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Suite 400 West
Washington, DC 20005

June 24, 2016

Ex Parte

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

Re: Use of Spectrum Bands Above 24 GHz for Mobile Radio Services, GN Docket No. 14-177, IB Docket Nos. 15-256 & 97-95, RM-11664 & WT Docket No. 10-112

Dear Ms. Dortch,

Chairman Wheeler emphasized this week that “[o]pening up spectrum and offering flexibility to operators and innovators is the most important thing we can do to enable the 5G revolution,” and is “far preferable to expecting ... regulators to define the future.”¹ The Chairman’s Fact Sheet outlining the proposed *Spectrum Frontiers Order*, however, describes a proposed spectrum screen of 1250 MHz for case-by-case review of secondary market transactions and a proposed spectrum cap of 1250 MHz for auctioned spectrum in the millimeter wave (“mmW”) bands.² The Commission should refrain from adopting mmW spectrum aggregation screens (or, worse still, caps) on 5G-suitable bands.³

A spectrum limit for 5G-suitable bands above some arbitrary threshold could thwart 5G innovation and undermine speedy deployment at this critical time, when much is still unknown about 5G. And given that the *Spectrum Frontiers Further Notice* will propose making an

¹ Prepared Remarks of FCC Chairman Tom Wheeler, *The Future of Wireless: A Vision for U.S. Leadership in a 5G World*, National Press Club, Washington, D.C., at 3, 5 (June 20, 2016) (“*Wheeler Remarks*”), http://transition.fcc.gov/Daily_Releases/Daily_Business/2016/db0620/DOC-339920A1.pdf.

² See FCC, Fact Sheet: Spectrum Frontiers Proposal to Identify, Open Up Vast Amounts of New High-Band Spectrum for Next Generation (5G) Wireless Broadband, at 2 (June 23, 2016) available at http://transition.fcc.gov/Daily_Releases/Daily_Business/2016/db0623/DOC-339990A1.pdf (“*Spectrum Frontiers Fact Sheet*”).

³ See *id.*; Letter from Competitive Carriers Association to FCC, GN Docket No. 14-177, at 2 (June 15, 2016) (“CCA Letter”) (calling for a one-third screen for all mmW spectrum and a one-half screen for spectrum in a particular band, like 28 GHz); Letter from T-Mobile to FCC, GN Docket No. 14-177, at 2-5 (June 20, 2016) (“T-Mobile Letter”) (same).

additional 17.7 GHz of mmW spectrum available, there will be no dearth of mmW spectrum available as 5G technologies and services develop. Verizon urges the Commission to adopt rules that maximize the utility of the mmW spectrum and avoid artificially constraining innovation and investment.⁴

Spectrum holding policies for mmW bands are unwarranted and would harm innovation.

The case for mmW aggregation limits does not exist. The record in the *Spectrum Frontiers* proceeding overwhelmingly demonstrates that the mmW bands hold much promise for 5G, but many of the potential use cases are not yet clearly defined.⁵ Given the recognized “nascent state of mmW technology, as well the early stage of the development of the accompanying standards,”⁶ it is simply “too early to determine with any certainty how these bands will ultimately be used.”⁷ So it is not surprising that recent calls for aggregation limits offer nothing but unfounded speculation about possible impacts to competition; the record contains no evidence of actual or tangible harm that would warrant a mmW spectrum screen or other aggregation limit.⁸

While the full range of use cases has yet to be fully developed, one thing is clear: anticipated 5G services will require significant amounts of bandwidth to deliver ultra-high data rates. As the Chairman has explained, 5G services will require “large swaths of spectrum – multiples of what is available today.”⁹ The *Spectrum Frontiers* proceeding aims to enable future innovative uses of this spectrum,¹⁰ not constrain those uses before they have even had a chance to develop. A spectrum screen would “risk causing substantial consumer harm” by discouraging and potentially even precluding the very wideband operations necessary to maximize the utility

⁴ See *Use of Spectrum Bands Above 24 GHz For Mobile Radio Services*, Notice of Proposed Rulemaking, 30 FCC Rcd 11878, 11880-81 ¶¶ 1-3 (2015) (“*Spectrum Frontiers Notice*”).

⁵ See, e.g., Ericsson Comments at 6; High Tech Spectrum Coalition Comments at 5; Mobile Future Comments at 15; TIA Comments at 28; Verizon Comments at 15; AT&T Reply Comments at 12.

⁶ See *Spectrum Frontiers Notice*, 30 FCC Rcd at 11935 ¶ 192.

⁷ Mobile Future Comments at 15.

