

**Before the
DEPARTMENT OF COMMERCE
NATIONAL TELECOMMUNICATIONS AND INFORMATION
ADMINISTRATION
Washington, D.C.**

In the Matter of)	
)	
Relocation of Federal Systems in the)	Docket No. 0906231085-91085-01
1710-1755 MHz Frequency Band:)	
Review of the Initial Implementation of)	
the Commercial Spectrum Enhancement)	
Act)	

COMMENTS OF T-MOBILE USA, INC.

Dated: August 21, 2009

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T-Mobile USA, Inc. (“T-Mobile”) respectfully submits these comments in response to the National Telecommunications and Information Administration (“NTIA’s”) Notice of Inquiry seeking comment on the initial implementation of the Commercial Spectrum Enhancement Act (“CSEA”).¹ With significant investment in Advanced Wireless Service (“AWS”) spectrum and experience coordinating with federal agencies under the CSEA framework, T-Mobile hopes that it can assist NTIA in improving and streamlining the CSEA spectrum relocation process for future spectrum auctions.

As NTIA stated in its NOI, the purpose of the CSEA is twofold: (1) to help solve the recurring problem of clearing spectrum incumbents to make way for new commercial wireless services, and (2) to enhance the efficiency of the federal relocation process.² On balance, the spectrum relocation process established by the CSEA has helped significantly in furthering these objectives and has served the public interest. T-Mobile

¹ Notice of Inquiry, *Relocation of Federal Systems in the 1710-1755 MHz Frequency Band: Review of the Initial Implementation of the Commercial Spectrum Enhancement Act*, Docket No. 0906231085-91085-01, 74 FED. REG. 32131-32138 (rel. July 7, 2009) (“NOI”).

² *See id.* at 32132.

applauds the hard work of those within NTIA and the various federal agencies who instituted transparent procedures that allowed licensees timely access to AWS spectrum. Their efforts and initiatives—both individually and collectively—have enabled T-Mobile to rollout competitive mobile broadband services across much of the country. T-Mobile strongly supports the use of the CSEA process going forward and offers the suggestions below to speed the deployment of advanced services to all Americans and promote competition in the wireless marketplace.

I. INTRODUCTION AND BACKGROUND

T-Mobile was an active participant in the development of service and auction rules for AWS spectrum, the Federal Communications Commission’s (“FCC’s”) AWS auction, and the federal government’s implementation of the CSEA.³ In 2006, T-Mobile was the top bidder in Auction No. 66, winning 120 licenses across the country and contributing nearly \$4.2 billion to the United States Treasury.⁴ Since then, T-Mobile has been a significant player in the secondary market for AWS spectrum, acquiring 58 additional AWS licenses to fill out its spectrum footprint. T-Mobile has also invested more than \$5 billion in infrastructure, and its mobile broadband network—using AWS

³ See, e.g., Petition for Reconsideration of T-Mobile USA, Inc., FCC WT Docket No. 02-353 (filed March 8, 2004) (proposing the reconfiguration of the 30 MHz E block license into two separate licenses); Comments of T-Mobile USA, Inc., FCC WT Docket No. 05-211 (filed Aug. 26, 2005) (urging the FCC and NTIA to implement the CSEA in a manner that would ensure “a successful auction that finances relocation adequately while also making commercial spectrum available as rapidly as possible”); Comments of T-Mobile USA, Inc., FCC WT Docket No. 00-258, at 5 (filed July 31, 2006) (supporting CTIA’s proposal to act as a clearinghouse for relocation in the 2.1 GHz band).

⁴ Press Release, T-Mobile, “T-Mobile USA Statement on Conclusion of Bidding in the FCC Auction of Advanced Wireless Services” (Sept. 18, 2006), *available at* http://www.t-mobile.com/company/PressReleases_Article.aspx?assetName=Prs_Pr_20060918&title=T-Mobile%20USA%20Statement%20on%20Conclusion%20of%20Bidding%20in%20the%20FCC%20Auction%20of%20Advanced%20Wireless%20Services.

spectrum—currently covers over 140 million U.S. consumers and will cover 200 million people by the end of the year.

