

Trey Hanbury
Partner
T: 202.637.5534
trey.hanbury@hoganlovells.com

September 26, 2013

Ms. Marlene Dortch
Secretary
Federal Communications Commission
445 12th Street, S.W.
Room TW-A325
Washington, D.C. 20554**Re: *Ex Parte Notice****Expanding the Economic and Innovation Opportunities of Spectrum Through Incentive Auctions*, GN Docket No. 12-268;
Policies Regarding Mobile Spectrum Holdings, WT Docket No. 12-269

Dear Ms. Dortch:

T-Mobile USA, Inc. (“T-Mobile”) has proposed a one-third limit on the amount of below-1 GHz spectrum a carrier can acquire in any individual market at auction.¹ This proposed spectrum-aggregation limit is a generally applicable rule that will promote competition while allowing major license holders such as Verizon and AT&T to participate extensively in the auction.² Under T-Mobile’s proposal, Verizon, AT&T, and other major holders of below-1 GHz spectrum could acquire substantial amounts of additional low-frequency spectrum in the 600 MHz incentive auction without exceeding the proposed spectrum-aggregation limit, and with T-Mobile’s proposed minimum access exception, the two dominant carriers could acquire spectrum in every single market in the country.³

In recent filings, Verizon and AT&T have suggested that a one-third limit on below-1 GHz spectrum would largely exclude them from the auction.⁴ These suggestions are not accurate. If 70 MHz of spectrum were available at auction, Verizon could acquire a 5x5 MHz license in markets covering approximately 90% of the population and a 10x10 MHz license in markets covering more than half of the population.⁵ AT&T meanwhile could acquire a 5x5 MHz license in markets covering more than

¹ T-Mobile USA, Inc. is a wholly-owned subsidiary of T-Mobile US, Inc., a publicly traded company.

² A one-third below-1 GHz spectrum-aggregation limit would apply to several carriers that have substantial low-frequency holdings in individual markets, including four national carriers and at least one regional carrier.

³ See *Ex Parte* Letter from Trey Hanbury, Hogan Lovells US LLP, to Marlene H. Dortch, Secretary, FCC, WT Docket No. 12-269 (May 30, 2013).

⁴ See *Ex Parte* Letter from Tamara Preiss, Verizon, to Marlene Dortch, Secretary, FCC, Docket Nos. 12-268 & 12-269 (July 17, 2013) (“Verizon Letter”); Yeon-Koo Che & Philip A. Haile, *Comments on T-Mobile’s “Dynamic Market Rule” Proposal 1 & n.3* (Aug. 13, 2013), attached to Letter from David L. Lawson, Counsel for AT&T, to Marlene H. Dortch, Secretary, FCC, Docket Nos. 12-268 & 12-269 (Aug. 13, 2013); see also Mobile Future, *The Case for Inclusive Spectrum Auction Rules 2-3* (Sept. 2013), attached to Letter from Jonathan Spalter, Chair, Mobile Future, to Marlene H. Dortch, Secretary, FCC, Docket Nos. 12-268 & 12-269 (Sept. 12, 2013).

⁵ These calculated figures are greater than those Verizon calculated in its July *ex parte* letter. See Verizon Letter at 1-2. In applying the proposed limit, Verizon always rounds down any available capacity under the limit for acquiring additional spectrum (*i.e.*,

90% of the population and a 10x10 MHz license in markets covering more than one-third of the population.

AT&T and Verizon could even acquire substantial spectrum in the top ten markets. In the graphic below, green shows markets where the two dominant carriers could acquire spectrum and gray shows the single top-ten market where, absent an exception, AT&T could not acquire spectrum:

Verizon and AT&T Could Acquire Significant Amounts of Spectrum in the Top Ten Markets Under a 1/3 Below-1 GHz Limit				
Carrier	CMA	Current Sub-1 GHz Holdings	Verizon and AT&T's Headroom Under the 1/3 Limit in MHz (Amount over the Limit in Red)	
			Recovery of 84 MHz	Recovery of 120 MHz
VZW	Los Angeles	59	9	19
VZW	New York City	59	9	19
VZW	Chicago	47	21	31
VZW	Dallas	34	34	44
VZW	Houston	59	9	19
VZW	Philadelphia	59	9	19
VZW	Atlanta	59	9	19
VZW	Washington	59	9	19
VZW	Detroit	59	9	19
VZW	Boston	47	21	31
<hr/>				
AT&T	Los Angeles	61	7	17
AT&T	New York City	61	7	17
AT&T	Chicago	55	13	23
AT&T	Dallas	80	(12)	(2)
AT&T	Houston	55	13	23
AT&T	Philadelphia	61	7	17
AT&T	Atlanta	55	13	23
AT&T	Washington	55	13	23
AT&T	Detroit	55	13	23
AT&T	Boston	61	7	17

