

February 11, 2020

Ex Parte

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

Re: *Unlicensed Use of the 6 GHz Band, ET Docket No. 18-295; Expanding Flexible Use in Mid-Band Spectrum between 3.7 and 24 GHz, GN Docket No. 17-183*

Dear Ms. Dortch:

Wi-Fi has become the most important wireless technology for American consumers and businesses. Not only does Wi-Fi support communications, web browsing, e-commerce, and access to news and entertainment, it also plays an important role in hospitals, industrial facilities, and transportation hubs. Technologies like Wi-Fi that rely on unlicensed spectrum are also critical to rural broadband access and U.S. economic prosperity. Unlicensed technologies contributed \$525 billion to the U.S. economy in 2017 and are expected to contribute more than \$834 billion this year.¹ But to continue this innovation and economic growth, unlicensed technologies require access to sufficient spectrum to keep pace with consumer demand and technological development.

The undersigned stakeholders appreciate the Commission's work toward making available new licensed and unlicensed spectrum resources sufficient to launch the U.S. into a next-generation wireless world. We will undoubtedly need more licensed and unlicensed spectrum across a variety of frequency ranges in order to make next-gen wireless speeds and capacity a reality. We urge the Commission to designate all 1200 megahertz of the 6 GHz band for unlicensed use, with appropriate measures to ensure incumbent licensees are protected from harmful interference. Licensing a portion of this band would undermine, not support, our next-generation wireless future.

Permitting unlicensed use to share the 1200 MHz with 6 GHz incumbents holds tremendous potential for multi-gigabit wireless broadband in communities across the country, including in rural communities, and will benefit consumers as an important complement to 5G. Wi-Fi already carries a majority of U.S. Internet traffic, and that is expected to increase exponentially over the next five years. For example, Cisco predicts that by 2022 Wi-Fi will carry 57 percent of U.S. Internet traffic, while mobile broadband networks, including new licensed 5G networks, will carry just 7 percent, and 71 percent of global 5G mobile traffic will be offloaded to Wi-Fi.^{2 3} Yet no new mid-band unlicensed spectrum suitable for Wi-Fi has been made available in the United States since before the smartphone was introduced.

¹ Raul Katz, Telecom Advisory Services LLC, *A 2017 Assessment of the Current & Future Economic Value of Unlicensed Spectrum in the United States* 75 (Apr. 2018).

² Cisco Systems Inc., *Cisco Visual Networking Index: Global Mobile Data Traffic Forecast Update, 2017–2022 White Paper* 21
<https://www.cisco.com/c/en/us/solutions/collateral/service-provider/visual-networking-index-vni/white-paper-c11-738429.html> (Feb. 2019).

³ Cisco Systems Inc., *Cisco Visual Networking Index, VNI Forecast Highlights Tool, United States*,
https://www.cisco.com/c/m/en_us/solutions/service-provider/vni-forecast-highlights.html (last visited Dec. 23, 2019).

Growing demand for Wi-Fi means an increased burden on existing unlicensed bands, which are becoming congested and almost at capacity. And existing bands are not large enough to support the wide 160 megahertz channels needed to enable multi-gigabit, next-generation Wi-Fi 6 technology, or the 320 megahertz channels envisioned for future Wi-Fi standards. Moreover, unlicensed spectrum will be critical to 5G deployment, both by providing offload capacity critical for handling an increasing number of connected devices and by bringing ultra-fast speeds and increased capacity indoors where good quality 5G cellular signals may not reach and outdoors where some rural Americans lack choice in accessing broadband connections. Studies demonstrate the need for over 1 gigahertz of mid-band unlicensed spectrum in the next few years to support these operations,⁴ which is why the 6 GHz band presents such an important opportunity for the FCC to enable 1200 MHz of innovation spectrum to foster economic and technological growth.

Opening the 6 GHz band for unlicensed use is also the fastest way to get additional spectrum suitable for next-generation wireless into the hands of American consumers. In contrast, relocating 6 GHz incumbents to a federal band that has not yet been studied for sharing and then proceeding to auction, as some stakeholders have proposed,⁵ will take years and significantly disrupt incumbents. Suggestions to move Fixed Service links, Broadcast Auxiliary Service, Cable Television Relay service, and wireless microphone operations out of the upper portion of the 6 GHz band, and make the adjacent 7125-8400 MHz government band available for relocation threaten to grind this mid-band unlicensed allocation to a halt.⁶ Indeed, the 7125-8400 MHz band has not yet been studied to determine whether it could accommodate shared non-federal use. A decade is likely to slip by before the band could be studied, procedures for relocation adopted, and the upper portion of 6 GHz finally auctioned. And in the meantime, countless existing users of the band would experience disruption and incur relocation burdens as they move either to different technologies or different frequencies. If the Commission wants to bring more mid-band spectrum into use for next-generation wireless in the near term, while preventing disruption and interference to incumbents, the clear answer is to make 6 GHz available for shared unlicensed use.

6 GHz spectrum is critical to Wi-Fi 6, 5G, and rural broadband deployment and to provide a home for the next generation of unlicensed innovations. The Commission can deliver the promise of next-gen wireless broadband to American consumers in urban, suburban and rural communities across the country in the most cost effective and least disruptive way by making all 1200 MHz available for unlicensed use while protecting incumbent users. We urge you to quickly move forward with rules that deliver all of these benefits and unleash the next wave of unlicensed innovation.

⁴ Rolf de Vegt et al., Qualcomm Techs., Inc., *A Quantification of 5 GHz Unlicensed Band Spectrum Needs 5* (2016); Steve Methley & William Webb, Quotient Assocs. Ltd., *Wi-Fi Spectrum Needs Study* 26, 28 (2017).

⁵ See Letter from Scott K. Bergmann, Senior Vice President, Regulatory Affairs, CTIA, to Marlene H. Dortch, Secretary, FCC, ET Docket No. 18-295, GN Docket No. 17-183, at 2-3 (filed Dec. 4, 2019).

⁶ See *id.*

