

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

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In the Matter of)		
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A National Broadband Plan for Our Future)	GN Docket No. 09-51	
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COMMENTS OF T-MOBILE USA, INC.

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TABLE OF CONTENTS

I.	INTRODUCTION AND SUMMARY.	1
II.	THE ADVANCEMENT OF MOBILE BROADBAND SHOULD BE AN ESSENTIAL COMPONENT OF A NATIONAL BROADBAND PLAN.	4
A.	Terrestrial mobile broadband can increase productivity via increased mobility, safety, and convenience of communications for individuals and businesses alike.	4
1.	Mobile Broadband Offers Unique Consumer Benefits.	4
2.	Mobile Broadband Can Be a Cost Effective Way To Bring Broadband to Remote Areas.	6
3.	Construction and Use of New Wireless Networks Promote Economic Growth.	7
a.	Building Out Broadband Networks and Offering Broadband Service Create Jobs.	8
b.	Broadband Service and Applications Boost Productivity.	8
B.	A Critical Component of the National Broadband Plan’s Success Is Access to Spectrum and Infrastructure.	10
III.	MEETING CONSUMER DEMAND FOR AFFORDABLE BROADBAND SERVICES SHOULD BE THE PRIMARY BENCHMARK FOR MEASURING PROGRESS.	11
IV.	ADDITIONAL SPECTRUM IS NEEDED FOR WIRELESS BROADBAND TO REACH ITS FULL POTENTIAL.	13
A.	Available Spectrum for Commercial Broadband Use Is Limited.	14
B.	The National Broadband Plan Should Establish a Goal of Reallocating at Least 200 MHz of Spectrum for Commercial Use.	16
V.	INCREASING CONSUMER DEMAND FOR BROADBAND SERVICES AND APPLICATIONS WILL BE FACILITATED IF THE GOVERNMENT ADDRESSES CERTAIN OTHER KEY ISSUES..	18
A.	Improved Regulation of Special Access Service Is Crucial for Mobile Broadband Growth.	18
B.	Mobile Broadband Build-out Requires Reform of the Commission’s Roaming Rules.	20
C.	The Commission Should Streamline the Tower Siting Process.	21

D.	The FCC Should Commit to Pole Attachment Reform.....	22
E.	The National Broadband Plan Should Commit to a Timeline for Intercarrier Compensation and Universal Service Reform.	23
VI.	THE COMMISSION SHOULD NOT SUBJECT RETAIL MOBILE BROADBAND SERVICES TO PRICE REGULATION.	26
VII.	CONCLUSION.....	27

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COMMENTS OF T-MOBILE USA, INC.

I. INTRODUCTION AND SUMMARY.

T-Mobile USA, Inc. (“T-Mobile”), the fourth largest mobile carrier in the United States, serving over 33 million customers, urges the Commission to create a National Broadband Plan (“National Broadband Plan” or “Plan”) that fully recognizes the benefits that terrestrial mobile broadband service can bring to the United States.¹ As the Commission’s Rural Broadband Report concludes, wireless service can play a critical role in striving toward the goal of bringing broadband to all Americans. The Report acknowledges that “wireless infrastructure costs are frequently less significant than comparable wired broadband deployments,” and “wireless broadband can be an efficient means of delivering both backhaul and ‘last-mile’ access services in rural areas.”²

¹ See *A National Broadband Plan for Our Future*, Notice of Inquiry, 24 FCC Rcd 4342 (2009) (the “NOI”). Development of the National Broadband Plan is one of the requirements set forth in the American Recovery and Reinvestment Act of 2009 (“Recovery Act”), Pub. L. No. 111-5, 123 Stat. 115 (2009) §§ 6001(k)(1),(2).

² See Acting Chairman Michael J. Copps, *Bringing Broadband to Rural America: Report on a Rural Broadband Strategy*, ¶ 142 (May 22, 2009) (“Rural Broadband Report”). The Rural Broadband Report is a “prelude to, and a building block for, the national broadband plan.” *Id.* ¶ 8.

In light of increasing demand for and reliance on mobile broadband by U.S. consumers, T-Mobile urges the Commission to implement the following three general policy initiatives to advance mobile broadband:

- Identify, reallocate, and auction new spectrum suitable for commercial mobile broadband services.
- Commit to more effective targeted oversight of the supply of certain key inputs for mobile broadband services.
- Make a number of focused, but important, steps to help streamline the process of siting wireless network facilities.
- Otherwise avoid unnecessary regulation in the highly competitive mobile broadband market.

The creation of a National Broadband Plan is a positive step forward.

Technological developments now permit broadband to be offered efficiently over multiple platforms, including terrestrial mobile wireless, fixed wireless, satellite, and a variety of wired platforms. Broadband offered over a terrestrial mobile wireless platform (hereinafter “mobile broadband”) is one of the most versatile and consumer-friendly forms of broadband. Ensuring there is a competitive and strong mobile broadband market is a critical component of the success of the National Broadband Plan.

As a national wireless provider, T-Mobile is at the forefront of developing innovative mobile services, including mobile broadband, for U.S. consumers. T-Mobile was the largest winner of Advanced Wireless Services (“AWS”) spectrum in the Commission’s 2006 auction. Including auction payments, T-Mobile has invested over \$7 billion thus far to build out its AWS-1 service offering, which provides 3G mobile broadband, generating and preserving thousands of jobs as it deploys its facilities and

rolls out new 3G-capable handsets and other devices.³ T-Mobile's 3G technology, when fully operational, will have the capability of providing High-Speed Downlink Packet Access ("HSDPA"), with theoretical maximum downstream data transmission speeds of up to 14.4 Mbps, which are comparable to many currently available wireline broadband services.⁴ In 2009, T-Mobile plans to double the population currently covered by its high-speed network to reach more than 200 million people in the U.S.⁵ T-Mobile is also planning next-generation mobile broadband services and is actively considering advanced technologies such as "HSPA plus" ("HSPA+") and Long Term Evolution ("LTE").