headroom), rather than rounding up or down to the nearest 10-MHz increment. Verizon's approach triggers the limit even with only the most modest of overages. Simply rounding the amount of available headroom to the nearest 10 MHz would allow Verizon to acquire spectrum in *all ten* of the top ten markets when 84 MHz is recovered. Rounding in this manner, Verizon could acquire at least 10 MHz of spectrum in markets covering approximately 90% of the US population and at least 20 MHz of spectrum in markets covering over half of the population. Spectrum will rarely fall into the neat 10 MHz units required by the LTE standard and proposed for the Commission's band plan, and modest rounding where market access would otherwise be denied entirely may be a reasonable approach for applying the limit.

Under T-Mobile's minimum access exception proposal, of course, all of the top ten markets for each of the dominant carriers would show green because both would be allowed to acquire at least a 5x5 MHz license in every market in the country, even in markets such as Dallas, Texas, where AT&T already controls substantially in excess of one-third of the available low-frequency spectrum.

In response to T-Mobile's proposed minimum access exception, Verizon has suggested that acquiring multiple licenses in half the country and one license in others could frustrate the economics of deployment "given the significant cost of deploying new handsets and cell site antennas that incorporate the 600 MHz band."⁶ But this assertion ignores that the two dominant carriers already have such a large percentage of the nation's low-frequency spectrum. As such, the exposure risk of not acquiring yet more low-frequency spectrum in the broadcast incentive auction is low in absolute terms and substantially lower than the exposure risk faced by T-Mobile and other non-dominant carriers that lack access to any low-frequency spectrum. Unlike AT&T or Verizon, T-Mobile and other similarly situated carriers have no low-frequency ecosystem on which to rely and assume considerably more risk to develop one for the 600 MHz band. Yet even if the dominant carriers did not face less exposure risk than the non-dominant competitors, the value offered from potential additional spectrum in unconstrained markets, combined with additional spectrum in constrained markets, is considerable and will outweigh associated deployment costs, which are relatively small by comparison.⁷

* * *

Given the superior propagation and in-building penetration characteristics of low-frequency spectrum, T-Mobile agrees with the Department of Justice's recommendation that the Commission "ensure that the allocation of spectrum at auction does not enable carriers with high market shares to foreclose smaller carriers from improving their customers' coverage."⁸ The two dominant carriers, however, would prefer that the Commission treat all spectrum the same, even though there are critical differences between low- and high- frequency bands. Verizon and AT&T, for example, have suggested that the costs for acquiring the spectrum and deploying networks using high- or low-frequency spectrum is similar and claim that high-frequency spectrum is more valuable compared to low-frequency spectrum.⁹

This critique is misguided: high-frequency spectrum does not offer the same ability to cover sparsely-populated rural areas where capacity is not an issue, nor does it offer the same ability to penetrate walls and provide service in indoor areas otherwise unreachable with higher frequencies. As former FCC Chief Economist Jonathan Baker has explained, "mobile wireless services [for] any

⁶ Verizon Letter at 2.

⁷ Should Verizon and AT&T wish to acquire additional below-1 GHz spectrum in the 600 MHz band, the companies could sell other below-1 GHz spectrum holdings to ensure compliance with the pro-competitive aggregation limitation.

⁸ *Ex Parte* Submission of the United States Department of Justice, WT Docket No. 12-269 at 14 (April 11, 2013).

