available at* http://www.amta.org.au/default.asp?Page=2246 (last visited Sept. 29, 2009).

[54] *See* Mary Lennighan, *Friday Review: Upheaval*, Total Telecom (Apr. 3, 2009), *available at* http://www.totaltele.com/view.aspx?ID=444619; *Research and Markets Adds Report: Telecoms, Mobile and Broadband in Scandinavia*, M2 Wireless News (Dec. 30, 2008).

[55] *See* CTIA August 14 ex parte.

[56] *See id. See also* Caroline Gabriel, *Germany to auction massive 340MHz of '4G' spectrum,* TelecomsEurope (May 7, 2009), *available at* http://www.telecomseurope.net/content/germany-auction-massive-340mhz-4g-spectrum (last visited Sept. 30, 2009); Lynette Luna, *Germany planning 4G spectrum auction*, Fierce Broadband Wireless (May 3, 2009), *available at*

In some cases, these countries' commercial mobile spectrum allocations exceed that of the United States, and in other cases, spectrum is being added to meet needs comparable to those of the United States. In all cases, these countries have active initiatives to increase the amount of spectrum available for wireless broadband services, a broadband planning step that the United States should take as quickly as possible.

The U.S. spectrum situation is increasingly serious because there is only a limited amount of spectrum allocated for commercial use left to be assigned and, after that, there is no additional spectrum being actively considered for licensed mobile broadband in the United States. The Commission recently allocated a large portion of spectrum below 698 MHz for use by unlicensed TV band devices.[57] Although unlicensed services have a place in delivering mobile broadband and other wireless applications, the Commission should cease further unlicensed allocations until sufficient spectrum is made available to support current and future demand for licensed wireless services. Ensuring that customers have the most acceptable and consistent wireless experience will require a backbone of licensed commercial spectrum for a truly competitive mobile broadband experience to be delivered.

In its comments on the National Broadband Plan,[58] T-Mobile outlined a practical, multi-step process for the Commission to undertake in cooperation with NTIA to obtain more spectrum for commercial use:

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http://www.fiercebroadbandwireless.com/story/germany-planning-4g-spectrum-auction/2009-05-03?utm_medium=rss&utm_source=rss&cmp-id=OTC-RSS-FBW0 (last visited Sept. 30, 2009).

[57] *See Unlicensed Operation in the TV Broadcast Bands,* 2nd R&O and Mem. Op. and Order, 23 FCC Rcd 16807 (2008).

[58] *See T-Mobile Broadband Comments* at 14-18.

First, the Commission should work closely with NTIA to conduct a rapid, targeted review of federal and non-federal spectrum allocations and uses from 300 MHz to 3.5 GHz.[59] The review process should be both time-limited and holistic: high-level enough to allow current users to gather and submit information in a cost-effective manner, and comprehensive enough to allow the agencies and commercial users sufficient data to identify the bands most appropriate for reallocation.

Second, as CTIA proposes, the Commission should move quickly to allocate and auction an additional 800 MHz of spectrum for commercial mobile broadband use throughout the United States,[60] a portion coming from the current government allocations managed by NTIA and a portion from spectrum regulated by the Commission. The spectrum identified should be largely contiguous, globally harmonized to the extent possible, and reside below 3.5 GHz to ensure that it can be used economically to deliver mobile broadband services.

T-Mobile urges the Commission to seek any necessary Congressional action and establish a schedule by which this spectrum would be available for commercial use. In T-Mobile's experience, the identification, reallocation, and licensing of spectrum understandably is a lengthy and complex process, but given the pressing need for additional bandwidth to allow U.S. broadband deployment to remain on par with the rest of the world, a portion of the identified spectrum should be reallocated and ready for

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[59] *See id.* T-Mobile acknowledges the efforts of Senators Kerry and Snowe to move in this direction by introducing S. 649, the Radio Spectrum Inventory Act on March 19, 2009. *See* S. 649, 111th Cong. (2009).

[60] *See* CTIA September 29 ex parte at 1-3.

auction within the next two to three years.[61] In particular, T-Mobile urges the Commission and NTIA to work together to ensure that 25 MHz of contiguous spectrum in the 1755-1800 MHz government band be paired with the 25 MHz "extended" AWS-3 (2155-2180 MHz) band, allowing for a "down payment" auction of 50 MHz for exclusive commercial use spectrum by mid-2012. Additional bands should be released to the commercial market as soon as possible thereafter – and no later than 2015.[62]

Third, the spectrum should be readily available for use, with a path to efficient and expeditious relocation of incumbent users. It would be helpful for the Commission to work with NTIA and Congress to adopt enhanced administrative procedures for federal agencies to identify appropriate spectrum and relocate existing federal users expeditiously.[63]

Fourth, parallel to its efforts to provide more spectrum for commercial use, the Commission should exercise its authority as manager of the nation's spectrum with an eye toward promoting wireless innovation and competition. The Commission's spectrum management practices should emphasize reliance on auctions and other market mechanisms, with clear but flexible service rules, to ensure that spectrum is put to its

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[61] Experience has shown that without an aggressively-enforced deadline, spectrum reallocation and assignment can be a long-term endeavor. For example, the reallocation and auction of AWS spectrum took more than a decade. *See T-Mobile Broadband Comments* at 17.

