**IEEE 802.15**

**Wireless Specialty Networks**

|  |  |  |
| --- | --- | --- |
| Project | IEEE P802.15 Working Group for Wireless Specialty Networks (WSNs) | |
| Title | Proposal of a liaison statement to ITU-R Working Party 5C | |
| Date Submitted | 10 January 2024 | |
| Source | Hiroyo Ogawa, Akifumi Kasamatsu, Norihiko Sekine, Iwao Hosako and Shingo Saito National Institute of Information and Communications Technology (NICT)  4-2-1 Nukuikita, Koganei 184-8795 Japan | Voice: +81 42 327 5043 Fax: +81 42 327 6961 E-mail: hiroyoogawa@nict.go.jp |
| Re: |  | |
| Abstract | This document proposes a reply liaison statement to ITU-R WP 5C on the activity in IEEE802.15 SC THZ above the frequency 450 GHz. | |
| Purpose | To provide information on technical and operational characteristics above 450 GHz discussed in IEEE802.15 SC THZ. | |
| Notice | This document has been prepared to assist the IEEE P802.15. It is offered as a basis for discussion and is not binding on the contributing individual(s) or organization(s). The material in this document is subject to change in form and content after further study. The contributor(s) reserve(s) the right to add, amend or withdraw material contained herein. | |
| Release | The contributor acknowledges and accepts that this contribution becomes the property of IEEE and may be made publicly available by P802.15. | |

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

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 300-3000 GHz. IEEE 802 SC THZ 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 IEEE802 THz 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] (see Attachment).

**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

This contribution was developed by IEEE Project 802®, the Local and Metropolitan Area Network Standards Committee (“IEEE 802”), an international standards development committee organized under the IEEE and the IEEE Standards Association (“IEEE-SA”).

The content herein was approved for submission by the IEEE 802.15™ Working Group for WPAN, the IEEE 802.18 Radio Regulatory Technical Advisory Group, and the IEEE 802 Executive Committee, in accordance with the IEEE 802 policies and procedures, and represents the view of IEEE 802.

# 2 Discussion

WP 5C invited IEEE to provide information on technical and operational characteristics of their systems operating in the range 450-1 000 GHz.

On March 2022 IEEE 802.15 SC THz received a contribution entitled, “Draft channel plan of 500-GHz fixed wireless access“. It provides a use case, a blockdiagram of a 500-GHz band transceiver, a link budget using BPSK modulation scheme and channel plans[[1]](#footnote-1). IEEE 802 did not include this in IEEE Std 802.15.3-2023, but noted to be included possible future project. Still, the information may help ITU-R WP 5C develop the working document in the future meeting.

IEEE 802 would appreciate if ITU-R WP 5C keeps it informed on the progress of the work.

# 3 Summary

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

|  |  |
| --- | --- |
| **Contact**: Edward Au | **E-mail:** [edward.ks.au@gmail.com](mailto:edward.ks.au@gmail.com) |

1. <https://mentor.ieee.org/802.15/dcn/22/15-22-0116-02-0thz-draft-channel-plan-of-500-ghz-fixed-wireless-system> [↑](#footnote-ref-1)