

Re: Consultation “Call for opinions on the proposed ministerial ordinance to amend part of the Radio Law Enforcement Regulations: Addition of systems and bands to the special exemption system for non-technical equipment”

Dear Respected Officer,

IEEE 802 LAN/MAN Standards Committee (LMSC) thanks Ministry of Internal Affairs and Communications (MIC) for providing an opportunity to comment on the consultation “Call for opinions on the proposed ministerial ordinance to amend part of the Radio Law Enforcement Regulations: Addition of systems and bands to the special exemption system for non-technical equipment”.

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 about 400,000 members in over 160 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 that other components of IEEE Organizational Units may have perspectives that differ from, or compete with, those of IEEE 802 LMSC¹.

Please find below the responses of IEEE 802 LMSC to this consultation.

Proposed amendment on the 90-day rule

Ultra-Wide Band (UWB) devices, as specified in IEEE 802.15 standards, are being used worldwide for a wide range of applications in communication, measurement, location, imaging, surveillance, and medical systems², often in conjunction with other short range device technologies. UWB enhances the operation of such technologies and is an efficient means to share spectrum.

The next generation of UWB technology, being developed under IEEE P802.15.4ab³, builds on IEEE Std 802.15.4z-2020⁴. Projected future developments supported by this project include:

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 See FiRa Consortium: Unleashing the Potential of UWB: Regulatory considerations, August 2022, <https://www.firaconsortium.org/sites/default/files/2022-08/Unleashing-the-Potential-of-UWB-Regulatory-Considerations.pdf> [accessed: 12 November 2024]. The introduction of IEEE 802.15 UWB-enabled devices in smartphones and laptops puts forecasts at more than 1 billion devices shipped annually worldwide by 2025.

³ See IEEE P802.15.4ab, <https://www.ieee802.org/15/pub/TG4ab.html> [accessed: 12 November 2024].

⁴ “IEEE Standard for Low-Rate Wireless Networks--Amendment 1: Enhanced Ultra Wideband (UWB) Physical Layers (PHYs) and Associated Ranging Techniques,” in IEEE Std 802.15.4z-2020 (Amendment to IEEE Std 802.15.4-2020), vol., no., pp.1-174, 25 Aug. 2020, doi: 10.1109/IEEESTD.2020.9179124.

- Improved link budget and reduced air-time
- Enhanced sensing capabilities for presence detection and environment mapping
- Improved accuracy, precision, and reliability for high-integrity ranging
- The use of interference mitigation techniques to support greater device density and higher traffic use cases
- Improved coexistence with other services
- Reduced complexity and power consumption
- Enhanced support for ultra-low power, low latency streaming
- Support for emerging applications such as high-definition audio

IEEE 802 LMSC follows Japan's regulatory activities regarding license-exempt short-range devices closely and commends MIC for recognizing the rapidly growing value of UWB, whose deployments are now cumulatively consisting of over a billion devices and continue to grow.

We agree with the MIC's proposal that allows tourists visiting Japan to use the UWB devices brought in by them for a limited period of 90 days from the date of entry into the country, provided that the UWB devices meets certain conditions, especially, conforming to IEEE Std 802.15.4-2020 and IEEE Std 802.15.4z-2020 set forth in the Radio Law.

Proposed amendment on the 180-day rule

IEEE 802 LMSC applauds MIC's progressive approach in committing to allocation of over 1 GHz of license exempt spectrum for Wi-Fi to enable 10 Gb/s services by utilizing Wi-Fi 6 and Wi-Fi 7 technologies, which are developed by IEEE 802 standards, in the 6 GHz band. MIC's commitment makes Japan along with the United States of America the global champions for low cost wireless connectivity.

Given the increasing usage of Wi-Fi devices operating in the 6 GHz band, we agree with the MIC's proposal to include 6 GHz very low power and low power indoor devices to the list of special exemption systems, without the conformity marking to be used in Japan for 180 days from the date of notification to MIC, provided that it meets conditions such as conforming to technical standards equivalent to those stipulated in the Radio Law.

Conclusion

IEEE 802 LMSC thanks MIC for the opportunity to provide this submission and supports the MIC's proposal.

Respectfully submitted,

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