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IEEE P802.18
Radio Regulatory Technical Advisory Group (RR-TAG)

Proposal of a liaison statement to ITU-R Working Party 5C

Date: 2025-02-25

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IEEE 802 received a liaison statement from ITU-R Working Party (WP) 5C requesting technical and operational characteristics of the systems in the Fixed Service operating in the frequencies above 450 GHz. IEEE 802.15 SC THZ (Standing Committee Terahertz) is soliciting and hearing contributions that address numerous THz issues in the frequency range 300 GHz to 3000 GHz. IEEE 802.15 TG3mb received one contribution which proposes the channel plan and link budget for 500 GHz wireless access systems [1]. Although the technologies proposed by this contribution were not included in the current IEEE Std 802.15.3-2023 standard, this information may help ITU-R WP 5C develop the working document on technical and operational characteristics of the fixed service applications operating in the frequency range 450-1 000 GHz. NICT proposes to send a liaison statement to ITU-R WP 5C to inform the technical information provided in Ref. [1]

Reference

[1] 15-22-0116-02-0thz-draft-channel-plan-of-500-ghz-fixed-wireless-system

Attachment**Institute of Electrical and Electronics Engineers, Inc.****DRAFT LIAISON STATEMENT TO ITU-R WORKING PARTY 5C****Technical and operational characteristics of the fixed service applications
operating in the frequency range 450-1 000 GHz****1. Source information**

IEEE 802 LMSC is a leading consensus-based open standards development committee for networking standards that are used by industry globally. It produces standards for networking devices, including wired and wireless local area networks (“LANs” and “WLANs”), wireless specialty networks (“WSNs”), wireless metropolitan area networks (“Wireless MANs”), and wireless regional area networks (“WRANs”). Technologies produced by implementers of our standards are a critical element for all networked applications today.

IEEE 802 LMSC is a committee of the IEEE Standards Association and of Technical Activities, two of the Major Organizational Units of the IEEE. IEEE has over 460,000 members in more than 190 countries and its core purpose is to foster technological innovation and excellence for the benefit of humanity. IEEE is also a major accredited standards development organization whose standards are recognized worldwide. In submitting this document, IEEE 802 LMSC acknowledges and respects that other components of IEEE Organizational Units may have perspectives that differ from, or compete with, those of IEEE 802 LMSC¹.

2. Discussion

ITU-R Working Party 5C invited IEEE to provide information on technical and operational characteristics of their systems operating in the range 450 GHz to 1000 GHz.

The upper spectrum limit of IEEE Std 802.15.3-2023² is at 450 GHz. Since at the time the standard was developed, this has been the upper limit of spectrum identified by World Radiocommunications Conference (WRC) 2019 for the use by MOBILE and FIXED service. IEEE 802 might consider the use of the frequency range beyond 450 GHz in a future project.

¹ This document solely represents the views of IEEE 802 LMSC and does not necessarily represent a position of either IEEE or the IEEE Standards Association or IEEE Technical Activities.

² “IEEE Standard for Wireless Multimedia Networks,” in IEEE Std 802.15.3-2023 (Revision of IEEE Std 802.15.3-2016), vol., no., pp.1-684, 22 Feb. 2024, doi: 10.1109/IEEESTD.2024.10443750, <https://ieeexplore.ieee.org/document/10443750> [accessed: 25 February 2025]

39 IEEE 802 would appreciate if ITU-R Working Party 5C keeps it informed on the progress of the
40 work.

41 **3. Summary**

42 We applaud the efforts of the participants in ITU-R Working Party 5C for undertaking this work
43 and giving IEEE 802 LMSC the opportunity to respond to the terahertz related matters.

44 Respectfully submitted

45 By: /ss/.

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