

May 5, 2014

Via ECFS

Ms. Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

RE: EX PARTE NOTICE

GN Docket No. 12-268: *Expanding the Economic and Innovation Opportunities of Spectrum Through Incentive Auctions*

WT Docket No. 12-269: *Policies Regarding Mobile Spectrum Holdings*

Dear Ms. Dortch:

On May 1, 2014, Mark McDiarmid, Karri Kuoppamaki, Kathleen Ham, and Steve Sharkey, all of T-Mobile USA, Inc.,¹ and Trey Hanbury, counsel to T-Mobile, (collectively “T-Mobile Representatives”) met separately with Erin McGrath, Acting Legal Advisor to Commissioner Michael O’Rielly; Brendan Carr, Legal Advisor for Commissioner Ajit Pai; Renee Gregory, Legal Advisor to Chairman Tom Wheeler; Louis Peraertz, Legal Advisor to Commissioner Mignon Clyburn; David Goldman, Senior Legal Advisor to Commissioner Jessica Rosenworcel; and Roger Sherman, Jim Schlichting, John Leibovitz, Jessica Almond, Joel Taubenblatt, and Michael Janson of the Wireless Telecommunications Bureau, to discuss the importance of low-band spectrum in deploying wireless broadband service.

During these meetings, the T-Mobile representatives discussed Mr. McDiarmid’s recently-filed declaration. Mr. McDiarmid reviewed the relevant technical literature and drew on proprietary capital expenditure data and cost models data as well as customer satisfaction reports produced in the ordinary course of business by T-Mobile to show the value of low-band spectrum to T-Mobile’s customers. Mr. McDiarmid explained the unique utility of low-band spectrum for

¹ T-Mobile USA, Inc. is a wholly-owned subsidiary of T-Mobile US, Inc., a publicly traded company. Mr. McDiarmid is Vice President for Radio Network Engineering and Development, and Mr. Kuoppamaki is Senior Director, Technology Strategy and Policy at T-Mobile.

penetrating buildings and traveling great distances, which makes this scarce resource uniquely valuable to mobile broadband network operators.² Mr. McDiarmid also explained how the deployed frequency and its associated propagation characteristics are considered important in virtually all major wireless network deployments. Numerous studies, including detailed studies and models reviewed in the declaration, have demonstrated that low-band spectrum experiences significantly less path loss over wide areas than higher-frequency spectrum and less penetration loss when traveling through building walls, yielding improved consistency and reliability of coverage over wide-areas and indoors. Mr. McDiarmid added that higher-band frequencies cannot substitute for lower frequencies in meeting coverage objectives, and he noted that frequency-dependent differences in coverage, in-building penetration, and network expenses have a profound effect on the ability of wireless carriers to acquire and retain customers.

Mr. McDiarmid and the T-Mobile representatives then reviewed T-Mobile's competitive position in the marketplace. T-Mobile added more than 4.4 million new subscribers in 2013, and an additional 2.4 million subscribers in the first quarter of 2014.³ The recent quarter was T-Mobile's fourth consecutive quarter with more than one million net customer additions – a significant turnaround from a year earlier and the largest subscriber additions of any carrier in the U.S. market. Despite T-Mobile's popularity with consumers, T-Mobile continues to face a number of challenges. For example, T-Mobile's subscriber base is still comparatively small. Verizon and AT&T have more than 103.3 million⁴ and 116 million⁵ wireless subscribers respectively, together making up two-thirds of the estimated 326.4 million wireless subscribers in the U.S.⁶ Although T-Mobile's subscriber base is growing, T-Mobile has only 49.1 million subscribers.⁷ Given the capital-intensive nature of the wireless business, scale – both operational

² Declaration of Mark McDiarmid, Vice President for Radio Network Engineering and Development, T-Mobile USA, Inc., GN Docket No. 12-268, WT Docket No. 12-269 (Apr. 11, 2014) ("*McDiarmid Declaration*").