[62] The Commission originally considered spectrum at 1755-1850 MHz for advanced wireless services, including 3G, as long ago as 2001. *See Amendment of Part 2 of the Commission's Rules to Allocate Spectrum Below 3 GHz for Mobile and Fixed Services to Support the Introduction of New Advanced Wireless Services, including Third Generation Wireless Systems*, Notice of Proposed Rulemaking and Order, 16 FCC Rcd 596 (2001).

[63] *See* Spectrum Relocation Improvement Act of 2009, H.R. 3019, 111th Cong. (2009), introduced by Rep. Inslee and co-sponsored by Chairman Boucher and Rep. Upton.

highest and best use by licensees. For example, when incumbent users occupy spectrum bands to be auctioned, the Commission should consider advanced auction methodologies, such as "two-sided" auctions, that can facilitate band-clearing and simplify transitions to new licensees.[64] For spectrum that is not auctioned, spectrum fees may be an appropriate way to introduce market incentives into the licensing process.[65]

At the same time, the Commission must act aggressively against market problems by preventing harmful interference among wireless services, as required in Title III of the Communications Act of 1934, as amended (the "Act").[66] By preventing such interference, especially for systems in adjacent bands, the Commission will create "the appropriate environment in which multiple technologies can vie for preeminence in the market."[67]

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[64] *See Innovation NOI* ¶ 28; *see also Amendment of Parts 1, 21, 73, 74, and 101 of the Commission's Rules to Facilitate the Provision of Fixed and Mobile Broadband Access, Educational and Other Advanced Services in the 2150-2162 and 2500-2690 MHz Bands*, Notice of Proposed Rulemaking and Mem. Op. and Order, 18 FCC Rcd 6722, 6820-6822 (2003); *Service Rules for the 698-746, 747-762 and 777-792 MHz Bands; Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems; Section 68.4(a) of the Commission's Rules Governing Hearing Aid-Compatible Telephones*, Notice of Proposed Rulemaking, 4th Further Notice of Proposed Rulemaking and 2nd Further Notice of Proposed Rulemaking, 21 FCC Rcd 9345, 9372 (2006).

[65] *See Innovation NOI* ¶ 42.

[66] *See, e.g.*, Sections 301-303, 309 of the Act, 47 U.S.C. §§ 301-303, 309.

[67] 3G Americas White Paper, *3GPP Technology Approaches for Maximizing Fragmented Spectrum Allocations,* at 28 (July 2009), *available at http://www.3gamericas.org/documents/3GA%20Underutilized%20Spectrum_Final_7_23_092.pdf.*

B. Mobile Broadband Innovation and Competition Require Reform of the Commission's Roaming Rules.

As noted in the National Broadband Plan workshops, roaming is a significant component of providing innovative services like mobile broadband.[68] Many mobile providers do not have network facilities in all parts of the United States and must rely on roaming relationships with other mobile providers to allow their traveling customers access at affordable rates. As consumers demand more mobile broadband applications, they increasingly will wish to access these applications anywhere in the country they may be traveling. Because no mobile service provider has deployed facilities ubiquitously throughout the United States, or in fact throughout its licensed service areas, roaming will continue to be important to the mobile marketplace. Without reasonable roaming relationships among providers, both competition and innovation in mobile services will be limited.[69]

The "home market exclusion" to the automatic roaming rule, which defines home market as any location in which the requesting carrier has "spectrum rights," has harmed the roaming marketplace and will limit the availability of reasonably-priced mobile services.[70] The home market exclusion is a carve-out from the current automatic roaming rule, under which, as a general matter, a "host carrier"—the wireless provider on whose network another carrier's customer roams—has the duty, on reasonable request, to

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[68] *See* August 12 Wireless Tr. at 109-110 (exchange between Rob Curtis, FCC, and Neville Ray). *Cf.* August 13 Technology/Wireless Tr. at 107, 168 (Comments of Vanu Bose, Vanu, Inc.).

[69] *See Competition NOI* ¶ 22.

[70] *See Reexamination of Roaming Obligations of Commercial Mobile Radio Service Providers,* Report and Order and Further Notice of Proposed Rulemaking, 22 FCC Rcd 15817 (2007) ("*Roaming Order and Notice*"), *recon. pending.*

provide automatic roaming to technologically compatible carriers on reasonable and nondiscriminatory terms and conditions.[71] This obligation does not apply, however, in the requesting carrier's "home market," which is defined as the area where it has a wireless license or spectrum-usage rights that could be used to provide CMRS services.[72] The home market exclusion favors the two largest wireless carriers, AT&T and Verizon, by effectively insulating them from complaints under Section 208 of the Act about the roaming rates, terms, and conditions that they impose in many areas of the United States where they operate networks on which other providers rely for roaming.

