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| ECC PT1 | | | ECC PT1(25)aaa | |
| ECC PT1 #82 | | | | |
| Vilnius, Lithuania and online, 15-19 September 2025 | | | | |
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| Date issued: | 14 August 2025 | | | |
| Source: | IEEE 802 LMSC | | | |
| Subject: | Upper 6GHz Band Studies – Protection of WAS/RLAN | | | |
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| Group membership required to read? (Y/N) | | N | |  |
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| Summary: | | | | |
| IEEE 802 LAN/MAN Standards Committee (LMSC) thanks the Electronic Communications Committee Project Team 1 (ECC PT1) for the ongoing work on the coexistence of the unlicensed and IMT services in the 6 GHz band and for the opportunity to provide feedback.  IEEE 802 LAN/MAN Standards Committee (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 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. Please find below the IEEE 802 LMSC’s comments on RSPG’s draft opinion on the long-term vision for the upper 6 GHz band.  EC decision (EU) 2021/1067 Article 3 stipulates that “when introducing new applications into the 5945 – 6425 MHz frequency band or into adjacent frequency bands after the entry into force of this Decision, Member States shall not adopt technical and operational conditions applicable to any new application that unduly restrict the continued use of WAS/RLAN in the 5945-6425 MHz frequency band in accordance with this Decision”.  WAS/RLAN using the 5945 – 6425 MHz band needs to be able to operate reliably. This can only be guaranteed if harmful interference from IMT is avoided. As such it is necessary to carry out the studies with the appropriate protection criterion of IN = –6 dB.  The regulatory status of WAS/RLAN in CEPT in 5945 – 6425 MHz is identical to the status in the 5150 – 5350 MHz and 5470 – 5725 MHz bands for which an I/N of –6 dB is applicable.  Should there be an extension of the frequency range for RLAN, the same protection should be afforded since a consistent user experience across the entire frequency range should be ensured.  It should further be noted that the lowest part of 5945 – 6425 MHz already has limitations for VLP usage which reduces the performance of the band. It is therefore of utmost importance to ensure that any remaining or added part is fully usable by WAS/RLAN. | | | | |
| Proposal: | | | | |
| IEEE 802 LMSC invites ECC PT1 consider I/N=-6dB criterion as the appropriate protection of RLAN as an application of the Mobile Service and the suggested amendment to the draft ECC Report. | | | | |
| Background: | | | | |
| ECC PT1 is asked to develop a technical report to investigate the potential introduction of IMT into the upper 6 GHz band. | | | | |

Attachment: 1

### ATTACHMENT:

### RLAN Protection Criteria

The I/N=-6 dB criterion stands as a significant and internationally recognized protection benchmark for unlicensed systems. Its primary establishment by ITU-R Recommendation M.1739 and subsequent adoption by CEPT/ECC Report 244 and 277 highlights a harmonized approach to spectrum management, particularly for devices operating in the 5 GHz bands which have similar physical characteristics to those of in the 6 GHz band. This criterion is analytically derived to ensure that the impact of interference on receiver sensitivity is limited to an acceptable minimum, typically around 1.0 dB degradation, based on specific propagation assumptions for indoor environments.

Furthermore, in the early discussions on WAS/RLANs in 5 GHz and before WAS/RLAN was identified in the Radio Regulations in 2003 an relevant precedent was set in ECC. WGFM linked WAS/RLAN to the existing mobile allocation existing at the time (No S5.447) and the associated rights of an application of a primary service. See ERC Report 67.

As wireless technologies continue to evolve and spectrum becomes increasingly congested, the fundamental principles underpinning protection criteria like the I/N -6 dB will remain vital. Such protection criterion is essential to ensure effective and fair coexistence in wireless ecosystems.

For the proposed edits on the draft ECC Report see Annex 1

1. Edits to the Draft ECC RePOrt

### RLAN protection criteria

Table : RLAN protection criterion

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| --- | --- | --- |
| arameter | Unit | Value |
| Protection criterion (I/N) | dB | -6 (Note 1)] |
| Note 1: defined without percentage of time associated to it | | |

Relevant verbiage from ITU-R Recommendation M.1739 is included for reference.

* 1. Relevant VERBIAGE from ITU-R Recommendation M.1739

The ITU Radiocommunication Assembly,

*recommends*

that, for the purposes of conducting compatibility studies with respect to services or applications from which WAS/RLAN systems are entitled, according to their status, to be protected, the protection criteria for WAS/RLAN systems operating in the mobile service in accordance with Resolution 229 (WRC-03) should be as follows:

– the I/N ratio at the WAS/RLAN receiver should not exceed –6 dB, assuring that degradation to a WAS/RLAN receiver’s sensitivity will not exceed approximately 1.0 dB as described in Annex 1.

**Conclusion**

IEEE 802 LMSC thanks ECC PT1 for the opportunity to provide this submission and respectfully requests consideration of the responses provided in this document.

Respectfully submitted,

By:

**References:**