³ Press Release, T-Mobile USA, Inc., *T-Mobile US Reports Fourth Quarter and Full Year 2013 Results and Third Consecutive Quarter of Over One Million Net Customer Additions* (Feb. 25, 2014), available at <http://investor.t-mobile.com/Cache/1500056771.PDF?Y=&O=PDF&D=&fid=1500056771&T=&iid=4091145>; Press Release, T-Mobile USA, Inc., *T-Mobile US Reports First Quarter 2014 Results and Best Ever Quarterly Performance in Branded Postpaid Net Customer Additions* (May 1, 2014), available at <http://investor.t-mobile.com/Cache/1001186494.PDF?Y=&O=PDF&D=&fid=1001186494&T=&iid=4091145> ("T-Mobile Q1 2014 Report").

⁴ *2014 Investor Quarterly, First Quarter*, Verizon Communications at 6 (Apr. 24, 2014), available at http://www.verizon.com/investor/DocServlet?doc=vz_1q2014_bulletin.pdf.

⁵ *Investor Briefing No. 284, 1st Quarter 2014*, AT&T at 6 (Apr. 22, 2014), available at http://www.att.com/Investor/Earnings/1q14/ib_final_1q14.pdf (this number includes 4.5 million subscribers from AT&T's Leap Wireless acquisition).

⁶ *Wireless Quick Facts*, CTIA, <http://www.ctia.org/your-wireless-life/how-wireless-works/wireless-quick-facts> (last updated Nov. 2013) (number based on year-end 2012 data).

⁷ T-Mobile Q1 2014 Report at 2.

and financial – has a meaningful effect on T-Mobile’s ability to compete in a sustainable manner. The greater size of the two dominant incumbents allows them to take advantage of economies-of-scale in the purchase of spectrum, network equipment, the development and roll-out of new handsets, and the purchase of inputs such as backhaul and roaming, that are not available to T-Mobile. This size advantage – combined with the two dominant carriers’ command of most critical low-band spectrum resources – contribute to the dominant carriers’ enormous profit margins of more than 50% for Verizon and more than 45% for AT&T – levels more than double that of T-Mobile.⁸

Thus, while Mr. McDiarmid explained that T-Mobile remains committed to continuing to compete vigorously, he noted that access to low-band spectrum and the economies of scale that greater access would enable represent two of the most pressing needs T-Mobile must satisfy if the company is to continue to play as disruptive a role in the market for the benefit of consumers as it has played over the last two years.⁹ Given the dynamics of the marketplace and the importance of T-Mobile’s role as a maverick, the issue of foreclosure identified by the Department of Justice poses a significant threat to consumers should the two dominant carriers choose to exert their market power and choke off low-band spectrum from T-Mobile. For this reason, the representatives made clear it is critical that the FCC employ reasonable competitive safeguards, which the FCC’s proposed rules appear to do, that ensure the requirements of the Communications Act are met for small carriers.¹⁰

⁸ See, e.g., *Mobilizing Our World: AT&T Inc. 2013 Annual Report*, AT&T Inc., http://www.att.com/Investor/ATT_Annual/2013/downloads/ar2013_annual_report.pdf; *Verizon 2013 Annual Report*, Verizon Communications Inc., http://www.verizon.com/investor/DocServlet?doc=2013_vz_annual_report.pdf; Thomas Gryta, *Verizon’s Profit Rises 16% as Margins Improve*, WALL ST. J., April 18, 2013, <http://online.wsj.com/news/articles/SB10001424127887323309604578430380773637180>; Scott Moritz & Amy Thomson, *T-Mobile Adds More Customers Than AT&T, Verizon Combined*, BLOOMBERG, May 1, 2014, <http://www.bloomberg.com/news/2014-05-01/t-mobile-lures-1-3-million-contract-customers-in-first-quarter.html>.

⁹ See, e.g., Brendan Greely & Scott Moritz, *T-Mobile’s Wacky Plan to Trash the Wireless Business Model*, BLOOMBERG BUSINESSWEEK TECHNOLOGY, Oct. 31, 2013, <http://www.businessweek.com/articles/2013-10-31/t-mobiles-john-legere-trashes-the-wireless-business-model#p1>; James B. Stewart, *Brash C.E.O. Keeps the Giants of Mobile Off Balance*, N.Y. TIMES, Nov. 29, 2013, http://www.nytimes.com/2013/11/30/business/brash-ceo-revives-a-moribund-t-mobile.html?pagewanted=all&_r=0.