⁸ Although T-Mobile suggests a screen be applied to mmW spectrum acquired by transaction, it calls for a cap for mmW spectrum acquired at auction. See T-Mobile Letter at 5. The Commission squarely rejected use of an overbroad, inflexible spectrum cap fifteen years ago: “[W]e conclude that case-by-case review ... is now preferable to the spectrum cap rule because it gives the Commission flexibility to reach the appropriate decision in each case, on the basis of the particular circumstances of that case.” *Spectrum Aggregation Limits for Commercial Mobile Radio Services*, Report and Order, 16 FCC Rcd 22668, 22693-94 ¶ 50 (2001).

⁹ *Wheeler Remarks* at 1.

¹⁰ See *Spectrum Frontiers Notice*, 30 FCC Rcd at 11881 ¶¶ 2-3.

of this spectrum.¹¹ And at this early stage of the innovation cycle, we do not know how much spectrum a provider will need to provide 5G services.¹²

Although there are high expectations that the mmW bands will be put to mobile use,¹³ the *Spectrum Frontiers Notice* pointed out there is still no basis to conclude that the spectrum is suitable for providing mobile services “in the same manner as other spectrum bands.”¹⁴ Indeed, up until recently CCA stated that “it would be premature for [mmW] spectrum to be included in the screen now,”¹⁵ and T-Mobile likewise asserted that “the better approach for now is to ensure a sufficient supply of licensed spectrum.”¹⁶ Nothing has changed to undermine those earlier positions, and no basis exists to impose a general screen or other aggregation limit in the mmW bands.

The Commission should reject any proposal for a band-specific mmW screen.

Nor should the Commission consider applying a spectrum screen to particular mmW frequency spectrum bands.¹⁷ Even where the Commission has found that spectrum in a certain frequency range – *i.e.*, below 1 GHz – should receive enhanced review,¹⁸ that review is not band-specific. Instead, the Commission has expressly declined to weigh one particular band as more valuable than another for spectrum aggregation purposes because of the difficulty of imposing a scheme that “accurately reflect[s] [a band’s] competitive significance.”¹⁹

Here the Commission is proposing to make spectrum available in multiple alternative mmW bands to serve the same purpose of enabling 5G, making band-specific limits unnecessary.²⁰ These alternative bands include the 28 GHz, 37 GHz, 39 GHz, and 64-71 GHz bands, and as noted above, the Commission will propose adding 17.7 GHz of additional

¹¹ See Verizon Comments at 15.

¹² See *id.*; see also AT&T Reply Comments at 15.

¹³ See AT&T Reply Comments at 12.

¹⁴ *Spectrum Frontiers Notice*, 30 FCC Rcd at 11934-35 ¶ 192 (tentatively concluding that no mmW spectrum band meets the Mobile Spectrum Holdings standard for inclusion of bands in the Commission’s spectrum screen).

¹⁵ CCA Reply Comments at 13.

¹⁶ T-Mobile Reply Comments at 11.

¹⁷ See CCA Letter at 2; T-Mobile Letter at 4-5.

¹⁸ See *Policies Regarding Mobile Spectrum Holdings*, Report and Order, 29 FCC Rcd 6133, 6233 ¶ 267 (2014) (“*Mobile Spectrum Holdings Order*”).

¹⁹ See *id.* at 6236 ¶ 276.

²⁰ See *Spectrum Frontiers Notice*, 30 FCC Rcd at 11934 ¶ 191; *Mobile Spectrum Holdings Order*, 29 FCC Rcd at 6193 ¶ 144.

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spectrum in the 24-25 GHz, 32 GHz, 42 GHz, 48 GHz, 51 GHz, 70 GHz, and 80 GHz bands.²¹ Proponents of band-specific screens ignore opportunities in these alternative bands, and offer no specifics to justify imposing spectrum aggregation rules on any particular mmW spectrum band. There is nothing in the record to support a band-specific mmW spectrum screen nor is there anything close to the rationale the Commission used to justify enhanced review for all the spectrum below 1 GHz .

* * *

Verizon supports the Commission's efforts to adopt a flexible framework for mmW spectrum that will allow the wireless industry to rapidly deploy innovative 5G technologies. This spectrum holds great potential, and the Commission should take care not to curtail those opportunities by imposing unwarranted spectrum aggregation policies.

This letter is being filed electronically pursuant to Section 1.1206 of the Commission's rules. Please contact me if you have any questions.

Sincerely,

/s/ Gregory M. Romano
Gregory M. Romano
Vice President & Associate General Counsel

²¹ *Spectrum Frontiers Fact Sheet at 2.*