In providing mobile broadband, T-Mobile offers U.S. consumers the same outstanding customer service and excellent value that characterize its current voice and data offerings. Multiple independent research studies continue to rank T-Mobile among the highest in wireless customer care and call quality in numerous regions throughout the country. For eight of the last nine reporting periods, T-Mobile received the highest

³ See Letter from Thomas J. Sugrue, V.P. Gov't Affairs and Neville Ray, Sr. V.P. Engineering & Operations, T-Mobile to Hon. Kevin Martin, Chairman, FCC, WT Docket No. 07-195, at 1 (June 13, 2008).

⁴ See Reply Comments of T-Mobile, WT Docket No. 07-195, at 1-2 (Aug. 11, 2008); see generally *The GigaOM Interview: Cole Brodman, CTO, T-Mobile USA* (May 12, 2009), available at <http://gigaom.com/2009/05/12/the-gigaom-interview-cole-brodman-cto-t-mobile-usa/>. Download speeds are affected by a number of factors, including terrain, time of day, distance from the base station, the user's device and browser, and backhaul capacity.

⁵ Press Release, *T-Mobile USA Launches 3G webConnect USB Laptop Stick* (Mar. 25, 2009), available at http://www.t-mobile.com/company/PressReleases_Article.aspx?assetName=Prs_Prs_20090325&title=T-Mobile%20USA%20Launches%203G%20webConnect%20USB%20Laptop%20Stick.

ranking in overall customer care in the J.D. Power and Associates 2009 Wireless Customer Care Performance study.⁶

A robust and nationwide mobile broadband network is crucial for T-Mobile to compete aggressively with other mobile broadband providers. Going forward, access to additional spectrum is essential for T-Mobile and other competitive mobile providers to make continued capital investments in mobile broadband networks that will help create jobs, enhance competition, lower prices, and benefit consumers.

II. THE ADVANCEMENT OF MOBILE BROADBAND SHOULD BE AN ESSENTIAL COMPONENT OF A NATIONAL BROADBAND PLAN.

A. Terrestrial mobile broadband can increase productivity via increased mobility, safety, and convenience of communications for individuals and businesses alike.

Any national plan for broadband development should focus on mobile broadband, which builds on today's successful terrestrial mobile wireless services to provide consumers and businesses with anywhere, anytime access to convenient and productivity-enhancing applications.⁷

1. Mobile Broadband Offers Unique Consumer Benefits.

Unlike wireline and fixed wireless broadband, mobile broadband potentially enables consumers to access the Internet at any time from almost any location. Rather than simply being the "third pipe to the home," mobile broadband brings "broadband to

⁶ The J.D. Power and Associates 2009 Wireless Customer Care Performance measures how satisfied wireless customers are with the experience of calling into the customer service centers or visiting the retail locations of their respective providers.

⁷ See NOI ¶ 13 (seeking comment on how to provide "an analysis of the most effective and efficient mechanisms for ensuring broadband access by all people of the United States.")

the person,” wherever and whenever consumers want it.⁸ The Commission recognized the same in its Rural Broadband Report, noting that “wireless broadband service can offer cost-effective connectivity where no broadband exists, as well as complementary or competitive service where it does.”⁹ Recent market studies confirm that consumers increasingly demand mobile broadband. The number of 4G service subscriptions worldwide is estimated to reach 136 million by year-end 2014, and subscriptions in global emerging markets may account for 43 percent of the total in 2014.¹⁰ Expansion of mobile broadband availability is critical to meeting customer demand¹¹ and accomplishing the American Reinvestment and Recovery Act’s (“Recovery Act”) goals of using broadband infrastructure and services for:

[A]dvancing consumer welfare, civic participation, public safety and homeland security, community development, health care delivery, energy independence and efficiency, education, worker training, private sector investment, entrepreneurial activity, job creation and economic growth, and other national purposes.¹²

Mobile broadband also can support applications that directly benefit consumers, such as public safety and telemedicine, with greater flexibility than wired broadband.¹³

The Commission already has found that wireless broadband services will play an

⁸ Ex Parte Letter from Christopher Guttman-McCabe, V.P. Regulatory Affairs, CTIA – The Wireless Association, to Marlene H. Dortch, Sec’y, FCC, RM-11361, GN Docket No. 09-51, WC Docket No. 07-52, at 15 (May 12, 2009) (“CTIA May 12 ex parte”).

⁹ See Rural Broadband Report ¶ 142.

¹⁰ See Wireless, Communications Daily (May 20, 2009), citing *Mobile Video Services: A Five-Year Global Market Forecast*, Pyramid Research, June 2009.

¹¹ The NOI seeks comment on how to develop “a detailed strategy for achieving affordability of such service and maximum utilization of broadband infrastructure and service by the public.” NOI ¶ 13.

¹² Recovery Act § 6001(k)(2)(D).

