



July 7, 2016

VIA ELECTRONIC FILING

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

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

Dear Ms. Dortch,

Chairman Wheeler recently delivered remarks at the National Press Club stating that, "if the United States is going to continue to be a world leader in wireless, we need to speed the deployment of 5G, here, on our shores."¹ The first step is making spectrum available for investment and innovation in 5G, and CTIA commends the Chairman for scheduling a vote on the *Spectrum Frontiers* order at the July 14th FCC Open Meeting. To unlock the potential of 5G spectrum, clear service and licensing rules are needed that prioritize licensed, exclusive-use spectrum and the flexibility to innovate. In contrast, Facebook recently filed in this proceeding calling for adoption of new sharing technologies and a "use it-or share-it" requirement – policy prescriptions that will impede investment and complicate service roll-out, and most assuredly *will not speed deployment of 5G on U.S. shores.*² As demonstrated below, such an approach would jeopardize this the Commission's objective of ensuring that the U.S. maintains its global leadership in 5G.

¹ Prepared Remarks of FCC Chairman Tom Wheeler, *The Future of Wireless: A Vision of U.S. Leadership in a 5G World* (Jun. 20, 2016), http://transition.fcc.gov/Daily_Releases/Daily_Business/2016/db0620/DOC-339920A1.pdf ("Wheeler Remarks").

² Letter from Kevin J. Martin, Facebook, to Marlene H. Dortch, FCC (June 21, 2016) ("Facebook Letter"); see also Letter from Michael Calabrese, New America's Open Technology Institute, and Harold Feld, Public Knowledge, to Marlene H. Dortch, FCC (June 13, 2016) ("OTI/PK Letter"); *Public Interest Groups Seeking Changes to High-Frequency Spectrum Order*, COMMUNICATIONS DAILY (June 29, 2016).



Flexible, exclusive use licensing will promote 5G innovation.

Facebook and others advocate use of spectrum access systems (“SASs”) and related technologies to manage tiered sharing among licensees and general users,³ but such regulatory experiments will only introduce licensee uncertainty and undermine necessary investment and innovation in 5G deployments. The SAS concept, first adopted for the 3.5 GHz band, has yet to be deployed in any real-world environment. It makes no sense to extend the SAS model to the 5G bands before it has been proven successful in any frequency band. A license condition, as Facebook advocates as an alternative to a rule adopted here,⁴ creates the same uncertainty that a new rule would. Because the Commission needs to promote investment in the 5G ecosystem, and because there remain many questions regarding future 5G deployments, the Commission should refrain from adopting an unproven sharing-intensive framework in these bands.

The Commission can best promote 5G by – in the words of Chairman Wheeler – “repeating the proven formula that made the United States the world leader in 4G.”⁵ A key element of that roadmap is making spectrum available on a licensed, exclusive-use basis. These policies enabled the industry to migrate to from 2G to 3G service, and produced global leadership by the U.S. in 4G LTE deployment and adoption. Investment by the wireless industry in licensed spectrum is extensive, with exclusively-licensed spectrum generating \$400 billion in economic activity each year.⁶ Exclusive-use licensing thus affords “the benefits of competition, on the one hand, and the efficiencies of scale and scope that justify investments of capital and expertise.”⁷ Indeed, this successful, exclusive-use framework will be particularly important in promoting investment in nascent 5G technologies.

Further, the Chairman has proposed to make 7 gigahertz of additional millimeter wave spectrum available for unlicensed use. In total, 70 percent of the spectrum made

³ See Facebook Letter at 1-3; OTI/PK Letter at 3.

⁴ See Facebook Letter at 3.

⁵ Wheeler Remarks at 3.

⁶ THE BRATTLE GROUP, MOBILE BROADBAND SPECTRUM: A VITAL RESOURCE FOR THE U.S. ECONOMY, at 23 (May 11, 2015). See also Nokia Comments, Appendix at 5 (describing exclusive use as the “gold standard” for meeting consumer demand).