The Commission should eliminate the home market exclusion, as numerous independent wireless providers have urged since the exclusion was created in 2007. Because no requesting carrier has fully deployed its network throughout the areas covered by its licenses or spectrum-usage rights, the home market exclusion severely limits host carriers' obligations to provide automatic roaming on a "reasonable and nondiscriminatory" basis. Eliminating the home market exclusion will make the Commission's complaint process available as a forum to consider focused issues about individual roaming agreements without having to adopt broader intrusive regulations.

In addition, the Commission should extend the automatic roaming rule to apply to data services generally, including wireless broadband Internet access, to allow consumers access to the same broadband services (2G and 3G) while traveling as they have at home. However, the Commission should not extend the current home market exclusion to apply to roaming for data services – it should eliminate the exclusion altogether. The

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[71] *See* 47 C.F.R § 20.12(d). The requesting carriers are known as "home carriers."

[72] *See id.* §§ 20.3, 20.12(d).

Commission last requested comment on this issue in 2007.[73] T-Mobile's experience since 2007 strongly suggests that, without Commission oversight, roaming for data services will not be provided at reasonable rates, terms, and conditions, or may be withheld altogether, diminishing competition at the retail level and harming consumers.

C. Improved Regulation of Special Access Service Provided by ILECs Is Crucial for Wireless Innovation and Competition.

The *Competition NOI* notes that mobile wireless services depend critically on the availability of backhaul facilities.[74] Innovation in wireless service also depends on the wide availability of backhaul to support new wireless applications.[75] As Brian Ponte of Lemko Corporation explained at a recent staff workshop, "[W]e're seeing that the backhaul is becoming the bottleneck."[76] BT Americas Inc. agrees that the ILECs' special access services are bottlenecks and notes that these chokepoints result in "[s]lower deployment and uptake of intermodal & intramodal broadband services."[77] T-Mobile's Neville Ray cautioned that while "competitive forces work in metro areas where there's a

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[73] *See Roaming Order and Notice*, 22 FCC Rcd 15817 (2007).

[74] *See Competition NOI* ¶ 26.

[75] *See Innovation NOI* ¶ 51.

[76] August 12 Wireless Tr. at 30.

[77] *See Relationship Between Effective Regulation of Access Bottlenecks and Broadband Penetration: The UK's Experience* at 9 (Sept. 2009), *att. to* Ex Parte Letter from Sheba Chacko, Head, Americas & Global Operational Regulation, BT Americas Inc., to Marlene H. Dortch, Sec'y, FCC, WC Docket No. 05-25, GN Docket No. 09-51, WC Docket No. 06-112, CC Docket No. 96-45 (Sept. 18, 2009) (stating that "US access bottlenecks need effective regulation" and that "US access services are chokepoints" (emphasis in original)).

lot of fiber …those challenges do become tougher, much tougher, as you start to thin out in terms of POP density."[78]

T-Mobile, like many other mobile providers, attempts to use alternative backhaul suppliers where available.[79] Nonetheless, in many rural markets especially, independent mobile providers like T-Mobile still must rely extensively on special access services provided by the ILECs for backhaul.[80] In these areas, competition is insufficient to discipline the prices and conditions for special access imposed by the ILEC. This ultimately thwarts competition in the special access market as the largest, vertically-integrated mobile providers, AT&T and Verizon, supply special access to competing mobile providers through their ILEC operations.[81] Earlier Commissions' premature deregulation of special access services has only exacerbated the problem.[82]

Thus, the Commission should reform special access regulation where practical competitive alternatives are not available.[83] T-Mobile, a member of the NoChokePoints Coalition,[84] urges the Commission to (i) adjust the "competitive triggers" for special access pricing flexibility, because present triggers do not identify competitive areas, (ii)

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78 August 12 Wireless Tr. at 45-46.

79 *See id.*; *see also T-Mobile Broadband Comments* at 18.

80 *See, e.g., Special Access: A Critical Broadband Chokepoint* at 3-4, *att. to* Ex Parte Letter from Norina Moy, Dir., Gov't Affairs, Sprint Nextel, to Marlene H. Dortch, Sec'y, FCC, WC Docket No. 05-25 (Sept. 18, 2009) (noting that AT&T and Verizon control 90% of the market, according to Commission data).

81 *See* Competition NOI ¶ 27.

82 *See T-Mobile Special Access Comments* at 4-6.

83 *See* August 12 Deployment – Unserved and Underserved Tr. at 64-65 (Comments of Mark Cooper, Consumer Fed'n of America).