¹³ See NOI ¶ 76.

essential role in the ability of public safety entities, especially first responders, in fulfilling their mission to protect the public's health, welfare, and property.¹⁴ Similarly, examples abound of potential telemedicine applications that depend on mobile broadband.¹⁵ Even the use of mobile broadband for such seemingly mundane tasks as telecommuting can enhance consumers' lives by giving them greater flexibility in managing their occupations and their personal lives.¹⁶

Since T-Mobile has rolled out its broadband 3G services, including its G1 "smartphone" with the Android operating system, an abundance of new personal mobile applications have become available. These mobile applications can benefit consumers by enabling activities like email, social networking, scheduling, managing personal finance, and myriad other functions on handsets that previously required an Internet-connected personal computer.

2. Mobile Broadband Can Be a Cost Effective Way To Bring Broadband to Remote Areas.

Compared to broadband provided over wireline facilities like fiber-to-the-home, copper, or coaxial cable, mobile broadband can be a more technologically cost-effective

¹⁴ See *Service Rules for the 698-746, 747-762 and 777-792 MHz Bands*, Second Report and Order, 22 FCC Rcd 15289, 15407-08, ¶ 325 (2007).

¹⁵ See, e.g., Sira P. Rao, Nikil S. Jayant, Max E. Stachura, Elena Astapova, and Anthony Pearson-Shaver, *Delivering Diagnostic Quality Video over Mobile Wireless Networks for Telemedicine*, International Journal of Telemedicine and Applications Vol. 2009, Article ID 406753 (2009).

¹⁶ See, e.g., Rhonda Wickham, *Broadband, Teleworking Could Spell Big Savings*, Wireless Week (May 30, 2008), available at <http://www.wirelessweek.com/article.aspx?id=160288> (discussing a Connected Nation report on money and time savings to workers and employers when teleworking programs are made available).

means of bringing broadband to remote or sparsely populated areas.¹⁷ As such, mobile broadband providers can advance the Recovery Act's twin purposes of bringing affordable, sustainable broadband to consumers in both unserved and underserved areas.¹⁸ Many rural areas remain without dependable broadband service, and densely populated cities sometimes lack the infrastructure available to provide broadband to all residents. In these cases, with proper incentives, terrestrial mobile broadband may be an economical means of making broadband ubiquitously available. Of course, there are still economic and operational challenges to building out broadband to many rural markets, even for wireless providers. As a result, as noted in Section V.E, *infra*, the Plan must include reforms to Universal Service Fund support mechanisms to facilitate the extension of mobile broadband to rural areas.

3. Construction and Use of New Wireless Networks Promote Economic Growth.

T-Mobile's recent experience in rolling out its AWS spectrum for broadband services underscores how new wireless broadband network facilities create jobs in the construction of cell sites and other infrastructure.¹⁹ Even in these difficult economic

¹⁷ See Rural Broadband Report ¶ 142.

¹⁸ See Dr. Jabari Simama, Alliance for Digital Equality, *Affordable Broadband: Empowering Communities Across The Digital Divide*, at 10-11 ("Affordable Broadband"), available at <http://www.alliancefordigitalequality.org/dep.pdf> (last visited June 4, 2009). Developing countries recently have begun to rely on terrestrial wireless networks in lieu of wired or satellite networks to bring advanced communications to unserved and underserved rural areas. See also, GSM Press, *Mobile Network Coverage in Rural Africa* (Feb. 19, 2009) <http://www.gsmprss.com/eng/news-mobile-network-coverage-in-rural-africa.html>; see also Yang Li, Johnson I. Agbinya, and H. Anthony Chan, *An Applicable GSM Network Model for Networking in Rural Environments*, *African Journal of Information & Communication Technology*, Vol. 2, No 2 (2006).

¹⁹ The NOI asks how to interpret and implement the Recovery Act's directive to include a plan for the use of broadband infrastructure and services in advancing job creation and economic growth. See NOI ¶ 102.

times, T-Mobile is making capital investments, generating and preserving jobs, and enhancing its customer service as it introduces service on its AWS spectrum.

a. Building Out Broadband Networks and Offering Broadband Service Create Jobs.

T-Mobile has found that construction of mobile broadband facilities and rollout of new service offerings can create high-paying jobs and training opportunities. Mobile broadband companies have call centers, retail stores, and network facilities, all of which draw on the workforce of local communities. For example, over the years, T-Mobile has grown its workforce to over 40,000 employees and operates 24 call centers in 16 states, 22 of which employ between 450 and 1500 people.²⁰

b. Broadband Service and Applications Boost Productivity.

The availability of mobile broadband services can increase demand for a variety of wireless services throughout the nation's workforce, boosting consumer demand, worker productivity and economic growth.²¹ The Recovery Act requires that the Commission formulate "a detailed strategy for achieving affordability of [broadband] service and maximum utilization of broadband infrastructure and service by the public."²²

²⁰ Call centers have a direct beneficial effect on local economies. T-Mobile built a new facility in Augusta, Georgia for one of its customer call centers and hired 750 people. T-Mobile's National Returns Center in La Grange, Georgia, a town suffering overall unemployment of 12 percent and substantial closures of local manufacturing plants, recently added 111 new jobs when it added a second shift to its schedule.

²¹ See CTIA May 12 ex parte at 11 (noting that the "mobile wireless broadband experience has been the increased functionality that smartphones and other advanced wireless devices have brought to consumers," which are in turn "becoming tools of productivity and gateways to information in ways that are evolving every day.")

²² See Recovery Act § 6001(k)(2)(B) .

