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**Before the  
Federal Communications Commission  
Washington, D.C. 20554**

In the Matter of )  
 )  
Petition for Rulemaking: Amendment of ) CG RM-11844  
Rules Governing Ultra-Wideband Devices )  
and Systems )

**Ex Parte of IEEE 802**

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I. Introduction

IEEE 802 LAN/MAN Standards Committee (LMSC) is pleased to provide a reply to comments on the above-captioned petition for a comprehensive review of Part 15, Subpart F, regulations governing Ultra-Wideband (UWB) devices and systems. In our filing on 8/23/2019<sup>1</sup> we endorsed the petition. We remain in favor of this petition and offer responses to the concerns raised by opponents to the petition.

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<sup>1</sup> <https://ecfsapi.fcc.gov/file/10823280773273/18-19-0106-06-0000-uwband-petition-reply%20to%20prm-802.pdf>

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IEEE 802 LMSC is a leading consensus-based industry standards body, producing standards for wireless networking devices, including wireless local area networks (“WLANs”), wireless specialty networks (“WSNs”), wireless metropolitan area networks (“Wireless MANs”), and wireless regional area networks (“WRANs”). We appreciate the opportunity to provide these comments to the Commission.

IEEE 802 is a committee of the IEEE Standards Association and Technical Activities, two of the Major Organizational Units of the Institute of Electrical and Electronics Engineers (IEEE). IEEE has about 420,000 members in about 190 countries and supports the needs and interests of engineers and scientists broadly. In submitting this document, IEEE 802 acknowledges and respects that other components of IEEE Organizational Units may have perspectives that differ from, or compete with, those of IEEE 802. Therefore, this submission should not be construed as representing the views of IEEE as a whole.<sup>2</sup>

The IEEE 802.15 Working Group (WG) is now specifying the next generation of precision ranging capable UWB PHY enhancements. The participation in the development of enhanced ranging includes major consumer electronics and mobile handset makers, with mass market application targets based on UWB capability in mobile devices, vehicles, buildings and other structures.

II. Majority of comments support the petition

In reviewing the comments filed we note that the all of the comment filers except for one (see section III) support the petition. In reviewing both positive and negative comments, IEEE 802 continues to support initiating the rulemaking process to review and revise Subpart F of Part 15 of the commission’s rules.

III. Protection of GPS is a high priority

Comments from the GPS Innovation Alliance (GPSIA) oppose the petition<sup>3</sup>. The concerns raised are that proposed changes to Subpart F would increase potential for interference in the GPS bands. IEEE 802 is committed to promoting positive coexistence and is not endorsing any

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<sup>2</sup> This document solely represents the views of the IEEE 802 LAN/MAN Standards Committee and does not necessarily represent a position of either the IEEE, the IEEE Standards Association or IEEE Technical Activities.

<sup>3</sup> <https://ecfsapi.fcc.gov/file/10819305204706/GPS%20Innovation%20Alliance%20Opposition%20FINAL%20081919.pdf>

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changes that would negatively impact GPS or other critical services. We note that the petition does not seek to change the current limits in the GPS bands, nor alter the UWB band allocation in any way that would allow an increase in the potential energy radiated into the GPS bands. IEEE 802 would not support any such changes. IEEE 802 wireless standards are used in a large proportion of the consumer devices that also include a GPS receiver today, and our members have a keen interest in assuring positive coexistence with GPS.

The GPSIA comments characterize the petition as proposing “sweeping changes” and “radical revision” that will “unwind carefully developed protections for high priority spectrum uses.” We disagree with this characterization. IEEE 802 endorses reasonable, incremental changes that will promote innovation and provide greater value from the spectrum without increasing the potential for harmful interference to critical services, and we believe that this is the intention of the petition. We further note that the rulemaking process provides the opportunity and means for addressing technical concerns to ensure the needs of the GPS industry and users are protected. We believe working with the stakeholders in the rulemaking process is the correct way to achieve the most value from the spectrum.

Specifically, the petition proposes no changes to the UWB band definitions or to the peak power, Equivalent Isotropic Radiated Power (EIRP) or Power Spectral Density (PSD) allowed in the GPS bands (1164-1610 MHz). The commission established the band plan and power limits to, among other things, protect GPS. It has been working and all available information suggests it will continue to do so. We further note that the specified level, -85.3 dBm/MHz, is far lower than what is allowed to be emitted into the GPS band by unintentional radiators and devices operating under Subparts C and E of Part 15 of the commission’s rules: observing that modern consumer devices that contain a GPS receiver also contain high speed digital circuitry as well as multiple radios authorized under Subparts C and E strongly confirms that operation under the levels defined in those Subparts does not interfere with the GPS receiver operation.

#### IV. Recommendations

We continue to support initiating a rulemaking process. The rulemaking process provides the opportunity to identify and address concerns of all stakeholders.

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We continue to recommend reasonable revisions that retain the carefully developed protections for high priority spectrum uses.

We believe the recommendations previously submitted do not change the protections for high priority spectrum users. In particular we recommend retaining the current stringent requirements in the bands used by GPS (1164-1610 MHz).

V. Conclusion

Following review and consideration of the negative comments received by the commission as described above, we continue to respectfully request the Commission to begin rulemaking to revise and update the rules governing UWB operation.

Regards,

By: /s/ Paul Nikolich

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