Access to AWS spectrum has enabled T-Mobile to launch its broadband network and offer innovative products and services to compete with AT&T, Verizon Wireless, and Sprint Nextel. As the fourth largest national competitor, T-Mobile is the largest commercial mobile radio services (“CMRS”) provider using AWS spectrum for its intended purpose: 3G mobile broadband.⁵ Over the last 3 years, T-Mobile has worked closely with federal incumbents to coordinate in and relocate from the 1710-1755 MHz band. As T-Mobile recently noted in its comments regarding the national broadband plan being crafted by the FCC, wireless service can and will play a critical role in achieving the goal of bringing high-speed broadband to all Americans.⁶ This goal is a top priority for the administration and the FCC and enjoys bipartisan support from law and policy makers.⁷

Promptly relocating federal incumbents from the AWS band furthers the government’s objective and provides consumers even more choices in mobile broadband providers, services, and devices. T-Mobile is currently deploying 3G technology capable of providing theoretical maximum downstream data transmission speeds of up to 14.4 Mbps, which are comparable to many wireline broadband services, and is actively

⁵ See e.g., Press Release announcing T-Mobile’s network launch -- http://www.t-mobile.com/company/PressReleases_Article.aspx?assetName=Prs_Prs_20080505&title=T-Mobile%20USA%20Begins%20Commercial%203G%20Network%20Rollout (last visited Aug. 17, 2009)).

⁶ Comments of T-Mobile USA, Inc., FCC GN Docket No. 09-51, at 2 (filed June 8, 2009) (“Broadband offered over a terrestrial mobile wireless platform . . . 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.”).

⁷ *A National Broadband Plan for Our Future*, Notice of Inquiry, Notice of Inquiry, FCC 09-31, at ¶ 5 (2009) (“Our goal must be for every American citizen and every American business to have access to robust broadband services.”).

evaluating advanced technologies, such as “HSPA plus” (“HSPA+”) and Long Term Evolution (“LTE”), with speeds many times faster.⁸ In addition to its mobile broadband network, T-Mobile is rolling out a host of new products and services that benefit consumers. T-Mobile was the first U.S. carrier to offer a “smartphone” running Google’s Android operating system—the T-Mobile G1™—that gives consumers an alternative to Apple’s popular iPhone and iTunes platform. Such competition drives innovation in handsets and mobile applications while expanding the opportunity of consumers to enjoy activities like email, social networking, and managing personal finance that once required a personal computer and an Internet connection.

Building on the success of the G1, T-Mobile recently released a second Android-powered device—the myTouch 3G™—⁹ and will release a third later this year. T-Mobile has also released other 3G devices, such as the HTC Touch Pro 2¹⁰ and the T-Mobile Sidekick LX™.¹¹ And last spring, T-Mobile launched the T-Mobile webConnect™ USB Laptop Stick—its first 3G USB device—that fully integrates WiFi, EDGE, and 3G high-speed data services.¹² Consumers have reacted to these new devices by increasing their bandwidth consumption by orders of magnitude. The typical G1 user, for example, uses

⁸ See [Broadband NOI Comments]; 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.

⁹ See e.g., <http://www.t-mobile.com/shop/phones/Cell-Phone-Detail.aspx?cell-phone=MyTouch-3G-Black> (last visited Aug. 17, 2009).

¹⁰ See e.g., <http://www.t-mobile.com/shop/phones/Cell-Phone-Detail.aspx?cell-phone=HTC-Touch-Pro-2> (last visited Aug. 17, 2009).

¹¹ See e.g., <http://www.t-mobile.com/shop/phones/Cell-Phone-Detail.aspx?cell-phone=Sidekick-LX-Carbon> (last visited Aug. 21, 2009).

¹² See e.g., <http://www.t-mobile.com/shop/phones/Cell-Phone-Detail.aspx?cell-phone=T-Mobile-webConnect-USB-Laptop-Stick> (last visited Aug. 17, 2009).

50 times the bandwidth of the average 2G user.¹³ T-Mobile could offer none of these services and products without access to AWS spectrum.

While the CSEA's process has generally worked as intended (and it allowed T-Mobile to launch its 3G network) the process has not been without problems. T-Mobile's launch of service in the AWS band was delayed by several months, if not longer, in many markets. Indeed, even today—nearly three years after Auction No. 66—there are certain parts of the country such as the southeast where no wireless carrier has been given access to AWS frequencies. Such delays jeopardize investment, hinder broadband deployment, and harm consumers. T-Mobile's experience working under the CSEA process and its suggestions for improving that process are detail below.