The NOI asks how American workers can use broadband to increase their workplace effectiveness, both for training and on a daily basis.²³

Broadband—and particularly robust mobile broadband—connects businesses and consumers to the Web and the world. Workers have the potential to telecommute from any location with a mobile broadband connection. Availability of broadband with sufficient capacity for enterprise applications can attract companies to small towns, potentially creating hundreds of jobs.²⁴ A recent study by the Alliance for Digital Equality found that broadband helps attract businesses and commerce to connected communities, citing economic models showing that “for every one percentage point increase in broadband penetration, employment expands by almost 300,000 jobs.”²⁵

Broadband build-out to many communities, however, is not sufficient. The Plan should also consider broadband demand and use. As evident in the wireless marketplace, demonstrated innovation in the application and handset markets can increase adoption of new technologies and boost productivity.²⁶ Innovating at a rapid pace to compete for customers, wireless providers continually upgrade the tools and applications to help users increase productivity. This innovation is reflected, for example, in the availability of “an

²³ NOI ¶ 94.

²⁴ For example, as described in a recent Washington Post article, when the small, rural town of Lebanon, Virginia obtained high-speed Internet three years ago from \$2.3 million in grants to bring broadband to homes and business parks, its economic outlook improved dramatically. Defense contractor Northrop Grumman and software maker CGI constructed facilities in the town and created about 700 jobs with salaries averaging \$50,000 a year. See Cecilia Kang, *Rural Riddle: Do Jobs Follow Broadband Access?; Two Hamlets That Got High-Speed Lines Show Wildly Different Results*, Wash. Post, Apr. 23, 2009, at A1.

²⁵ See Affordable Broadband at 1.

²⁶ CTIA May 12 ex parte at 11.

extraordinarily large number of handsets in the U.S. market,” allowing American consumers to choose the device that best fits their wireless needs.²⁷

In fact, smartphones like the Android-based T-Mobile G1 and its competitors use mobile broadband to allow individual consumers to access productivity tools such as e-mail and Web-browsing that had previously only been widely adopted in the business marketplace.²⁸ The recent significant growth of smartphone use has caused “an explosion of applications to run on these devices,” with estimates of tens of thousands of applications available for use whenever and wherever consumers want.²⁹ Such innovation is a positive for the economy by permitting more flexible and efficient consumer uses that can benefit individuals and businesses alike.

B. A Critical Component of the National Broadband Plan’s Success Is Access to Spectrum and Infrastructure.

To succeed as a national policy, the National Broadband Plan must outline steps for enabling mobile providers’—and, hence, consumers’—access to additional spectrum and infrastructure. Although mobile broadband brings the ultimate consumer benefits of personalized access to individuals rather than to a fixed location, wireless carriers are limited by the spectrum capacity over which such services operate. The use of highly efficient networks and handsets has helped U.S. wireless providers maximize the utility of their existing spectrum. But with limited spectrum available for commercial mobile

²⁷ Overall, there are more handsets available in the United States than in any other country in the world, with more than 630 different wireless handsets and devices available to American consumers compared to, for example, only 147 different handsets available in the United Kingdom. *Id.*

²⁸ *Id.*

²⁹ *Id.* at 12-13.

use, U.S. providers are increasingly challenged to offer next-generation applications and services to a U.S. population of well over 300 million people.³⁰

T-Mobile and other independent wireless providers also largely rely on the infrastructure controlled by the incumbent local exchange carrier (“ILEC”) operations of AT&T and Verizon for high-speed “backhaul” circuits that are critical arteries in wireless. In particular, backhaul—or “middle mile” broadband—is essential for wireless networks to provide mobile broadband service nationwide.³¹ Thus, ensuring competitive access to necessary inputs like special access services for backhaul will be crucial to advancing Congress’ and the Commission’s policy goals of nationwide broadband.

III. MEETING CONSUMER DEMAND FOR AFFORDABLE BROADBAND SERVICES SHOULD BE THE PRIMARY BENCHMARK FOR MEASURING PROGRESS.

The chief benchmark for success of the National Broadband Plan should be whether the Plan establishes a viable regulatory path that permits providers to meet customers’ demands for broadband service at a variety of speeds for a variety of applications. The Plan should recognize this basic tenet while stating its plans for new or revised regulations where necessary. Most importantly, the Plan should provide guidance for the next several years on the plan that the Commission and other governmental bodies

³⁰ *Id.*

³¹ The Commission asks whether there is a need for a greater focus on broadband capabilities in the network beyond last-mile connections, and seeks input on the robustness of broadband capabilities in backbone and feeder networks throughout the country. *See* NOI ¶ 17.

will implement to ensure that broadband providers can meet consumer and community needs.³²

Because broadband can be defined in numerous ways, the Commission asks how to appropriately define “broadband capability.”³³ The Plan should take into consideration the inherent differences between wireline and wireless broadband and should make the provision of mobile broadband at flexible and evolving speeds a priority. To encourage this flexibility, T-Mobile recommends that any definitions be broad enough to allow for mobile broadband providers to start at existing 3G and 4G data speeds and to evolve the speed and capacity of their offerings over time, as T-Mobile is doing with HSPA technology.

To realistically ensure that mobile broadband providers are key players in the National Broadband Plan, the Commission must take care not to establish minimum data transfer speeds that current mobile technologies cannot meet.³⁴ Even though current mobile broadband speeds may not equal those provided over wireline connections, the ability to bring “broadband to the person” is a significant advantage that wireless broadband has over wireline and that warrants flexibility in defining the adequacy of broadband access.

At a minimum, the Commission should adopt different definitions or standards of what constitutes “broadband” based on the technology being used to provide the service

³² Providing a plan that includes potential actions by other governmental bodies is consistent with the Rural Broadband Report’s emphasis on promoting interagency coordination. *See* Rural Broadband Report ¶¶ 48-76

³³ *See* NOI ¶ 15.

