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

Proposed Response to Canada ISED's consultation re: draft RSS-210 issue 11				
Date: 2024-05-02				
Author(s):				
Name	Company	Address	Phone	email
Vijay Auluck	Self			auluck.vijay@gmail.com
Edward Au	Huawei			edward.ks.au@gmail.com
Ben Rolfe	Blind Creek Associates			ben@blindcreek.com
Gaurav Patwardhan	HPE			gaurav.patwardhan@hpe.com

This document is a proposed response to the Innovation, Science and Economic Development (ISED) consultation on the draft Radio Standard Specification RSS-210 Issue 11: Licence-Exempt Radio Apparatus: Category I Equipment.

Electronic filing May 2, 2024

Re: Consultation on the draft RSS-210 Issue 11: Licence-Exempt Radio Apparatus: Category I Equipment"

Attention: Regulatory Standards Directorate, Planning and Standards Branch, Innovation, Science and Economic Development Canada Engineering,

IEEE 802 LAN/MAN Standards Committee (LMSC) thanks the Radio Advisory Board of Canada (RABC) for providing an opportunity to comment on the Innovation, Science and Economic Development (ISED)'s consultation "Draft RSS-210 Issue 11: Licence-Exempt Radio Apparatus: Category I Equipment".
.

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 also produce standards for wired Ethernet networks, and technologies produced by implementers of our standards are critical for all networked applications today.

IEEE 802 LMSC 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 400,000 members in over 160 countries. IEEE's core purpose is to foster technological innovation and excellence for the benefit of humanity. 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 LMSC. Therefore, this submission should not be construed as representing the views of IEEE as a whole[1].

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

IEEE 802 devices operating in the 57 GHz to 71 GHz bands

Today, devices based on IEEE 802.11 family of standards are found in residential, office, and commercial environments in public and private settings, and devices based on IEEE 802.15 family of standards serves uses in many sectors, including consumer, industrial, utility and government systems. Users in an array of industries rely on ~~technologies defined by the standards in the 802.11 and 802.15 family rely on these~~ the cost-effective, energy efficient technologies defined by the standards in the 802.11 and 802.15 families.

Each new generation of IEEE 802.11 and IEEE 802.15 technologies continues to improve efficiency, reliability, latency, and throughput with significant global deployments[2,3]. Specifically,

[1] This document solely represents the views of IEEE 802 LMSC and does not necessarily represent a position of either the IEEE or the IEEE Standards Association.
[2] See Wi-Fi Alliance: Value of Wi-Fi, https://www.wi-fi.org/discover-wi-fi/value-wi-fi [accessed: 25 April 2024]. Wi-Fi technology, based on the IEEE 802.11 standard, has an estimated 19.5 billion devices in use world-wide, with over 4 billion devices added annually.
[3] See FiRA Consortium: Unleashing the Potential of UWB: Regulatory Considerations, https://www.firaconsortium.org/sites/default/files/2022-08/Unleashing-the-Potential-of-UWB-Regulatory-Considerations.pdf [accessed: 25 April 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.

the ~~draft~~ revision of IEEE Std 802.11-~~2024~~2020[4], currently under development (which incorporates both IEEE Std 802.11ad-2012 and IEEE Std 802.11ay-2021) and IEEE Std 802.15.3-2023[5] (which incorporates IEEE Std 802.15.3c-2009 and IEEE Std 802.15.3e-2017) standards enable multi-gigabit communication both indoor and outdoor in the band 57 GHz to 71 GHz.

The 57 GHz to 71 GHz bands are of continued relevance for the WLAN ecosystem. In November 2023, IEEE 802.11 established a Study Group[6] with goals that include an expansion of the multi-link operation framework specified in IEEE P802.11be[7] for sub-7 GHz by extending the frequency band to include 42 GHz to 71 GHz bands.

IEEE 802 LMSC fully supports the updated requirements for licence-exempt radio apparatus operating in 57 GHz to 71 GHz bands.

Radio Standards Specification (RSS) 210 sets out the certification requirements for several types of licence-exempt radio apparatus. The draft Issue 11 Annex J further expands on the requirements for operation in the 57 GHz to 71 GHz band. Specifically draft Issue 11 clarified the use restrictions for devices operating in-flight, operation of devices in the 59.3 GHz to 71.0 GHz band, and the use of Field Disturbance Sensors (FDS) in 60 GHz to 64 GHz band. Further, draft Issue 11 outlines the operational requirements including the limits on power, emissions, and spurious emissions limits for FDS, Point-to-Point, and other devices within the 57 GHz to 71 GHz band.

IEEE 802 LMSC welcomes ISED to have expanded on these requirements to make rules clearer and consistent with the FCC 15.255 of Part 15[8].

Respectfully, we would like to point to a possible erratum in the draft Issue 11 where a reference was made to section J.3.3(d), which is not in the document. Perhaps the reference should be J.2(d).

Conclusion

IEEE 802 LMSC thanks the RABC for the opportunity to provide this submission and kindly requests ISED to consider our response.

Respectfully submitted

By: /ss/.
James Gilb
IEEE 802 LAN/MAN Standards Committee Chairman
em: gilb_ieee@tuta.com

[4] "IEEE Draft Standard for Information Technology -- Telecommunications and Information Exchange Between Systems Local and Metropolitan Area Networks -- Specific Requirements - Part 11: Wireless Local Area Network (LAN) Medium Access Control (MAC) and Physical Layer (PHY) Specifications," in IEEE P802.11-REVme/D5.0, February 2024, vol., no., pp.1-6203, 18 March 2024.

[5] "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.

[6] See IEEE 802.11 Integrated Millimeter Wave (IMMW) Study Group, https://www.ieee802.org/11/Reports/immw_update.htm [accessed: 25 April 2024]. IMMW is a new Study Group within the IEEE 802.11 working group that will define a Project Authorization Request to address the problem of WLAN non-standalone operation in unlicensed bands between 42 GHz and 71 GHz using single-user OFDM based transmissions. An 802.11 device should also support 2.4 GHz to 7.250 GHz unlicensed band operation.

[7] "IEEE Draft Standard for Information technology--Telecommunications and information exchange between systems Local and metropolitan area networks--Specific requirements - Part 11: Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY) Specifications Amendment: Enhancements for Extremely High Throughput (EHT)," in IEEE P802.11be/D5.0, November 2023, vol., no., pp.1-1045, 3 Jan. 2024.

[8] See Code of Federal Regulations: §15.255 Operation within the band 57-71 GHz, https://www.ecfr.gov/current/title-47/chapter-I/subchapter-A/part-15/subpart-C/subject-group-ECFR2f2e5828339709e/section-15.255 [accessed: 25 April 2024].