II. SHARING INFORMATION AND TRANSPARENT PROCEDURES FURTHER THE GOALS OF THE CSEA

The fluid exchange of information among AWS licensees and agency incumbents and the implementation of transparent procedures have been crucial in making the CSEA relocation process work effectively. When federal agencies accurately forecasted costs, received sufficient relocation funding, and readily shared their technical specifications, T-Mobile was able to coordinate relocation and spectrum access with few difficulties. In these cases, open, two-way communication between T-Mobile and the incumbent agency enabled the exchange of reliable data that is critical to successful coordination.

A number of agencies stand out in their efforts. The Department of Energy has been a consistent, outstanding partner in the relocation process. Most recently, it worked

¹³ See e.g., http://www.t-mobile.com/company/PressReleases_Article.aspx?assetName=Prs_Prs_20080923&title=T-Mobile%20Unveils%20the%20T-Mobile%20G1%20%E2%80%93%20the%20First%20Phone%20Powered%20by%20Android (last visited Aug. 17, 2009).

with T-Mobile to allow early access to spectrum in Tulsa, Oklahoma; Portland, Oregon; and Springfield, Missouri. T-Mobile's interaction with the Department of Interior has been similarly propitious. For example, the U.S. Geological Survey's efforts to move its northern California seismic system to new frequency assignments in half the time originally estimated, enabled T-Mobile to launch 3G service in the San Francisco bay area in 2008. Likewise, the National Park Service worked collaboratively with T-Mobile to allow access to AWS spectrum in Virginia and the Carolinas. Several other agencies, including the Department of Housing and Urban Development, the Department of the Treasury, and the U.S. Postal Inspection Service, completed their relocations well in advance of their Office of Management and Budget ("OMB") deadline. Working cooperatively ensured that these agencies could continue to operate without harmful interference while also allowing T-Mobile access to much needed spectrum in considerable areas of the country.

Two other agencies—the Department of Justice ("DOJ") and the Department of Homeland Security ("DHS")—worked closely with T-Mobile and other AWS licensees to overcome a seemingly intractable coordination problem that threatened to block access to the entire AWS band until mid-2010. DOJ and DHS used United States & Possession ("US&P") assignments to operate mobile surveillance systems throughout the country. These US&P assignments were nationwide licenses that spanned the entire 1710-1755 MHz band and precluded *any* access to AWS band and impacted *all* AWS license holders. After joint laboratory testing at NTIA's facility in Boulder, Colorado demonstrated that potential harmful interference prevented the agencies from sharing use of the spectrum with AWS licensees, DOJ and DHS worked to accelerate the relocation

of their systems from the band. Through their efforts, T-Mobile and other licensees gained access to portions of spectrum and began offering service to their customers in some areas of the country in 2008.

Web-based systems can be an effective way of exchanging information and increasing transparency. And for the most part, web portals proved to be an efficient means of sharing information among AWS licensees and incumbent agencies. Both DOJ and the Department of Defense (“DOD”), have used web portals to provide a systematic mechanism for tracking inquiries and responses, making the exchange of information more reliable, timely, and efficient. T-Mobile encourages other agencies to consider implementing web-based systems with transparent procedures for current and future coordination efforts.¹⁴ In addition, T-Mobile recommends that NTIA consider adopting a centralized and standardized web portal for all agencies to use in exchanging information with licensees.

As these positive experiences illustrate, the CSEA process has generally enabled T-Mobile and other licensees to obtain access to AWS spectrum resources in a timely manner while also providing government users the financial resources to migrate to more efficient technology that serves their needs. In these tough budget times, this is a “win-win” for everyone. The need for more commercial broadband spectrum will only grow in the coming years as T-Mobile and other wireless providers develop and innovate to meet the growing consumer demand for more bandwidth-intensive services and applications. As licensees move toward 4G technology, more spectrum will inevitably be required to

¹⁴ T-Mobile, however, does not want this support of web-based portals to be construed as criticism of other agencies’ coordination methodologies. Indeed, the importance of direct interaction, especially when problems arise, cannot be overstated.

realize the potential of mobile broadband, and it is important to begin this effort now, especially given the high priority placed by the administration on the delivery of broadband to the American public.

III. GREATER TRANSPARENCY AND AVAILABILITY OF RELOCATION DATA CAN IMPROVE THE CSEA PROCESS

Ongoing relocation efforts under the CSEA have significantly facilitated the process of transitioning spectrum from government to commercial use. There are a number of ways, however, in which this process can be streamlined and made more efficient for incumbent federal agencies and commercial licensees. Below are T-Mobile's suggestions on improving the accuracy of pre-auction information and post-auction coordination and relocation.