³⁴ The NOI asks whether, if the Commission decides to define broadband by “speed,” it should consider “raising the speeds that define broadband,” and whether its definitions should distinguish among the various broadband technologies. *See id.* ¶ 16.

or the context in which the service is applied, as proposed in the NOI.³⁵ This would mean crafting different definitions for mobile broadband services and fixed broadband services. The Plan’s recognition of the inherent differences between wireline and wireless broadband will be particularly helpful in promoting broadband access in rural areas, as mobile broadband may be the only practicable and cost-effective solution for serving remote customers.

The Plan should also define mobile broadband broadly to adjust with changes in technology.³⁶ The NOI asks whether a definition of “broadband” should be based on a numerical metric or, instead, an “experiential” metric based on the consumer’s ability to access sufficiently robust data for certain identifiable broadband services.³⁷ Neither of these approaches standing alone fully permits the Plan to evolve as technology improves over time. As mobile broadband capabilities improve, any broadband threshold can be adjusted.

IV. ADDITIONAL SPECTRUM IS NEEDED FOR WIRELESS BROADBAND TO REACH ITS FULL POTENTIAL.

Spectrum is the most critical input to ensuring that mobile broadband is a successful technological platform for U.S. consumers. T-Mobile urges the Commission to develop a program under which the Commission and NTIA would work cooperatively to identify, reallocate, and auction 200 MHz of new spectrum for commercial use. This plan should have a clear timetable, and reallocated spectrum should be offered for commercial mobile broadband use within the next three to five years.

³⁵ See *id.* ¶ 19.

³⁶ See *id.* ¶ 18.

³⁷ See *id.* ¶ 17.

A. Available Spectrum for Commercial Broadband Use Is Limited.

The NOI seeks “comment on the extent to which access to spectrum poses a constraint on broadband access and development.”³⁸ Spectrum constraints exist today and will only tighten over time. Mobile providers like T-Mobile have invested large amounts of capital in improving the robustness of their networks and the efficiency of how they use spectrum and will continue to do so going forward. Network expansion and the use of spectrum-efficient infrastructure, however, can only stretch existing spectrum allocations so far. Since T-Mobile began offering its G1 smartphone, for example, customers of that device use 50 times the data of the average T-Mobile customer.³⁹

U.S. consumers also use wireless service at a much higher rate than their counterparts in other countries.⁴⁰ The 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 wireless broadband in the United States.⁴¹ Moreover, the recent action by the Commission to allot a large portion of spectrum for unlicensed uses has limited the availability of additional spectrum for licensed mobile broadband services.⁴² While unlicensed services have their place in delivering mobile broadband services, ensuring

³⁸ See *id.* ¶ 44.

³⁹ 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>.

⁴⁰ CTIA May 12 ex parte at 15.

⁴¹ *Id.*

⁴² The Commission has recently dedicated a vast portion of spectrum below 698 MHz to use by unlicensed TV band devices. See *Unlicensed Operation in the TV Broadcast Bands*; Second Report and Order and Memorandum Opinion and Order, 23 FCC Rcd 16807 (2008).

that customers have the most acceptable and consistent broadband experience will require a backbone of licensed commercial spectrum for a truly competitive mobile broadband experience to be delivered.

And, notwithstanding the United States' higher rates of spectrum use per user, other countries are taking more aggressive steps to add commercial mobile spectrum. During 2009 and 2010, most European countries are planning to auction or allocate spectrum in the 2.5 and 2.6 GHz bands, and a 2.6 GHz band auction in the UK will likely take place by the end of 2009.⁴³ 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.⁴⁴ France is adding 72 MHz to its existing commercial mobile spectrum, Germany has identified 340 MHz of spectrum for wireless network access, and the UK plans to allocate 400 MHz of additional commercial mobile spectrum.⁴⁵

⁴³ See *Airspan Succeeds in First-Ever Multi-Band Mobile WiMAX Handover; Creating One-of-a-Kind Opportunities for Mobile WiMAX Operators*, Marketwire (Nov. 25, 2008); see also *UK report recommends spectrum caps ahead of auctions*, Telecom Paper (May 13, 2009), available at <http://www.telecompaper.com/news/article.aspx?cid=671746>.

⁴⁴ 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).

⁴⁵ See CTIA May 12 ex parte at 15; 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>; Lynette Luna, *Germany planning 4G spectrum auction*, Fierce Broadband Wireless (May 3, 2009), available at http://www.fiercebroadbandwireless.com/story/germany-planning-4g-spectrum-auction/2009-05-03?utm_medium=rss&utm_source=rss&cmp-id=OTC-RSS-FBW0.

Mexico recently announced plans to make available spectrum in the 1.7 to 1.9 GHz bands to enable entry by at least one new national competitor and to encourage provision of 3G service.⁴⁶ 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 mobile broadband service, an example the United States should follow in the National Broadband Plan.

B. The National Broadband Plan Should Establish a Goal of Reallocating at Least 200 MHz of Spectrum for Commercial Use.

The National Broadband Plan should seek to reallocate spectrum for commercial mobile broadband use in order to facilitate competition and the deployment of data-intensive services consumers so crave.⁴⁷ The Rural Broadband Report acknowledges the urgent need to “conduct a thorough inventory of the spectrum [the Commission] has already licensed,” and “consider various ways to redeploy this spectrum for more efficient use.”⁴⁸ As an initial step, the Plan should propose an inventory by the Commission and NTIA of federal and non-federal spectrum allocations and uses from 300 MHz to 3.5 GHz that is practical and easily measurable. T-Mobile applauds the effort of Senators Kerry and Snow to move in that direction by introducing S. 649, the Radio Spectrum Inventory Act on March 19, 2009.⁴⁹

⁴⁶ See *Mexico's Cofetel Sets Spectrum Plans, Eyes New Entry, 3G Services*, TR Daily (May 26, 2009).