⁹ Verizon Letter at 2-3; *Ex Parte* Letter from David L. Lawson, Counsel for AT&T, to Marlene Dortch, Secretary, FCC, GN Docket No. 12-268 & WT Docket No. 12-269 at 2 (June 13, 2013) ("AT&T June 13th Letter"). Verizon has submitted a Deutsche Bank report, which predicts that because higher-frequency spectrum can handle a higher data throughput, it may become more valuable as spectrum becomes more scarce. See Brett Feldman et al., Deutsche Bank Markets Research, *Sprint Nextel Corp., the New Spectrum Powerhouse 3* (July 11, 2013), *attached to* Verizon Letter. Yet even the report Verizon cites concedes that higher frequencies "have been viewed as less attractive due to their limited propagation characteristics." *Id.*

given geographic coverage and quality . . . can be provided more efficiently using a mix of low and high spectrum frequencies than using either frequency exclusively.”¹⁰

Just as important, nothing that T-Mobile has proposed prevents Verizon or AT&T from acquiring more high-frequency spectrum. Therefore, if high-frequency spectrum were a reasonable substitute for low-frequency spectrum, then a below-1 GHz should be entirely unproblematic for Verizon and AT&T because the dominant companies could simply acquire high-frequency spectrum to avoid the effects of any below-1 GHz limit. The continued opposition of AT&T and Verizon to a below-1 GHz limit strongly suggests that, their policy arguments notwithstanding, above-1 GHz spectrum is not a reasonable substitute for below-1 GHz spectrum.

Analysts also do not appear to view spectrum above 1 GHz as a reasonable substitute for below-1 GHz spectrum. J.P. Morgan, for example, values lower-frequency Cellular and 700 MHz bands at roughly double to quadruple the amount it values the PCS, AWS, and 2.5 GHz bands.¹¹ With Verizon and AT&T’s extensive below-1 GHz spectrum, J.P. Morgan estimates that the combined value of these two carriers’ spectrum holdings is more than two and one-third times that of Sprint and T-Mobile’s combined (or nearly one and two-thirds times as valuable if Clearwire’s holdings are included).¹² Indeed, J.P. Morgan goes so far as to explain that AT&T and Verizon’s low-frequency acquisitions in the 700 MHz auction have “cemented” their position “as the leaders of the US wireless industry for the next decade at least.”¹³

Even if low-frequency spectrum were not uniquely valuable, Professor Baker has explained that AT&T or Verizon would still be able to foreclose competitors from providing competing services by acquiring a disproportionate share of low-frequency spectrum.¹⁴ By foreclosing smaller carriers from low-frequency spectrum, Verizon and AT&T could effectively prevent smaller carriers from providing nationwide, full-coverage services, Professor Baker has written.¹⁵ If the non-dominant carriers are foreclosed access to low-frequency spectrum resources, they may feel compelled to alter their business models by, for example, providing more niche or geographically targeted services, which results in less competition for the two dominant carriers. Absent low-frequency spectrum, smaller carriers will not be able to competitively offer comparable in-building and rural coverage.¹⁶

¹⁰ Jonathan B. Baker, *Spectrum Auction Rules That Foster Mobile Wireless Competition* 14-15 (March 12, 2013) (“Baker Report”), attached to Letter from Howard J. Symons, Member, Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C., to Marlene H. Dortch, Secretary, FCC, WT Docket No. 12-269 (March 12, 2013).

¹¹ See *id.* at 9 (valuing Cellular and 700 MHz spectrum at \$1.62 and \$1.32/MHz-POP respectively, while valuing PCS and AWS spectrum at \$0.68/MHz-POP and 2.5 GHz spectrum at \$0.28/MHz-POP).

¹² *Id.* at 9-10.

¹³ J.P. Morgan, *Telecom Services and Towers* 9-10 (Dec. 5, 2012), attached to Letter from Trey Hanbury, Counsel to T-Mobile US, Inc. to Marlene H. Dortch, Secretary, FCC, GN Docket No. 12-268 & WT Docket 12-269 (July 26, 2013).

¹⁴ Jonathan B. Baker, *Further Comments on Spectrum Auction Rules That Foster Mobile Wireless Competition* 4 (Aug. 2, 2013), attached to *Ex Parte* Letter from Howard Symons, Counsel for T-Mobile, USA, Inc., to Marlene H. Dortch, Secretary, FCC GN Docket No. 12-268 & WT Docket No. 12-269 (Aug. 2, 2013).

¹⁵ *Id.*

¹⁶ Contrary to AT&T’s assertions, low-frequency spectrum is not merely an issue for rural coverage. See AT&T June 13th Letter at 3. The coverage disparities between high- and low- frequency spectrum are equally if not more important in dense urban environments, where in-building penetration is critical to reach office workers and residents located deep within large, difficult-to-penetrate buildings. See, e.g., Baker Report at 14-15; Martin Cave & William Webb, *Spectrum Limits and Auction Revenue: the European Experience*, attached to *Ex Parte* Presentation of Sprint Corporation, GN Docket No. 12-268 & WT Docket No. 12-269 (July 29, 2013); Competitive Carriers Association Notice of *Ex Parte*, GN Docket No. 12-268 & WT Docket No. 12-269, 3-4 (Sept. 4, 2013).

