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Via Electronic Filing

James Schlichting
Office of Engineering and Technology
Federal Communications Commission
445 Twelfth Street, S.W.
Washington, D.C. 20054

Re: Petition for Rulemaking - Amendment of the
Commission's Rules for the License-Exempt
57-64 GHz Band
RM-11104

Dear Mr. Schlichting:

This letter follows our telephone conversation today in which Mr. Van Tuyl responded to the reply comment filed by the Wireless Communications Association International, Inc. ("WCA") in this matter. Also on the call were John Reed, Karen Rackley, Ron Repasi and Gary Thayer of the Office of Engineering and Technology.

The following points were discussed during the conversation:

- Mr. Van Tuyl's comment should be given the weight appropriate for an industry leader commenting on behalf of all potential users of the 60 GHz unlicensed band, not just the existing point-to-point businesses that comprise WCA. Mr. Van Tuyl's comments arise out of a concern that the Commission engage in the best, most efficient management of spectrum, especially with regard to the future of the unlicensed 60 GHz band.¹ The fact that there are not more commenters representing his point of view is simply because there are no active business interests engaged in mobile 60 GHz wireless at present.

¹ See, e.g., *In the Matter of Principles for Promoting the Efficient Use of Spectrum by Encouraging the Development of Secondary Markets*, Policy Statement, 15 FCC Red 24178, 24182 (2000) (noting the Commission's goal of maximizing spectrum use, subject "to appropriate technological standards to control interference.").

- The Commission should maintain the 60 GHz band as a place where point-to-point links and mobile users can peacefully co-exist. Due to recent advances in mmWave silicon integrated circuits, use of these devices soon could predominate in the band. The present rules allow for this expansion of innovative use of the band, while WCA's proposal has the potential to degrade the quality of the band for any users other than operators of point-to-point transmitters. Contrary to WCA's claim,² the PD restrictions of Section 15.255(b)(1) serve the public good by controlling the operating environment for the benefit of all users.
- The Commission was prescient in setting aside spectrum for the mmWave community (specifically, 7 GHz of spectrum for unlicensed use and 13 GHz for low-cost licensed use), especially given the recent innovations in the market. High power transmitters belong in the mmWave licensed band, where there are better controls on potential interference. The nearby 71-76 GHz band, for example, is ideally suited for high-power point-to-point links. In fact, the Commission recently issued an order regarding the use of the 71-76 GHz band, granting many of WCA's requested rule changes in order to promote greater use of that band. *See In the Matter of Allocation and Service Rules for the 71-76 GHz, 81-86 GHz and 92-95 GHz Bands*, Memorandum Opinion and Order (rel. March 3, 2005). Because this order allows WCA members to expand their use of the 71-76 GHz band, there is no need for WCA to ask the Commission to interfere with 60 GHz. If WCA is dissatisfied with the terms of the unlicensed mmWave band, it should focus on modifying the licensed band rules to address any unmet needs of the point-to-point link community, rather than distorting the use of the unlicensed band.
- The WCA's invocation of radiation safety as a reason for its requested rule change is a red herring. WCA claims that an EIRP-based power limit must be added to the rule to assure compliance with the RF safety standards.³ However, the real issue is interference between high power point-to-point transmitters and low-power mobile devices. The WCA represents the views of point-to-point link manufacturers. These manufacturers seek marginal gains in performance, as detailed in Mr. Van Tuyl's comments, at the cost of major interference to the low power mobile users that happen to be located in the path of a direct or reflected beam from a point-to-point transmitter.
- WCA is incorrect in its claim that its requested EIRP rule change is necessary.⁴ Measuring power density in the far field as allowed by Section

² *In the Matter of Amendment of the Commission's Rules for the License-Exempt 57-64 GHz Band*, 47 C.F.R. §§ 15.255(b) and 15.255(i), Reply Comments of the Wireless Communications Association International, Inc. at n.7 (filed Dec. 14, 2004).

³ *Id.* at 2.

⁴ *Id.* at 3.

15.31(f) of the Commission's rules is quite practical. EIRP can very easily be calculated from such a measurement. Alternatively, near-field scans can be made and Fourier transformed to derive an EIRP measurement. EIRP and Power Density are equivalent measures. Changing the units of measure is not a sufficient reason for the rule change sought by WCA, and to invoke measurement problems as a reason for a requested rulemaking is misleading.

- Finally, it is significant that WCA fails to address the regulatory and practical problem of window links. At the time of type certification, the Commission would not be able to distinguish the difference between a window link and some other point-to-point indoor link. Moreover, even if the Commission could make this distinction at the time of certification, there are no available measures to keep the owner of a window link from operating away from windows. As noted in Mr. Van Tuyl's comments, windows reflect mmWave power and the unintentional splatter from a beam incident on a window could pose an interference problem. Hence, the best spectrum management policy is to maintain the Transmit I.D. requirement and to continue to limit indoor transmitters to low-to-moderate EIRP levels.

Please contact me if you have any questions.

Respectfully submitted,

/s/ Laura Stefani

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cc: Lauren Van Wazer
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