¹⁰ See, e.g., 47 U.S.C. § 309(j)(3) (directing the Commission to satisfy numerous objectives in its competitive bidding process, including promoting competition, “avoiding excessive concentration of licenses and . . . disseminating licenses among a wide variety of applicants”); *id.* § 309(j)(17)(B) (authorizing the Commission to adopt “rules concerning spectrum aggregation that promote competition”).

Following a review of Mr. McDiarmid's sworn declaration, the T-Mobile representatives discussed several other issues related to the incentive auction design and the proposed spectrum-aggregation limits under consideration by the Commission:

The Spectrum Act Unambiguously Authorizes the FCC to Adopt Auction-Design Mechanisms to Protect Consumers and Promote Competition.

Based on extensive record evidence, the Commission has proposed a reserved license framework, and the Commission has extensive authority to do so under the plain text of the Middle Class Tax Relief and Job Creation Act of 2012 (the Spectrum Act).¹¹ As Representative Waxman explained almost immediately after the passage of the Spectrum Act,¹² and as he and several other representatives explained to then Chairman Julius Genachowski in May of last year, the Spectrum Act contains a "carefully negotiated provision" – Section 6404 – that was "designed to address the issue of auction participation while preserving the FCC's authority to protect against undue concentration of spectrum holdings."¹³ Under this provision, the Commission is *not* required "to allow every carrier to bid for every megahertz of a spectrum band that is made available for auction."¹⁴

If there were any doubt about the FCC's authority, Congress included a saving clause, subparagraph 17(B), clarifying that the new provision does not affect "any authority the Commission has to adopt and enforce rules of general applicability, including rules concerning spectrum aggregation that promote competition."¹⁵ Representative Waxman and the other representatives provide an illustrative example of the type of rule that complies with the law: "[i]t therefore would be permissible for the FCC to set aside blocks of licenses within an auction on which particular bidders may not bid as long as those bidders were eligible for other blocks or licenses being auctioned."¹⁶ That is precisely what the Commission has proposed here.

¹¹ Pub. L. No. 112-96, § 4606, 126 Stat. 156, 230 (codified as amended at 47 U.S.C. § 309(j)(17)).

¹² See 158 Cong. Rec. E265 (Feb. 28, 2012) (statement of Rep. Henry A. Waxman).

¹³ Letter from Henry A. Waxman, Ranking Member, Committee on Energy and Commerce, *et al.*, to Julius Genachowski, Chairman, Federal Communications Commission, WT Docket No. 12-269 (May 16, 2013), *available at* <http://democrats.energycommerce.house.gov/sites/default/files/documents/Genachowsk-Mobile-Spectrum-Holdings-2013-5-16.pdf> ("Waxman Letter").

¹⁴ *Id.*

¹⁵ 47 U.S.C. § 309(j)(17)(B).

¹⁶ Waxman Letter at 2.

Encouraging the Two Dominant Providers to Bid Against One Another Will Enhance Competition and Increase Auction Revenue and Broadcast Payments.

Verizon and AT&T have complained that in a scenario where the incentive auction clears sixty megahertz of broadband spectrum, a thirty megahertz reserve allocation comprised of three ten-megahertz blocks would mean that only one of these two highly capitalized carriers could win twenty megahertz of spectrum while the other would win only ten. The prospect of having more demand than supply should come as welcome news to anyone concerned about generating sufficient auction revenues or generating large payments to broadcast licensees.

When demand exceeds supply, prices increase. Preserving – and indeed expanding – the occasions when Verizon and AT&T must bid against one another for broadband spectrum, rather than contorting the rules to allow the two dominant carriers to divide the available resources evenly between them, may represent the single most meaningful thing the Commission can do to improve auction revenue, increase payments to broadcasters, and expand the amount of spectrum available for new wireless broadband services.¹⁷ More competitive bidding not only increases revenue, but it will encourage AT&T and Verizon to increase overall bidding in order to clear more spectrum and avoid a lack of supply. This not only increases the amount paid to broadcasters, but increases the number of broadcasters that receive payment. The Commission should avoid an even number of unreserved blocks wherever possible by, for example, reducing the unreserved allocation from forty to thirty megahertz in a seventy megahertz broadband clearing scenario. At a minimum, the Commission must retain the proposed thirty megahertz reserve block in a sixty megahertz broadband clearing scenario.