84 *See* http://nochokepoints.org/about-coalition/who-we-are.

lower prices by improving price cap regulation of special access, and (iii) address anticompetitive terms and conditions in the contracts offered by ILECs under the pricing flexibility rules.[85]

The Commission also could improve the viability of competitive wireless backhaul by making spectrum—particularly a portion of the TV white spaces spectrum—available for this use. White spaces spectrum can be used effectively as a "foundational tool for new entrants and existing carriers to construct wireless networks across large regions of the country."[86]

D. The Commission Should Streamline the Tower Siting Process and Reform the Pole Attachment Rules.

The *Competition NOI* recognizes that mobile wireless services depend on cell sites as a productive input.[87] More specifically, in the staff workshops for the National Broadband Plan, Stephen Bye of Cox Communications and Jake MacLeod of Bechtel Telecommunications noted the importance to mobile broadband deployment of timely tower siting and pole attachment processes.[88] Indeed, obtaining zoning and other authorizations from local authorities to build cell sites has become so cumbersome that targeted regulatory intervention by the Commission is necessary. To help ensure that new wireless services are deployed expeditiously, the Commission should set a federal

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[85] *See Special Access Reform: Delivering on the Promise of Broadband* at 12, *att. to* Ex Parte Letter from Paul Margie, Counsel, Media Access Project, Nat'l. Telecomm. Coop. Ass'n, New Am. Found., *et al*., to Marlene H. Dortch, Sec'y, FCC, WC Docket No. 05-25 (Sept. 24, 2009); *T-Mobile Special Access Comments* at 9-15.

[86] *See Optimizing the TV Bands White Spaces* at 7*, att. to* Ex Parte Letter from Michele C. Farquhar, Special Counsel, FiberTower Corp. and Rural Telecomms. Group, Inc., to Marlene H. Dortch, Sec'y, FCC, ET Docket Nos. 04-186, 02-380 (Oct. 2, 2007).

[87] *See Competition NOI* ¶ 26.

[88] *See* August 12 Wireless Tr. at 74-75.

shot clock of 45 days for final action on collocation requests and 75 days for ruling on all other state and local tower siting applications.[89]

Similarly, current pole attachment regulations and practices hamper the expansion of wireless coverage in residential and suburban neighborhoods and impede the deployment of competitive backhaul facilities. T-Mobile recommends that the Commission:

- Adopt enforceable deadlines for submitting estimates and completing construction work for pole attachments; increase transparency and discouraging re-litigation of settled issues by incorporating existing precedents into the Commission's rules;
- Adopt uniform and objective safety standards to prevent pole owners from invoking subjective standards to unreasonably limit access to poles;
- Require pole owners to identify pole locations and to post agreements, fee schedules, and lists of approved contractors;
- Affirm that states that have established their own pole attachment regimes are prohibited by Section 332(c)(3) of the Act from requiring wireless carriers to submit to state certification requirements as a precondition for access to poles;[90] and
- Clarify that Section 332(c)(7)(B)(i)(II) bars zoning decisions that would preclude a carrier from serving an area it does not currently serve, regardless of whether the area is already served by another provider.[91]

The limited areas for increased regulatory action discussed above are necessary to cure specific market failures and improve the prospects for increased competition among

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[89] *See* Petition for Declaratory Ruling of CTIA, *Petition for Declaratory Ruling to Clarify Provisions of Section 332(c)(7)(B) to Ensure Timely Siting Review and to Preempt Under Section 253 State and Local Ordinances that Classify All Wireless Siting Proposals as Requiring a Variance,* WT Docket No. 08-165 (July 11, 2008); *T-Mobile Comments on CTIA Shot Clock PDR*.

[90] *See* Ex Parte Letter from Brita D. Strandberg, Counsel, Fibertech Networks and Kentucky Data Link, Inc., to Marlene H. Dortch, Sec'y, FCC, WC Docket No. 07-245, GN Docket No. 09-29, RM-11293, RM-11303, at 4-5 (Apr. 16, 2009).

[91] *See T-Mobile Comments on CTIA Shot Clock PDR* at 13.

mobile providers. Rapid action by the Commission in these specific areas will help competition and innovation expand in the wireless market without broader regulation.

IV. THE COMMISSION SHOULD RENEW ITS COMMITMENT TO A LIGHT-TOUCH, DEREGULATORY APPROACH TO THE WIRELESS MARKETPLACE.

A. The Commission Can Best Promote Innovation by Ensuring that Competition in the Market Continues to Flourish—and Such Innovation Will in Turn Promote More Competition.

Beyond addressing certain bottleneck issues regarding inputs for wireless services, the most important contribution the Commission can make to wireless innovation is to reaffirm its longstanding reliance on the healthy forces of competition in the wireless marketplace. As Professor William J. Baumol has explained, "competitive pressures . . . force firms . . . to unrelenting investment in innovation."[92] Indeed, the Commission itself notes, "A robustly competitive mobile wireless market will be essential to realizing the full benefits to American consumers and channeling investment toward vitally important national infrastructure. A vibrant mobile wireless market is also essential to driving innovation, not only within the mobile market itself, but also in markets—current and future—for which wireless mobility is a key enabler."[93]

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[92] WILLIAM J. BAUMOL, THE FREE-MARKET INNOVATION MACHINE, AT 3 (2002). *See also* Robert D. Willig, *Knowledge Economy Forum V: Innovation, Growth and Competition* at 14 (2006) ("*Willig Presentation*") ("Product market competition" is what "drives innovation"), *available at*: http://siteresources.worldbank.org/INTECAREGTOPKNOECO/Resources/Plenary_I_Robert_WILLIG.ppt (last visited Sept. 24, 2009).

