Consumer Technology Association™

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*Via Electronic Filing*

April 26, 2024

Marlene H. Dortch, Secretary
Federal Communications Commission
45 L Street NE
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:

Consumer Technology Association ("CTA")[1] writes on behalf of its members in response to the initial comments on the Federal Communications Commission ("FCC" or "Commission") Second Further Notice of Proposed Rulemaking ("Second FNPRM") on *Unlicensed Use of the 6 GHz Band* and *Expanding Flexible Use in Mid-Band Spectrum Between 3.7 and 24 GHz.* CTA was pleased to see discussion in the record about the benefits of geofenced variable power (GVP) and low power indoor (LPI) client to client (C2C) communications, and supports the proposals discussed below.

**Geofenced Variable Power (GVP)**

CTA supports the proposal by Apple Inc., Broadcom Inc., Google LLC, Intel Corp., Meta Platforms, Inc., Microsoft Corp., and Qualcomm Inc. ("The Commenters") urging the Commission to create a GVP device class.[2] GVP would enable higher powers paired with variable exclusion zones instead of mandating only a single power level. The Commenters called for GVP operations up to 21 dBm EIRP and 8 dBm/MHz PSD, subject to geofenced areas that grow or shrink in proportion to a device's power level. Creating a GVP device class as proposed would allow for operations at higher power levels and would take advantage of the geofencing proposal outlined in the Second FNPRM.[3]

[1] CTA is North America's largest technology trade association. Our members are the world's leading innovators—from startups to global brands—helping support more than 18 million American jobs. CTA owns and produces CES® —the most powerful tech event in the world.
[2] Comments of Apple Inc., Broadcom Inc., Google LLC, Intel Corp., Meta Platforms, Inc., Microsoft Corp., and Qualcomm Inc., ET Docket No. 18-295, GN Docket No. 17-183 (filed Mar. 27, 2024) at 23.
[3] Second FNPRM ¶ 107.

As the Commission considers this proposal, it is important to remember that GVP would be a complement to VLP rather than a substitute to or subset of VLP. VLP is an established class of devices that operate indoor/outdoor at power levels up to 14 dBm without spectrum access restrictions. The low power level is the primary interference mitigation mechanism, and the main enabler of this device class, while GVP would permit higher powers than VLP paired with geofencing requirement. Categorization of GVP as a subset of VLP would cause confusion in the device certification process. Avoiding this confusion is imperative for continued innovation and deployment of new technologies for consumer benefit.

In addition, GVP implementation should be technology neutral, allow for manufacturer flexibility in developing geofencing systems, and reflect actual operating conditions. CTA supports The Commenters' recommendation for different-sized exclusion zones for different GVP power levels.[4] Larger than necessary exclusion zones would potentially burden consumers by blocking their abilities to use their devices, especially in urban centers. This would run counter to the FCC's stated goals and strategy for spectrum management as outlined in the *Spectrum Policy Statement*, which states "given the complex interplay of radio service operations, completely eliminating interference is often unrealistic and unachievable. We encourage spectrum users to plan accordingly as they design and implement systems to ensure that they operate under expected, or even exceptional, conditions, in a changing RF environment." [5]

**Low Power Indoor (LPI) Client-to-Client (C2C) Communications**

As CTA previously stated in the record, allowing LPI clients to directly communicate with each other would increase opportunity for new and exciting applications.[6] CTA supports authorizing LPI C2C in the 6 GHz band as proposed in the joint comments of Apple Inc., Broadcom Inc., Google LLC, Intel Corp., Meta Platforms, Inc., Microsoft Corp., and Qualcomm Inc.[7] The C2C communications use cases outlined by Apple et. al. would benefit consumers by allowing operations where sustained low latency is imperative, such as healthcare and education.[8] Consumers would also benefit from C2C modes that permit devices to communicate directly in public indoor locations where they may not have access to the infrastructure AP network.[9]

CTA also supports the Wi-Fi Alliance proposal for C2C communications when the client devices receive an enabling signal of -82 dBm/20MHz or higher with a refresh interval of at least 4

[4] Comments of Apple et. al. at 41.
[5] *Principles for Promoting Efficient Use of Spectrum and Opportunities for New Services; Promoting Efficient Use of Spectrum through Improved Receiver Interference Immunity Performance,* Policy Statement, FCC 23-27 (rel. Apr. 21, 2023) at ¶ 17.
[6] Letter from J. David Grossman, VP Regulatory Affairs, CTA, to Marlene H. Dortch, Secretary, FCC, ET Docket No. 18-295, GN Docket No. 17-183 (filed Mar. 27, 2024) at 2.
[7] Joint Comments of Apple Inc., Broadcom Inc., Google LLC, Intel Corp., Meta Platforms, Inc., Microsoft Corp., and Qualcomm Inc., ET Docket No. 18-295, GN Docket No. 17-183 (filed Mar. 27, 2024) at 3.
[8] *Id.* at 16.
[9] *Id.* at 17.

second from an LPI or Composite (LPI and SP) AP.[10] Authorizing LPI C2C would make it possible to scale and improve performance of peer-to-peer communications in consumer devices operating indoor.

CTA looks forward to continued dialogue with the Commission and other stakeholders on these important questions. Please contact the undersigned if you have any questions regarding this filing.

Respectfully submitted,

/s/ J. David Grossman
J. David Grossman
Vice President, Policy & Regulatory Affairs

/s/ Rachel Nemeth
Rachel Nemeth
Sr. Director, Regulatory Affairs

[10] Comments of Wi-Fi Alliance, ET Docket No. 18-295, GN Docket No. 17-183 (filed Mar. 27, 2024) at 19.