NTIA requests comment on whether the information made available to bidders prior to Auction No.66 was sufficient for potential bidders to make reasonable conclusions as to value of AWS licenses.¹⁵ Because several agencies underestimated the cost and time involved in relocation, prospective bidders, including T-Mobile, received inaccurate projections about when the spectrum would be commercially available. Indeed, under the funding mechanism established by the CSEA,¹⁶ agency requests for additional funds can and did cause long, detrimental delays in relocating incumbent

¹⁵ *Id.* at 32133-34.

¹⁶ National Telecommunications and Information Administration Organization Act, 47 U.S.C. § 901(d)(2) (“None of the funds provided under this subsection may be transferred to any eligible Federal entity – (A) unless the Director of OMB has determined, in consultation with the NTIA, the appropriateness of such costs and the timeline for relocation; and (B) until 30 days after the director of OMB has submitted to the Committees on Appropriations and Energy and Commerce of the House of Representatives for approval, to the Committees on Appropriations and Commerce, Science, and Transportation of the Senate for approval, and to the Comptroller General a detailed plan describing specifically how the sums transferred from the Fund will be used to pay relocation costs in accordance with such subsection and the timeline for such relocation.”).

systems. To prevent these delays in the future, NTIA should consider appointing an independent auditor to review the agency's initial relocation cost-estimates and timelines to ensure their accuracy and reasonableness before the auction.¹⁷ Such a measure would remove much of the uncertainty for bidders in valuing spectrum.

NTIA also asks what additional technical and operational information would have better described the systems to be relocated.¹⁸ Prior to the auction, AWS bidders were given only a limited amount of information about the incumbent systems: agency name, center frequency, system type and name, and coordinates for transmitters and receivers.¹⁹ These data points were insufficient to determine whether agencies could share AWS spectrum in particular geographic areas without causing harmful interference. The US&P assignments discussed above illustrate the problem. Although agencies provided the center frequency for their operations, they did not specify the channel bandwidth. It was only after the auction that carriers learned these 12 assignments barred use of the entire AWS band, causing significant delays in launching commercial service.²⁰ To ensure that bidders have sufficient information prior to auction, agency incumbents should provide at minimum the channel bandwidth and antenna power and height for each system to be relocated.

¹⁷ T-Mobile recognizes that such measures would require Congressional legislation and supports it.

¹⁸ NOI at 32133.

¹⁹ Bidders were not even given this information for certain classified systems operated by DOD.

²⁰ See e.g., http://www.ntia.doc.gov/osmhome/reports/specrelo/pdf/CBP_FINAL.pdf (representative data provided by Federal agencies which listed only the frequency and coordinates of stations to be relocated, without any other corresponding technical information necessary to attempt to determine if spectrum sharing may be possible prior to relocation) (last visited Aug. 17, 2009).

The NOI further asks for suggestions on improving communications related to early entry.²¹ As noted above, much of the data compiled by federal agencies and provided to prospective licensees was incomplete or inaccurate and impeded licensee requests for early access to spectrum. In some cases, initial cost-estimates were so off the mark that the additional requests for funds from OMB triggered Congressional review, stalling efforts for early access to the spectrum and further delaying service to consumers. The monthly meetings held among federal agencies since the Auction No. 66 may serve as a useful forum for identifying these types of problems and notifying interested parties. As such, NTIA and the agencies should consider expanding these monthly meetings to include all stakeholders, including commercial licensees.

IV. ENACTMENT OF PROPOSED LEGISLATION TO CHANGE THE SPECTRUM RELOCATION PROCESS WOULD PROMOTE MORE EFFICIENT RELOCATION OF FEDERAL INCUMBENTS

Two pieces of pending legislation would, if passed, lead to substantial improvements in the incumbent relocation process and the more efficient use of spectrum. T-Mobile supports passage of the proposed Spectrum Relocation Improvement Act of 2009²² (“Relocation Improvement Bill”) and Radio Spectrum Inventory Act²³ and believes that many of the challenges of transitioning spectrum from government to commercial use would be resolved under this legislation.

Under the Relocation Improvement Bill, NTIA would be required to post on its website detailed transition plans from each federal entity no later than 60 days after NTIA

²¹ *Id.* at 32137.

²² Spectrum Relocation Improvement Act of 2009, H.R. 3019, 111th Cong. (2009) (“Relocation Improvement Bill”).