[93] *Competition NOI* ¶ 2.

In an era where some have begun to argue that *regulation* is the key to spurring new broadband innovation,[94] the basic observation noted by the Commission bears repeating: Innovation is the fruit borne of a robust marketplace. It cannot be forced, legislated, or regulated into existence:

> [T]he most critical lesson to be gleaned from the transformation of the communications landscape is that competitive markets generally do far more than regulation to place new technologies at the disposal of consumers. Experience has shown that when providers have the incentive and the ability to compete for consumers' communications dollars, they will develop and deploy the technologies that the people demand. Conversely, when circumstances deprive them of that incentive or that ability, investment and innovation are blunted, deployment lags, and consumers suffer.[95]

Or, as scholars Gregory Rosston and Michael Topper observe,

> Deployment of next-generation technologies is an important part of the competitive dynamic in the wireless industry" because competitive forces drive carriers to seek to "improve the coverage, capacity, and capabilities of their networks, leading to improvements in service quality.[96]

Established players must innovate to protect their competitive position, while upstart companies seek to introduce groundbreaking innovations. "The consumer benefits, the marketplace evolves."[97]

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[94] *See, e.g.*, Comments of Free Press, *A National Broadband Plan for Our Future*, GN Docket No. 09-51 (June 8, 2009).

[95] Bryan N. Tramont and Russell P. Hanser, *Facing Tomorrow's Challenges: Looking Forward*, *Looking Back*, 16 COMMLAW CONSPECTUS i, v (2007-2008).

[96] Gregory L. Rosston & Michael D. Topper, *An Antitrust Analysis of the Case for Wireless Network Neutrality*, forthcoming in *Information, Economics, and Policy*, at 24 (July 2009).

[97] Tracy Ford, *FCC inquiry into competition is complicated, to say the least,* RCR Wireless (Sept. 15, 2009).

These observations are truisms that apply to markets and economies across the board. In an address to the World Bank, Professor Willig explained that, in a market in which competitive forces thrive, incumbents will invest in innovation in order to try to protect their market positions, while "upstarts" will accomplish revolutionary innovations in an attempt to make a market impact — a process that results in "a dynamic equilibrium with leap-frogging."[98] McKinsey & Company likewise has stressed that "competitive intensity (ideally coupled with robust demand) is the clearest driver of innovation within companies and sectors. Factors other than competition can and do play a role. Nonetheless, our research clearly shows that wherever competitive intensity is greatest, innovative products and practices proliferate and productivity grows."[99]

From the very inception of the wireless industry, Congress understood that heavy regulation could undermine the industry's dynamism. It thus quickly preempted state rate and entry regulation,[100] and directed the Commission to proactively consider forbearing from regulation of wireless services wherever appropriate.[101] In light of this overall approach and Congress's more general deregulatory directives throughout the

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98 *Willig Presentation* at 16.

99 *See* Ian Davis, McKinsey & Co., *How to Drive Innovation in Europe*, at 1 (Presentation to European Commission), *available at* http://ec.europa.eu/economy_finance/events/2006/bxlforum/davis_speech_en.pdf; *see also* Written Statement of George S. Ford, Chief Economist – Phoenix Center for Advanced Legal & Economic Public Policy Studies, Before the House of Representatives Committee on Energy and Commerce, Subcommittee on Telecommunications and the Internet, Hearing on "An Examination of Competition in the Wireless Industry" (May 7, 2009).

100 *See* 47 U.S.C. § 332(c)(3).

101 *See id.* §332(c)(1)(A).

Act, [102] the Commission has consistently allowed the wireless market to develop without intervention, finding that a "minimal regulatory environment" would "benefit American consumers and promote innovative and efficient communications."[103] In fact, the wireless market is as robust, open, and dynamic as it is today because the Commission took a deregulatory approach to the market early on, allowing competition to promote consumer welfare and drive innovation.

The Commission should carry on that approach. In the face of an ongoing economic recession, wireless carriers are among the few U.S. business sectors still involved in heavy investment in infrastructure projects.[104] A reaffirmation by the Commission that wireless carriers are right to invest in the future of this industry and this country is critical. Blunt regulatory tools that seek to hew a specific vision of the future are unlikely to achieve anything more impressive than what the industry has wrought on its own, yet they may do serious damage in the interim.