⁴⁷ The NOI seeks suggestions for “approaches toward spectrum allocation, assignment, management, and use that will best promote national access to broadband service.” See NOI ¶ 44.

⁴⁸ See Rural Broadband Report ¶ 150.

⁴⁹ See Radio Spectrum Inventory Act, S. 649, 111th Cong. (2009).

Current initiatives to inventory spectrum holdings will not promote broadband development, however, unless a meaningful deliverable is required. Rather than simply auditing use, the Plan should also propose to allocate and auction an additional 200 MHz of spectrum for commercial mobile broadband use throughout the United States, with 50 percent coming from NTIA's current government allocations and 50 percent from spectrum regulated by the Commission. Moreover, the 200 MHz of spectrum identified should reside below 3.5 GHz to ensure that the spectrum may be used fruitfully to deliver mobile broadband services. In addition, the spectrum should be readily available for use, without burdensome coordination or sharing requirements extracted by incumbent users.

The Plan should seek any necessary Congressional action and establish a schedule by which this 200 MHz would be available for commercial use as soon as possible, and T-Mobile would recommend within the next three to five years. As experience has shown, reallocation and assignment of spectrum can be a long-term endeavor. The reallocation and auction of AWS spectrum took more than a decade, for example. T-Mobile believes that is too long to accommodate the needs of current broadband users. A period of three to five years from today to make the 200 MHz available for mobile broadband is both necessary and reasonable, particularly in light of the large amounts of spectrum planned for commercial use in other countries and the burgeoning demand that exists in the United States that is not met by current spectrum allocations.

The National Broadband Plan also should help streamline the process of spectrum reallocation from federal use by proposing improved administrative procedures for federal agencies to identify appropriate spectrum and relocate existing federal users

expeditiously. The Plan should base its proposals on the detailed procedures set forth in H.R. 7207, introduced in the 110th Congress by Representative Inslee.⁵⁰

V. INCREASING CONSUMER DEMAND FOR BROADBAND SERVICES AND APPLICATIONS WILL BE FACILITATED IF THE GOVERNMENT ADDRESSES CERTAIN OTHER KEY ISSUES.

A. Improved Regulation of Special Access Service Is Crucial for Mobile Broadband Growth.

To maximize mobile broadband deployment, the Commission should commit to ensuring there is substantial additional backhaul capacity⁵¹ to handle the increased volumes of voice and data traffic. Inflated special access costs in the wholesale market undermine the expansion of broadband service by raising the cost of deployment and service for business and consumers across America. Access to a robust and competitive market for high-capacity broadband with reasonable prices is key to lasting economic growth and job creation for broadband services.

In many markets, independent mobile providers like T-Mobile must still rely on ILECs for provision of special access services for backhaul. As T-Mobile has explained previously, in many areas, competition is insufficient to discipline the prices and conditions for special access imposed by the ILECs, and the premature deregulation of these services has only exacerbated the problem.⁵² T-Mobile attempts to use alternative backhaul suppliers where available, but the current reality is that for many markets, ILECs are the only practical suppliers of specialized backhaul through their special access services.

⁵⁰ See Spectrum Relocation Improvement Act of 2008, H.R. 7207, 110th Cong. (2008).

⁵¹ See NOI ¶17; Rural Broadband Report ¶ 142.

⁵² See Reply Comments of T-Mobile, WC Docket No. 05-25, at 1 (Aug. 15, 2007).

Accordingly, the Commission should establish a specific timetable for reforming its regulation of special access services where no competitive alternatives exist, and it should take a hard look at how it evaluates competition in this area—especially in light of the growing broadband need. Recognizing that the special access market is “broken,” the Commission has been collecting relevant data in a docket that has been lingering for four years. T-Mobile, Sprint, and others have provided extensive, detailed proposals to the Commission for improving the special access marketplace and T-Mobile would urge the Commission to commit to acting on this record within a specific time frame. At the same time, the Commission should examine whether onerous ILEC volume and term commitments limit independent wireless providers from obtaining backhaul from sources other than the ILECs to the extent those sources are or are just now becoming available.

In addition to improved regulatory oversight of special access rates, terms, and conditions, the Commission could also improve the viability of competitive wireless backhaul by making spectrum—particularly white spaces spectrum—available for this use. As discussed in a recent white paper by FiberTower Corporation and the Rural Telecommunications Group, white spaces spectrum is ideal for providing wireless backhaul services in many areas due to the propagation characteristics of the band and the ability of signals to cover long distances.⁵³ As a result, 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.”⁵⁴

⁵³ See White Paper, *Optimizing the TV Bands White Spaces*, attached to Ex Parte Letter from Michele C. Farquhar, Special Counsel, FiberTower Corp. and Rural Telecommunications Group, Inc., to Marlene H. Dortch, Sec’y, FCC, ET Docket Nos. 04-186, 02-380, at 7 (Oct. 2, 2007) (“FiberTower/RTG White Paper”).

⁵⁴ See *id.*

T-Mobile urges the Commission to revisit one or both of these solutions as the National Broadband Plan is developed in order to ensure that competing mobile broadband providers have sufficient backhaul capacity to move traffic rapidly through their networks to and from end users.

