

Re: Consultation “Light Licensing Regulations Annex for the 6 GHz Frequency Band”

Dear Respected Officer,

IEEE 802 LAN/MAN Standards Committee (LMSC) thanks Communications, Space and Technology Commission (CST) for providing an opportunity to comment on the consultation “Light Licensing Regulations Annex for the 6 GHz Frequency Band”.

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 LMSC<sup>1</sup>.

IEEE 802 LMSC follows the Saudi Arabia’s regulatory activities regarding license-exempt short-range devices closely and applauds CST for developing a detailed light licensing regulation for the 6 GHz band using Automatic Frequency Control (AFC) technology. Please find below the responses of IEEE 802 LMSC to selected questions of this consultation.

**Question 2: Are there any other matters related to the Eligibility section that CST should consider?**

IEEE 802 LMSC commends CST’s continuous leadership in empowering the latest Wi-Fi technology by allocating the 6 GHz band (i.e., 5925 MHz to 7125 MHz) for lightly licensed operation.

IEEE 802 LMSC supports CST’s proposal in requiring any light license user in the 6 GHz band to deploy the 6 GHz WLAN Standard Power (SP) Access Points and Fixed Client devices under the control of an Automated Frequency Control (AFC) system.

**Question 9: Are there any other matters related to the Technical Requirements for Standard Power Access Points and Client Devices section that CST should consider?**

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<sup>1</sup> 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.

As we believe the indoor SP mode could be important in Saudi Arabia because of extensive indoor WLAN facilities<sup>2</sup>, IEEE 802 LMSC recommends that CST include the indoor SP mode in its proceedings related to AFC systems and SP regulation. AFC systems are designed not only to enable SP mode for outdoor operation but also to improve the performance of indoor WLAN systems. Considering this, IEEE 802 LMSC recommends CST to consider authorizing indoor SP mode and relaxing the requirement in (2.1.6) of Appendix A to allow AFC systems to incorporate associated Building Entry Loss (BEL) in AFC system calculations. As an example, FCC already accepts requests for the inclusion of BEL through various waiver requests<sup>3</sup>.

**Question 10: Does the AFC have the necessary capabilities to collect the required data mentioned in section (8.1)?**

IEEE 802 LMSC suggests replacing “Location confidence level (percentage)” in (8.1.3.2) with “Location uncertainty (in meters), with a confidence level of 95%”, which aligns with the requirement in (7.5.1), as well as the regulations of the Federal Communications Commission<sup>4</sup> and Innovation, Science and Economic Development Canada<sup>5</sup>.

In addition, SP devices typically do not have information listed in (8.1.3.6). However, it would be very difficult to require this information from the end users or the device manufacturers. AFC systems can be required to collect this information from the party responsible for operating the AFC system.

**Question 11: Are there any other matters related to the communication between an AFC and Standard Power Access Points and Fixed Client Devices section that CST should consider?**

The requirement in (8.3.2) states that if a SP device fails to reach an AFC system, it can operate under 11:59 PM KSA time of that day. IEEE 802 LMSC would like to note that this is a stricter requirement than the FCC<sup>6</sup> where devices are allowed to operate until the midnight of the following day. We would suggest to align the timing requirement with the regulations of the FCC.

**Question 17: Are there any other matters related to AFC System Data Retention and Sharing section that CST should consider?**

While the IEEE 802 LMSC agrees with CST’s non-burdensome security obligations on AFC system and standard power devices, we would like to respectfully ask CST to clarify how long collected data should be retained. In other geographies, data needs to be stored at least 90 days<sup>7</sup> after the last inquiry from a SP device. Clarification of the retention duration would be useful as a lack of this duration may imply retention indefinitely.

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<sup>2</sup> Some examples of deployment where indoor SP is beneficial are where propagation environment requires additional link budget, such as airports, sport venues, concert halls, and warehouses.

<sup>3</sup> See Federal Communications Commission: OET Announces Conditional Approval for 6 GHz Band AFC Systems, <https://www.fcc.gov/document/oet-announces-conditional-approval-6-ghz-band-afc-systems> [accessed: 12 November 2024]

<sup>4</sup> See 47 CFR §§ 15.407 (k)(9)(i), the Code of Federal Regulations, Office of the Federal Register, United States of America, <https://www.ecfr.gov/current/title-47/chapter-I/subchapter-A/part-15/subpart-E/section-15.407> [accessed: 12 November 2024].

<sup>5</sup> See 9.1.1, DBS-06 — Automated Frequency Coordination (AFC) System Specifications for the 6 GHz (5925-6875 MHz) Frequency Band, Innovation, Science and Economic Development Canada, <https://ised-isde.canada.ca/site/spectrum-management-telecommunications/en/devices-and-equipment/radio-equipment-standards/database-specifications-dbs/dbs-06-automated-frequency-coordination-afc-system-specifications-6-ghz-5925-6875-mhz-frequency-band> [accessed: 12 November 2024].

<sup>6</sup> See 47 CFR §§ 15.407 (k)(8)(iv), the Code of Federal Regulations, Office of the Federal Register, United States of America.

<sup>7</sup> See 9.3, DBS-06 — Automated Frequency Coordination (AFC) System Specifications for the 6 GHz (5925-6875 MHz) Frequency Band, Innovation, Science and Economic Development Canada.

## **Conclusion**

IEEE 802 LMSC thanks CST for the opportunity to provide this submission and respectfully requests that CST investigate the possibility of authorizing indoor SP mode, consider updating the requirements in (8.1.3.2), (8.1.3.6), and (8.3.2), and provide a clarification on the duration of data retention.

Respectfully submitted,

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