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[102] *See* Preamble to the Telecommunications Act of 1996, Pub. L. No. 104-104, 110 Stat. 56 (emphasis added) (goal of the Act is "[t]o promote competition and reduce regulation in order to secure lower prices and higher quality services for American telecommunications consumers and encourage the rapid deployment of new telecommunications technologies."); 47 U.S.C. § 1302(a) (the Commission should "encourage the deployment on a reasonable and timely basis of advanced telecommunications capability" by adopting a policy of "regulatory forbearance" and other measures to "remove barriers to infrastructure investment."); *see also, e.g.*, *Federal-State Joint Board on Universal Service*, Report to Congress, 13 FCC Rcd 11501, 11508 (1998) (recognizing that the 1996 Act explicitly endorsed a policy of deregulation).

[103] *See Appropriate Regulatory Treatment for Broadband Access to the Internet over Wireless Networks*, Declaratory Ruling, 22 FCC Rcd 5901, 5902 (2007) (establishing "a minimal regulatory environment for wireless broadband Internet access service that promotes our goal of ubiquitous availability of broadband to all Americans").

[104] *See* Jeffry Bartash, *Carriers Still Pouring Billions Into Mobile Networks*, Dow Jones Newservices (Sept. 22, 2009).

Put simply, "[d]ecentralized competitive forces far outperform governmental planning and micromanagement."[105] Myriad academics and economists have agreed that "blanket rules can . . . reduce the incentives both for incumbents and new entrants to develop innovative new wireless service packages."[106] As Commissioner Baker notes, rules that seek to "benchmark innovation" could "unintentionally hinder possible new entrants, technologies, and business models."[107] The innovation/competition-distorting effects of heavy regulation are evident in a comparison of the U.S. and European wireless markets. As Professor Ford explains, "as a consequence of a spectrum policy regime different than those adopted in Europe, the United States has a much broader diversity of wireless network platforms and more competition among network providers than markets where governments have taken much stronger command-and-control approaches to technical matters."[108] In other words, as Commissioner McDowell has observed, "The Commission's longstanding policy to allow competitive market forces, rather than

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[105] *See Willig Presentation* at 1.

[106] *See* Gregory L. Rosston & Michael D. Topper, *An Antitrust Analysis of the Case for Wireless Net Neutrality*, at 4; William J. Baumol et al., AEI-Brookings Joint Center, Economists' Statement on Network Neutrality Policy, at 1 (2007), *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id= 976889#PaperDownload (last visited Sept. 29, 2009) ("[I]ntroducing price regulation risks discouraging the healthy process of risk-taking innovation—which is especially important in telecommunications.").

[107] Statement of Commissioner Meredith A. Baker at 34, *Fostering Innovation and Investment in the Wireless Communications Market*, GN Docket Nos. 09-157, 09-51 (Aug. 27, 2009); *see also* Statement of Commissioner Robert M. McDowell at 32, *Fostering Innovation and Investment in the Wireless Communications Market*, GN Docket Nos. 09-157, 09-51 (Aug. 27, 2009) ("I hope that we will proceed with care; mindful that any future action we consider should aim to *attract* more private investment capital, rather than deter it.").

[108] George S. Ford et al., *A Policy and Economic Exploration of Wireless* Carterfone *Regulation*, 25 SANTA CLARA COMPUTER & HIGH TECH L.J. 647, 666-67 (2008-2009).

command-and-control regulations, to foster the development of and investment in wireless networks and services has led to remarkable advances."[109]

B. The Commission Should Reject Calls for Burdensome Regulatory Intervention that Would Disregard the Unique Needs and Characteristics of Wireless Service.

Some parties nevertheless urge the Commission to move toward a heavily regulatory approach to wireless oversight.[110] Their arguments focus solely on development at the edge of the network—disregarding the substantial contributions wireless providers have made from the beginning, but particularly in recent years, as detailed above, and dismissing the toll that heavy regulation would take on the network on which all edge innovation depends.[111] Yet, according to Robert Atkinson of the Information Technology and Innovation Foundation, "[W]e have to have a regulatory framework that enables innovation at the core and not just the edge. And if we don't have that there'll be no incentive to do *any* of this innovation."[112] In other words, regulating the providers heavily in the hope that innovation will nevertheless develop

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[109] Statement of Commissioner Robert M. McDowell at 32, *Fostering Innovation and Investment in the Wireless Communications Market*, GN Docket Nos. 09-157, 09-51 (Aug. 27, 2009); *see also 4G World 2009: FCC Official Urges WCAI Conference Attendees to Weigh in on Multitude of Wireless Issues at Agency*, Telecommunications Reports, 2009 WLNR 18844387 (2009) (quoting FCC Chief Counsel and Senior Legal Adviser to Chairman Julius Genachowski as noting that "inflexible regulation can be a burden on innovation and consumers").

[110] *See, e.g.*, Comments of Free Press, *A National Broadband Plan for Our Future*, GN Docket No. 09-51 (June 8, 2009).