B. Mobile Broadband Build-out Requires Reform of the Commission’s Roaming Rules.

Roaming will continue to be an important component of providing mobile broadband for the foreseeable future. Independent 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 provide service at affordable rates. The Commission’s “home market exclusion” to its automatic roaming rule has harmed the roaming marketplace and will limit the availability of reasonably-priced mobile broadband.⁵⁵ Under the current automatic roaming rule, a “host carrier”—the wireless provider on whose network another carrier’s customer roams—has the duty, on reasonable request, to provide automatic roaming to technologically compatible carriers on reasonable and nondiscriminatory terms and conditions.⁵⁶ 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.⁵⁷ 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

⁵⁵ 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), *recon. pending*.

⁵⁶ See 47 C.F.R § 20.12(d). The requesting carriers are known as “home carriers.”

⁵⁷ See *id.* §§ 20.3, 20.12(d).

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 FCC should commit to revise or eliminate the home market exclusion, as numerous independent wireless providers have urged since it was created in 2007.⁵⁸ 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.

Achieving nationwide mobile broadband will require seamless and reasonably priced automatic roaming. Limiting a requesting carrier's rights to reasonable roaming conditions harms competition by limiting the requesting carrier's ability to serve customers. The home market exclusion should be repealed or at the very least modified so that it applies only in areas where the requesting "home carrier" has an operating network in place.⁵⁹

C. The Commission Should Streamline the Tower Siting Process.

To help ensure that mobile broadband is deployed expeditiously, the Commission should also institute a federal 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.

⁵⁸ The NOI asks if there other policies or programs that the Commission should review as a part of its analysis of effective and efficient mechanisms to achieve the goals of the Recovery Act. The Commission acknowledges that there are numerous ongoing proceedings whose outcomes could affect competition among broadband providers of all types and where certain rule and policy changes will help to expedite the deployment of broadband facilities and services. *See* NOI ¶ 50.

⁵⁹ *See, e.g.*, Petition for Partial Reconsideration of T-Mobile, WT Docket No. 05-265, at 1-2 (Oct. 1, 2007); *see also* Ex Parte Letter from Kathleen O. Ham, V.P. Fed.

Obtaining zoning and other authorizations from local authorities has become increasingly cumbersome for wireless carriers.⁶⁰

All too often, collocation requests filed with state and local authorities are left pending for more than one year, and T-Mobile faces even greater delays for requests for permission to construct new towers. Delays of this type will thwart the Recovery Act's goal of swift construction of new broadband networks by undermining build-out efforts of carriers with the resources and business plans to deploy mobile broadband to unserved and underserved areas. A shot clock requires only that state and local authorities act in a timely way on applications, not that they rule in favor of the requesting carrier. Timely action on siting applications is particularly important for carriers so that they can quickly revise their applications or make different siting plans as they continue efforts to roll out broadband services.

D. The FCC Should Commit to Pole Attachment Reform.

T-Mobile also suggests that the Commission commit to the pole attachment reforms recently suggested by Fibertech Networks, LLC and Kentucky Data Link, Inc., to promote the availability of competitive backhaul.⁶¹ Current pole attachment regulations and practices can impede further broadband deployments by making it more difficult for alternative suppliers to construct backhaul networks or for mobile providers to self-supply backhaul when they must rely on pole or conduit space owned by others.⁶² As noted in the Rural Broadband Report, "timely and reasonably priced access to poles and

Reg. Affairs, to Marlene H. Dortch, Sec'y, FCC, WT Docket 05-265, at 1 (Aug. 18, 2008).

⁶⁰ T-Mobile NTIA Comments at 12.

rights of way is critical to the build-out of broadband infrastructure,” particularly in rural areas.⁶³ T-Mobile recommends that the FCC commit to:

- (1) adopting enforceable deadlines for submitting estimates and completing construction work for pole attachments; increasing transparency and discouraging re-litigation of settled issues by incorporating existing precedents into the Commission’s rules;
- (2) adopting uniform and objective safety standards to prevent pole owners from invoking subjective standards to unreasonably limit access to poles;
- (3) requiring pole owners to identify pole locations and to post agreements, fee schedules, and lists of approved contractors;
- (4) affirming 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;⁶⁴ and
- (5) clarifying 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.⁶⁵

E. The National Broadband Plan Should Commit to a Timeline for Intercarrier Compensation and Universal Service Reform.

In order for consumers, especially in underserved and unserved areas, to enjoy the benefits of greater broadband availability, the Commission should finally address comprehensive intercarrier compensation (“ICC”) and universal service fund (“USF”) reform. These programs, if properly structured, can provide the proper economic incentives for the efficient pricing and deployment of broadband services. T-Mobile

⁶¹ Ex Parte Letter from Brita D. Strandberg, Counsel, Fibertech Networks, LLC and Kentucky Data Link, Inc., to Marlene H. Dortch, Sec’y, FCC, WC Docket No. 07-245, GN Docket No. 09-29, RM- 11293 & 11303, at 4-5 (Apr. 16, 2009) (“Fibertech/Kentucky Data Link ex parte”).

⁶² The NOI asks the extent to which pole attachment regulations and practices could impede further broadband deployments where such deployments would be made by market participants in the absence of any government-funded programs. NOI ¶ 50.

⁶³ See Rural Broadband Report ¶ 157.

⁶⁴ Fibertech/Kentucky Data Link ex parte at 4-5.