Based on these differences in high- and low-frequency spectrum, T-Mobile supports a clear, upfront spectrum-aggregation limit for below-1 GHz spectrum. A spectrum-aggregation limit, rather than after-the-fact application of the spectrum screen, will promote certainty for auction participants and overall auction success.

Verizon's suggestion that "[n]o party has explained why" the spectrum screen has not served its pro-competitive purpose is therefore without foundation.¹⁷ T-Mobile has explained the significant problems with an after-the-fact screen in the context of the incentive auction.¹⁸ As Professor Jonathan Baker has written, "[a]bsent clear auction rules, firms may base their bids on potentially erroneous predictions of how the agency will react in an after-the-fact review of auction results, distorting auction bidding and outcomes."¹⁹ Firms may wrongly predict that they can acquire spectrum when they actually cannot, which will require costly, deployment-delaying divestitures that smaller competitors are poorly positioned to exploit. Alternatively, firms may wrongly predict that they cannot acquire spectrum when they actually can, which risks awarding the spectrum to the less efficient operator and driving down auction revenue. Both types of errors in prediction are costly to competition and consumers. Many commenters, including T-Mobile, have explained them at great length in the record.²⁰

* * *

Another T-Mobile proposal, the Dynamic Market Rule, could prevent resource concentration while *increasing* revenue to help ensure auction success.²¹ As T-Mobile has explained, the Dynamic Market Rule would remove the risk that auction revenue targets will not be met by putting spectrum-aggregation limits to a market test.²² Under the Dynamic Market Rule, the Commission would run the auction with the full spectrum-aggregation limit in place; if the auction's revenue target is met, the auction ends, but if the bids fall short of the target, the limit is gradually relaxed.²³ By allowing the market to determine the appropriate level of spectrum-aggregation limits, the rule removes risks of insufficient spectrum clearing or inadequate auction revenues.²⁴

T-Mobile's proposed spectrum-aggregation limit, together with its proposed minimum access exception and its proposed Dynamic Market Rule, will encourage investment, stimulate innovation, and enhance consumer choice.

¹⁷ Verizon Letter at 3 (emphasis added).

¹⁸ Baker Report at 11-14; *see also* *Ex Parte* Letter from Thomas J. Sugrue, Senior Vice President, Government Affairs, T-Mobile US, Inc. to Chairman Julius Genachowski, WT Docket No. 12-269 (May 7, 2013).

¹⁹ Baker Report at 8.

²⁰ An after-the-fact screen also invites attempts to game the system. As T-Mobile has explained, firms understand that requiring divestitures is expensive and time-consuming and that the Commission, recognizing as much, may be reluctant to mandate divestiture. *Id.* at 12-13.

²¹ *See Ex Parte* Letter from Trey Hanbury, Counsel to T-Mobile USA, Inc., to Marlene H. Dortch, Secretary, FCC, GN Docket No. 12-268 & WT Docket No. 12-269 (June 21, 2013) ("T-Mobile June 21st Letter"); Gregory Rosston and Andrzej Skrzypacz, *A Dynamic Market Rule for the Broadcast Incentive Auction: Ensuring Spectrum Limits Do Not Reduce Spectrum Clearance* (July 2013) ("Rosston and Skrzypacz DMR Economic Study"), *attached to Ex Parte* Letter from Trey Hanbury, Counsel to T-Mobile USA, Inc., to Marlene H. Dortch, Secretary, FCC, GN Docket No. 12-268 (July 26, 2013).

²² *See* T-Mobile June 21st Letter at 2.

²³ Rosston and Skrzypacz DMR Economic Study at 1-2.

²⁴ *See* T-Mobile June 21st Letter at 2.

Pursuant to Section 1.1206(b)(2) of the Commission's rules, an electronic copy of this letter is being filed in the above-referenced docket. Kindly direct any questions regarding this filing to the undersigned.

Respectfully submitted,

/s/ Trey Hanbury

Trey Hanbury
Counsel to T-Mobile USA, Inc.