[111] *See* Editorial, *The FCC's Heavy Hand*, WASH. POST, Sept. 28, 2009, at A14 (urging the Commission to avoid unnecessary regulation that could jeopardize entrepreneurial activity and "stifle further investments . . . with attempts to micromanage what has been a vibrant and well-functioning marketplace.").

[112] *See* Sept. 3 Big Ideas with Potential to Substantially Change the Internet Tr. at 85 (Comments of Robert D. Atkinson, The Info. Tech. and Innovation Found.).

around them is a calculation that never hits the mark.[113] As Jennifer Manner (now Deputy Chief of the Public Safety and Homeland Security Bureau) recently observed, in the "heavily regulated telecommunications marketplace [of the past] . . . there was limited consumer choice, expensive rates and . . . innovation was limited"—while "the competitive telecommunications market . . . has resulted in substantial consumer benefits."[114] There is no reason to predict a different outcome here—nor any reason for the Commission to do anything other than reaffirm its current approach.

The Commission should in particular resist the call to impose "net neutrality" or "open access" rules on the wireless industry. While Chairman Genachowski recently suggested that the Commission would be considering such a proposal,[115] he also made clear that wireless requires a different analysis than wired broadband because of technological differences and bandwidth constraints.[116] In particular, wireless broadband faces the special challenge of providing a *shared* resource over *finite* spectrum. Carriers must have the flexibility to ensure that some users do not unduly undermine the broadband experience of others or interfere with the carrier's ability to offer voice and critical emergency services. In addition, carriers need the ability to ensure the security of

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[113] *See* Thomas W. Hazlett, *Broadband Regulation in the United States: An Empirical Assessment* (June 14, 2007).

[114] Jennifer A. Manner, *Telecommunications in a Dearth of Capital: A Changed Paradigm that Requires a New Way of Thinking*, 18 MEDIA L. & POL'Y 36 (2009); *see also Carterfone to iPhone* at 215 ("[T]he wireless carrier market in the U.S. is rapidly evolving and highly competitive, in stark contrast to the price-regulated, vertically integrated carrier and equipment AT&T monopoly of the pre-*Carterfone* era.").

[115] *See* Julius Genachowski, Chairman, FCC, Prepared Remarks at The Brookings Institution: "Preserving a Free and Open Internet: A Platform for Innovation, Opportunity, and Prosperity" (Sept. 21, 2009) ("*Genachowski Remarks*").

[116] *Id.* at 7.

their networks and to make sure the wireless devices on their network meet technical standards.[117]

Moreover, as the Chairman acknowledged, wireless carrier innovation and market forces are already bringing increased openness to the wireless marketplace.[118] T-Mobile and other carriers offer customers considerable freedom in their access to applications and broad flexibility in choosing handsets and features. T-Mobile sells and supports the use of Wi-Fi- and Bluetooth-enabled devices, broadly permits customers to use GSM handsets that can operate at 1.9 GHz on its network, was the first wireless carrier to offer an Android handset, and has a general policy of unlocking subsidized phones on request 90 days after purchase.[119] As even the industry's critics acknowledge, these developments are a "step in the right direction" and show "an industry that is increasingly moving toward openness"[120]—all without blunt-edged, prescriptive regulation or enforcement.

Indeed, if the Commission's C Block "open access" test case[121] produces a service model that proves attractive to consumers, the industry is sure to proceed down

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117 *See T-Mobile Skype Comments* at 37.

118 *Genachowski Remarks* at 6 (acknowledging "a trend towards openness among several participants in the mobile marketplace"); *see also Thirteenth Annual Wireless Competition Report*, 24 FCC Rcd at 6266.

119 *See T-Mobile Skype Comments* at 30.

120 Posting of Brian Gardiner to Wired.com Epicenter blog, *Pigs Fly, Hell Freezes Over and Verizon Opens Up Its Network—No, Really*, *at* http://blog.wired.com/business/2007/11/Verizon-opens-u.html (Nov. 27, 2007, 11:48 EST); *see also Carterfone to iPhone* at 210.

121 *See Service Rules for the 698-746, 747-762 and 777-792 MHz Bands*, Second Report and Order, 22 FCC Rcd 15289 (2007).

that path even more decisively.[122] The Commission accordingly should reject calls for precipitous action at this time, and should instead await and assess the results of that test case. Moreover, in the absence of any demonstrated problem in the short term, no other action is needed or appropriate at this time.

The Commission should also reject calls for intrusive regulation of exclusive handset arrangements. As T-Mobile and others have explained, handset exclusivity arrangements promote innovation by allowing carriers to undertake the investments necessary to develop cutting-edge devices.[123] In addition, these arrangements promote competition by allowing carriers to distinguish themselves from their competition and tailor their handsets to better meet consumer needs.[124] Eliminating these agreements will erode, not enhance, competition and—more specifically—innovation.[125]

Without exclusivity arrangements, innovative devices such as the T-Mobile myTouch™ and the SideKick, for example, might never have been developed at all.[126]

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[122] *Carterfone to iPhone* at 221.