⁶⁵ See T-Mobile Comments, WT Docket 08-165, at 13 (Sept. 29, 2008).

agrees with the Rural Broadband Report's assessment that comprehensive ICC and USF reform is critical to support broadband deployment going forward.⁶⁶

The Commission should set an aggressive schedule for comprehensive ICC/USF reform that builds on the proposals that it presented in late 2008 in the *ICC/USF Notice*.⁶⁷ In particular, the Draft Proposal circulated on October 15, 2008 ("Draft Proposal") in Appendix A to that notice represents significant progress. T-Mobile urges the Commission to adopt the Draft Proposal with the changes that T-Mobile proposed in its comments on the *ICC/USF Notice*.⁶⁸ With these changes, the Draft Proposal goes far toward achieving the Commission's reform goals and, among the alternatives, is most likely to encourage broadband deployment.

The National Broadband Plan also cannot adequately promote build out of rural mobile broadband service without addressing the current USF regime, which distorts incentives for investment and is woefully outdated in light of today's technologies.⁶⁹ The Commission asks about each USF program's effectiveness as a mechanism to help achieve national broadband goals and what program modifications would better advance

⁶⁶ See Rural Broadband Report ¶¶ 137-138, 155.

⁶⁷ See *High-Cost Universal Service Support*, Order on Remand and Report and Order and Further Notice of Proposed Rulemaking, WC Docket No. 05-337, FCC No. 08-262 (Nov. 5, 2008).

⁶⁸ See T-Mobile. Comments, WC Docket No. 05-337, CC Docket No. 96-45 (Nov. 26, 2008) ("T-Mobile ICC/USF Comments"). Following a transition during which no existing intercarrier rates could be increased, the Draft Proposal would establish an ICC/USF regime that unifies and reduces intercarrier termination rates to a level of \$0.0007 per minute or lower, subjects all Internet Protocol ("IP") traffic to exclusive federal jurisdiction, and permits local exchange carriers ("LECs") to increase subscriber line charges ("SLCs") above current SLC caps.

⁶⁹ The NOI seeks comment on the impact of broadband on existing USF programs, including the High-Cost program and Low-Income programs. NOI ¶ 39.

the National Broadband Plan.⁷⁰ The Commission should eliminate the disparities in universal service funding caused by the current cap on competitive eligible telecommunications carrier (“CETC”) support, adopt a Lifeline-Linkup program for broadband, and rationalize the USF contribution system by adopting a numbers-based contribution mechanism.

Specifically, the Commission should commit to eliminate the current cap on support to CETCs. A cap applied only to CETCs predominantly affects wireless carriers, undermining deployment of mobile broadband—often the most expeditious and cost-effective platform to bring broadband to rural and difficult to serve customers.⁷¹ Any legally valid high-cost USF support must be fully portable to CETCs, and any supplemental funding for rate-of-return ILECs should be subject to the same conditions as for any other ILEC or CETC.⁷²

Rural broadband deployment could be supported through the expansion of the Lifeline/LinkUp program. The National Broadband Plan can initiate this program by committing to adoption of a Broadband Lifeline/LinkUp Pilot Program, as discussed in T-Mobile’s 2008 comments on the *ICC/USF Notice*.⁷³ The Lifeline/LinkUp funds could be used to support low-income consumers’ access to mobile broadband services in both urban and rural areas. The Lifeline/LinkUp Pilot Program would provide an efficient

⁷⁰ See *id.*

⁷¹ See Comments of T-Mobile, WC Docket No. 05-337, CC Docket No. 96-45 at 8-11 (Apr. 17, 2008).

⁷² See *id.* at 4-6. See also CTIA Comments in WC Docket No. 05-337, CC Docket No. 96-45, at 12-18 (Apr. 17, 2008).

⁷³ T-Mobile ICC/USF Comments at 17-20.

means of delivering broadband service to low income consumers and would be far more effective than other proposals currently before the Commission.

The Commission should also ensure the sustainability of the USF going forward by committing to improve the contribution system through adoption of a numbers-based mechanism. The existing revenue-based contribution methodology is unsustainable in light of ever-increasing shift away from switched telephony to Internet Protocol-based communications over broadband platforms. As more and more U.S. communications traffic travels over broadband networks, it will be increasingly difficult to collect USF funds based on interstate end-user telecommunications revenues. Any such reforms to the contribution mechanism, however, should properly accommodate prepaid wireless services and wireless family plans, as T-Mobile has discussed in the ICC/USF proceeding.⁷⁴

VI. THE COMMISSION SHOULD NOT SUBJECT RETAIL MOBILE BROADBAND SERVICES TO PRICE REGULATION.

The National Broadband Plan should not include any retail price regulation of mobile broadband service as long as the market remains competitive. Such regulation is unnecessary and counterproductive for all providers, because market mechanisms have been successful in ensuring access to broadband in many areas of the country.

The NOI seeks comment on the “extent to which competition between various broadband network providers, application and service providers, and content providers should be evaluated as an effective and efficient mechanism to achieve the goals of the Recovery Act.”⁷⁵ Regulation of end-user rates would only limit competition among

⁷⁴ *Id.* at 15-16.

⁷⁵ *See* NOI ¶ 49.

multiple mobile broadband providers, which is the best mechanism for ensuring that consumers have access to affordable broadband service.

VII. CONCLUSION.

This is a critical time in the evolution of broadband in the United States, and the creation of a National Broadband Plan is a positive step. The breadth and scope of the NOI demonstrates the Commission's determination to examine the issue of broadband holistically, with an eye toward comprehensive and lasting reforms that will foster competition and innovation for years to come. T-Mobile urges the Commission to craft the National Broadband Plan to recognize the benefits that mobile broadband service can bring to the United States, and to implement the policies as outlined above.

Respectfully submitted,

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