⁷ See *Use of Spectrum Bands Above 24 GHz for Mobile Radio Services*, Notice of Inquiry, 29 FCC Rcd 13020, 13045 ¶ 88 (2014).



available in the forthcoming Order will be subject to unlicensed or shared use.⁸ If Facebook, with its \$326 billion market capitalization – a far larger market cap than any wireless carrier in the United States – wishes to innovate in 5G, it can certainly bid at auction or continue to pursue broadband connectivity in the unlicensed frequencies.⁹

Reasonable performance requirements will drive investment.

The FCC should not adopt a use it-or-share-it requirement or performance requirements that force innovators to “build to the rules,”¹⁰ as Facebook recommends.¹¹ Use it-or-share-it is a “regulatory experiment that, until tested and proven to work, would introduce risk that licensees may not be able to use their spectrum when and where they need it.”¹² As a result, a licensee may be forced to deploy a network in a rushed, inefficient manner simply to ensure that it retains its license rights.

The dynamic nature of millimeter wave use also makes a use it-or-share-it requirement highly impractical. Facebook’s approach would redistribute “unused” millimeter wave spectrum just five years (or sooner) into a license term, despite the fact that deployment timetables for millimeter wave services are unknown.¹³ Further, such a requirement is entirely unsuitable given the nascent nature of technology in this band. Not only will both fixed and mobile architectures be present in the band, but these bands also may host non-traditional network architectures such as “mesh” networks, with each node of the network, including receivers, relaying data for the network.¹⁴ Use-it-or-share-it “would introduce uncertainty at this critical stage and could deter the investments necessary to make millimeter wave mobile deployments successful.”¹⁵

⁸ The Commission’s proposed approach to make available 600 megahertz of spectrum in the 37-37.6 GHz band for dynamic shared access between commercial users and federal users further renders unnecessary any use-it-or-share-it requirement. See FCC Fact Sheet: Spectrum Frontiers Proposal to Identify, Open Up Vast Amounts of New High-Band Spectrum for Next Generation (5G) Wireless Broadband, http://transition.fcc.gov/Daily_Releases/Daily_Business/2016/db0623/DOC-339990A1.pdf.

⁹ See Largest Companies by Market Cap Today, <http://www.dogsofthedow.com/—largest-companies-by-market-cap-mc.htm> (last visited July 5, 2016). See also Facebook Letter at 4 (noting that Facebook is “developing a multi node wireless system focused on bringing high speed internet connectivity to dense urban areas that operates on unlicensed V Band spectrum. Expanding unlicensed access to the 64 71 GHz band would increase such opportunities”).

¹⁰ CTIA Comments at 25.

¹¹ See Facebook Letter at 1, 3; see also OTI/PK Letter at 3.

¹² Verizon Comments at 20.

¹³ See AT&T Comments at 21.

¹⁴ See CTIA Comments at 24-25.

¹⁵ Qualcomm Comments at 13.



Thus, a use it-or-share-it requirement has the potential to thwart the very objectives of this proceeding.

Instead, the Commission should promote investment by adopting reasonable performance requirements that allow innovators to maximize the potential of the technologies and architectures in play.¹⁶ A flexible performance requirement containing safe harbors for licensees will best achieve this goal.

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By adopting clear service and licensing rules that prioritize licensed, exclusive-use spectrum and the flexibility to innovate, the Commission will promote a vibrant mobile ecosystem that will help to improve service for U.S. wireless consumers, facilitate the Internet of Things, and achieve U.S. leadership in mobile technologies and service to consumers for years to come.

Pursuant to Section 1.1206 of the Commission's rules, a copy of this letter is being filed in ECFS. Please do not hesitate to contact the undersigned with any questions.

Sincerely,

/s/ Scott K. Bergmann

Scott K. Bergmann
Vice President, Regulatory Affairs
CTIA

¹⁶ See Letter from Brian M. Josef, CTIA, to Marlene H. Dortch, FCC (May 24, 2016) (providing details for a flexible, substantial service performance requirement containing safe harbors for new 28 GHz, 39 GHz, and 37 GHz licensees).