Claims that Twenty-Megahertz Blocks of 600 MHz Spectrum Are Required To Productively Deploy Broadband Service Are Misleading.

Twenty-megahertz blocks of 600 MHz spectrum are not required for effective mobile deployment, and unsubstantiated claims that they are should be no basis for calling into question the proposed reserved license framework.¹⁸ As Mr. Kuoppamaki recently explained in a Declaration in support of ten megahertz (5+5 MHz) licenses in the AWS-3 proceeding, there is no material difference in spectrum efficiency between the use of two 5+5 megahertz blocks and a single 10+10 megahertz block.¹⁹ Moreover, because of well-accepted carrier aggregation

¹⁷ See Letter from Rebecca Murphy Thompson, General Counsel, Competitive Carriers Association, to Marlene Dortch, Secretary, Federal Communications Commission, GN Docket No. 12-268, WT Docket No. 12-269 (May 1, 2014); Letter from Trey Hanbury, Counsel to T-Mobile USA, Inc., to Marlene Dortch, Secretary, Federal Communications Commission, GN Docket No. 12-268, WT Docket No. 12-269 (Apr. 28, 2014).

¹⁸ See, e.g., Letter from Joan Marsh, Vice President – Federal Regulatory, AT&T, to Marlene H. Dortch, Secretary, Federal Communications Commission, GN Docket No. 12-268, WT Docket No. 12-269 at 2 (Apr. 16, 2014).

¹⁹ See Declaration of Karri Kuoppamaki, Senior Director, Technology Development and Policy, T-Mobile USA, Inc., (Mar. 24, 2014), *attached to* Letter from Russell H. Fox, Counsel to T-Mobile USA, Inc., to

techniques, these two blocks need not be contiguous – two non-contiguous 5+5 megahertz carriers have the same spectral efficiency and peak data rates as one 10+10 megahertz carrier.²⁰ Even if claims about the imperative of twenty-megahertz blocks were true (and they are not), the ostensible need would not pose a problem under the proposed spectrum-aggregation limits because AT&T and Verizon will have the opportunity to acquire twenty-megahertz blocks anytime at least twenty megahertz of spectrum is available for purchase.²¹

Expanding Access to Low-Band Spectrum Promotes Public Safety and National Security.

As Chairman Wheeler recently recognized, “[w]ith more and more Americans opting for wireless-only connectivity, they should not run the risk of being unable to place a 911 call from the interior of a building just because their wireless company has the wrong spectrum.”²² Public safety officials agree. “[A] healthy competitive wireless industry in itself is good for public safety,” City of Charlottesville Fire Chief Charles L. Werner wrote earlier this year.²³ “As a first responder,” Chief Werner added, “I want to know that all carriers in the market have robust networks. So that during emergency situations, we’ll all be able to communicate better, no matter whose network we’re making a call on or relying on for transmitting critical data.”²⁴ The importance of low-band spectrum to public safety, moreover, is not limited to being able to place a wireless emergency call; it is also important for providing accurate location data to first responders. For example, an emerging LTE location determination technique, Observed Time Difference of Arrival (OTDOA), has the potential to allow the mobile handset to be more accurately located if the mobile handset can communicate with at least three wireless base stations.²⁵ Better propagating low-band spectrum offers wireless users in deep urban

Marlene H. Dortch, Secretary, Federal Communications Commission, GN Docket No. 13-185 (Mar. 24, 2014).

²⁰ *See id.* at 3.

²¹ Under the Commission’s proposed band plan and reserved license framework, there will be at least four 5+5 megahertz licenses in each market, assuming sufficient broadcaster participation, thus allowing AT&T and Verizon the opportunity to each acquire a 10+10 megahertz aggregation. It is only in the worst case clearing scenarios of 60 megahertz and less that AT&T and Verizon’s ability to each acquire 20 megahertz of spectrum even could become an issue.

²² Chairman Tom Wheeler, *Getting the Incentive Auction Right*, FCC BLOG (Apr. 18, 2014), <http://www.fcc.gov/blog/getting-incentive-auction-right>.