[123] *See T-Mobile RCA Handset Comments* at 3; *see also* Written Statement of Barbara S. Esbin, Senior Fellow and Dir. of the Ctr. for Comm. and Competition Policy, The Progress & Freedom Found., Before the Senate Committee on Commerce, Sci. & Transp. Hr'g on "The Consumer Wireless Experience" (June 17, 2009).

[124] *T-Mobile RCA Handset Comments* at 3.

[125] *See* Adam Therier, *Is Apple's iPhone the End of Innovation?*, Technology Liberation Front, *available at* http://techliberation.com/2009/09/27/is-apples-iphone-the-end-of-innovation-hahn-singer-on-handset-exclusivity-fears/ (last visited Sept. 28, 2009) (quoting Robert W. Hahn & Hal J. Singer, *Why the iPhone Won't Last Forever and What the Government Should Do to Promote its Successor* (Sept. 1, 2009)) ("Banning exclusive contracts could have the unintended consequence of reducing innovation, reducing options, raising prices, and potentially establishing market dominance for an incumbent handset maker.").

[126] *T-Mobile RCA Handset Comments* at 5; Reply Comments of Research in Motion Corp. at 7, *Petition for Rulemaking Regarding Exclusivity Arrangements Between Commercial Wireless Carriers and Handset Manufacturers*, RM-11497 (Feb. 20, 2009).

And notwithstanding the exclusive arrangements that characterize the introduction and adoption of many devices, the resulting innovation quickly filters throughout the rest of the wireless market, benefiting a broad range of carriers and, most importantly, consumers. Most exclusive arrangements are short enough that other carriers and their customers enjoy the new technology relatively quickly—typical T-Mobile exclusive arrangements last for only about 90 days.[127] And even where exclusive arrangements are longer, they still tend to spur innovation throughout the industry. For example, the introduction of the iPhone motivated Sprint to develop the touchscreen Samsung Instinct and Verizon Wireless to work with Blackberry to introduce the Storm.[128] Indeed, this dynamic aptly illustrates the power of competition to fuel innovation.

Finally, the Commission should be careful to recognize the special nature of exclusive arrangements that are designed to protect a device developed specifically for—and with substantial input of—a specific carrier. For example, in certain circumstances, T-Mobile collaborates closely with a manufacturer to design unique, T-Mobile-focused handsets. The resulting devices showcase customized features and functionalities that deliver a distinct T-Mobile-branded user experience and address the preferences of T-Mobile subscribers. In such cases, extended exclusive distribution is appropriate to protect T-Mobile's substantial investment, its brand, and its contribution of significant intellectual property.

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[127] *T-Mobile RCA Handset Comments* at 6.

[128] Comments of Sprint Nextel Corporation at 6, *Rural Cellular Association Petition for Rulemaking Regarding Exclusivity Arrangements Between Commercial Wireless Carriers and Handset Manufacturers*, RM-11497 (Feb. 2, 2009).

Consumers can now choose from among at least 35 handset manufacturers offering over 600 handset models.[129] "The regulatory freedom that wireless carriers and handset makers enjoy has fueled exponential technological innovation in a market that is nowhere near mature."[130] As the Commission concluded almost two decades ago, the government should be "reluctant to implement a rule that could disrupt an evolving market that is already offering consumers the benefits that derive from competition."[131]

In a proceeding dedicated to competition and the innovation that fuels it, the Commission has—and should take—the opportunity to commit itself to a "proceed with caution" approach to wireless broadband regulation. Such a signal will promote continued investment in innovation and advanced services, and ultimately will ensure that competition remains robust and vibrant in all corners of this market.

V. CONCLUSION.

This is a critical time in the evolution of wireless services in the United States, particularly as consumers continue to demand faster and more robust mobile broadband services. T-Mobile endorses the Commission's determination to foster competition and innovation across the wireless industry for years to come and, therefore, urges the

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129 *See* CTIA March 20 ex parte at 1.

130 *See Carterfone to iPhone* at 215.

131 *Implementation of Section 304 of the Telecommunications Act of 1996: Commercial Availability of Navigation Devices*, Report and Order, 13 FCC Rcd 14775, 14800 (1998).

Commission to craft its regulatory approach to wireless and mobile broadband in a manner that recognizes the benefits that such services can bring to the United States.

Respectfully submitted,

/s/ Thomas J. Sugrue
Thomas J. Sugrue
Kathleen O'Brien Ham
Sara F. Leibman

MORRISON & FOERSTER, LLP
2000 Pennsylvania Avenue, N.W.
Suite 6000
Washington, D.C. 20006
Voice: (202) 887-1500
Fax: (202) 887-0763

T-MOBILE USA, INC.
401 Ninth Street, N.W.
Suite 550
Washington, D.C. 20004
(202) 654-5900

September 30, 2009

dc-573462