²³ Radio Spectrum Inventory Act, H.R. 3125, 111th Cong. (2009) (“House Inventory Bill”); Radio Spectrum Inventory Act, S. 649, 111th Cong. (2009) (“Senate Inventory Bill”).

releases relocation estimates from federal agencies to the Commission.²⁴ In addition, federal agencies would be required to disclose the full size of each assignment, not merely the center frequency.²⁵ This additional data would help bidders and licensees better understand when and where they would have access to spectrum, aid in their deployment plans, and address many of the challenges discussed above that caused delay.

The Relocation Improvement Bill would also enhance the exchange of information among licensees and federal incumbent agencies. By requiring agencies to disclose the professional staff responsible for relocation efforts,²⁶ the Relocation Improvement Bill would open the lines of communication among interested parties and facilitate the planning of meetings between future licensees and agency staff. As T-Mobile's experiences demonstrate, these meetings are critical for the CSEA process to succeed.

Under the Relocation Improvement Bill, each transition plan would be evaluated by a 3-member technical panel that would report on the "sufficiency of the plan . . . including whether the required public information is included and whether proposed timelines and estimated relocation costs are reasonable."²⁷ This panel would perform an important auditing function and help prevent situations where inaccurate relocation cost-

²⁴ Relocation Improvement Bill at § 2(b) ("Not later than 60 days after the date on which the NTIA, on behalf of eligible Federal entities and after review by OMB, notifies the Commission of estimated relocation costs and timelines for such relocation . . . NTIA shall post on its website detailed transition plans from each of the eligible Federal entities.").

²⁵ *Id.* at § 2(b).

²⁶ *Id.* at § 2(b) (requiring the disclosure of "[t]he professional staff, including managers, who are responsible for the Federal entity's relocation efforts and who are authorized to meet and negotiate with commercial licensees regarding the relocation process.").

²⁷ *Id.* at § 2(b).

estimates have required agencies to seek additional funding and resulted in unnecessary delay.

In addition, the Relocation Improvement Bill would help ensure the timely relocation of incumbent systems by requiring agencies to complete relocation within one year to receive funding (absent prior OMB approval)²⁸ and to update NTIA on the status of transition plans at the halfway point of the relocation process.²⁹ These two requirements would assist in prompt completion of relocation, help identify any problems that come up during the process, and remove much of the uncertainty behind relocation timelines.

Another important aspect of the Relocation Improvement Bill is that it would allow federal agencies to recover pre-auction costs that relate to relocating incumbent operations. This would ensure that agencies that spend funds to assemble accurate cost-estimates and relocation timelines before an auction are reimbursed from the Spectrum Relocation Fund after the auction. Moreover, it would afford federal agencies the ability to plan for the relocation process well in advance of the auction, instead of being limited to waiting until its completion. As T-Mobile's experience in the AWS context shows, many federal agencies were unable to begin the coordination process until all post-auction funding was disbursed and in place. By allowing for some pre-auction funding, the relocation process will move much more rapidly and efficiently.

T-Mobile also supports the passage of legislation that would promote the efficient use of spectrum, particularly spectrum which is currently underutilized. Pending in both houses of Congress are bills proposing an audit of radio spectrum bands that would

²⁸ *Id.* at § 2(c).

²⁹ *Id.*

promote more efficient use of the nation's limited spectrum resources.³⁰ The success of the CSEA relocation process, and introduction of new broadband services by T-Mobile and others, underscore how making additional spectrum available can enable broadband deployment. Identifying underutilized spectrum and making an additional 200 MHz of spectrum available for licensed commercial use is a critical step in bringing ubiquitous and affordable broadband to all Americans.³¹ Together with the Relocation Improvement Bill, this pending legislation would drastically improve and facilitate the transition of underutilized spectrum to more efficient uses.

³⁰ See Radio Spectrum Inventory Act, S. 649, 111th Cong. (2009); See also Radio Spectrum Inventory Act, H.R. 3125, 111th Cong. (2009).

³¹ See House Inventory Bill at § 2; See also Comments of T-Mobile USA, Inc., FCC GN Docket No. 09-51, at 17 (filed June 8, 2009).

V. CONCLUSION

Consumer demand for mobile broadband services will only increase in the coming years, and the need for additional spectrum resources to meet this demand will only intensify. The CSEA's relocation process has allowed significant progress in transitioning spectrum from government to commercial use, and T-Mobile believes the suggestions discussed above will improve this process by providing government users the financial resources to migrate to more efficient technology that better serve their needs and by accelerating the deployment of advanced wireless services.

Respectfully submitted,

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