²³ Chief Charles L. Werner, *Public Safety Needs a Competitive Wireless Industry*, THE HILL BLOG (Jan. 16, 2014), <http://thehill.com/blogs/congress-blog/technology/195571-public-safety-needs-a-competitive-wireless-industry>.

²⁴ *Id.*

²⁵ *See, e.g.*, Karri Ranta-aho, Senior Specialist, Radio Standardization, Nokia Siemens Networks, *Performance of 3GPP Rel-9 LTE Positioning Methods* (June 13-14, 2010), available at <http://bit.ly/1ksCsen>.

environments and in expansive rural areas a better opportunity to have a handset that can communicate with three base stations and to be more accurately located through OTDOA.

Greater Access to Low-Band Spectrum Will Help Reduce Costly Roaming and Encourage Rural Buildout and Investment in New Facilities.

Without access to the low-band spectrum required to deploy in rural and other areas, T-Mobile requires access to roaming.²⁶ However, many carriers continue to experience serious difficulty in securing commercially reasonable roaming agreements from the two dominant providers, AT&T and Verizon.²⁷ Access to low-band spectrum allows non-dominant carriers to avoid the need of entering one-sided roaming purchase agreements by investing in cost-effective low-band spectrum infrastructure. Expanded access to low-band spectrum can also provide more competition in the market for the provision of roaming services as more carriers are able to provide coverage in more areas. This effect may be particularly pronounced for smaller and rural carriers, which have long struggled to reach commercially reasonable terms with the big carriers for voice and data roaming.²⁸ As the Competitive Carriers Association (CCA) has explained, the introduction of additional competitive opportunities for low-band roaming, which would be encouraged through more widespread distribution of low-band spectrum, could materially improve smaller carriers' bargaining power in negotiating roaming agreements.²⁹

Broader Distribution of Low-Band Spectrum Will Promote the Interests of the Hearing-Impaired Community.

Handsets that operate using low-band spectrum can better accommodate the needs of the hearing-impaired community. For example, the inherently superior propagation characteristics of low-band spectrum that better enables a handset to communicate with a base station also allow the use of reduced power that can improve inter-operation with hearing aids.³⁰ Similarly, the difference in wavelength between lower- and higher-band spectrum can result in the same hearing aid capturing significantly less energy (and thus experiencing less interference) from lower-frequency spectrum.³¹ Hence, ensuring broader distribution of 600 MHz spectrum

²⁶ See, e.g., Comments of T-Mobile US, Inc., WT Docket No. 13-135 at 21 (June 17, 2013), available at <http://apps.fcc.gov/ecfs/document/view?id=7520920251>.

²⁷ *Id.* at 22.

²⁸ See Letter from Steven K. Berry, President and CEO, Competitive Carriers Association, to Marlene H. Dortch, Secretary, Federal Communications Commission, GN Docket No. 12-268, WT Docket No. 12-269 at 2 (Apr. 9, 2014).

²⁹ *Id.* at 2-3.

³⁰ See, e.g., *Section 68.4(a) of the Commission's Rules Governing Hearing Aid-Compatible Telephones*, Report and Order, 18 FCC Rcd 16753 ¶ 41 (2003).

³¹ See, e.g., Letter from Thomas Goode, Attorney, The Alliance for Telecommunications Industry Solutions, to Marlene Dortch, Secretary, Federal Communications Commission, WT Docket No. 01-309 (Aug. 26, 2005).

through the reserved license framework can enable carriers to provide a broader range of hearing aid compatible handsets that will benefit customers with hearing loss.

* * *

To help ensure that Verizon and AT&T do not shut off access to the last, best opportunity to acquire low-band spectrum at any meaningful scale, the Commission has proposed a modest, contingent limit on the ability of any one carrier that already holds substantial low-band holdings to acquire all or substantially all of the spectrum available in the upcoming 600 MHz auction. T-Mobile strongly supports the proposed spectrum-aggregation limit as well as the related auction-design mechanisms that will help promote innovation, protect consumers, increase revenue, and ensure a successful incentive auction.

This *ex parte* notification is being filed electronically with your office pursuant to Section 1.1206 of the Commission's Rules.

Respectfully submitted,

/s/ Trey Hanbury

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cc: Erin McGrath
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