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

**Proposed Response to: Draft RSPG Opinion on Long-term vision
for the upper 6 GHz band**

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Abstract

This document drafts a proposed response to an ongoing public consultation European Commission's Radio Spectrum Policy Group (RSPG). The call for public comments on the "Draft RSPG Opinion on Long-term vision for the upper 6 GHz band" is open from 20 June 2025 - 31 August 2025.

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Dear Secretariat of the Radio Spectrum Policy Group,

IEEE 802 LAN/MAN Standards Committee (LMSC) thanks the Radio Spectrum Policy Group (RSPG) for issuing the consultation “Draft RSPG Opinion on Long-term vision for the upper 6 GHz band” (*Draft Opinion*) and for the opportunity to provide feedback. Our feedback here is intended to be consistent with, and supplement, our responses to an earlier RSPG consultation (“Questionnaire on long-term vision for the upper 6 GHz 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 over 460,000 members in more than 190 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 IEEE 802 LMSC’s comments on RSPG’s draft opinion on the long-term vision for the upper 6 GHz band.

Wi-Fi remains the preferred indoor wireless connectivity solution across Europe, with traffic volumes growing significantly faster than those on mobile networks. In our response to the RSPG Questionnaire issued last year, we emphasized that authorising the entire upper 6 GHz band (i.e., 6425 MHz to 7125 MHz) for Wi-Fi is essential to fully support latency-sensitive, high-throughput applications such as real-time XR in healthcare, education, and gaming, as well as robotics, industrial automation, and sensory systems. The IEEE 802 LMSC strongly supports Option 1 in the *Draft Opinion* in which the entire upper 6 GHz band is allocated to WAS/RLAN (Wi-Fi). Dedicated access to the entire upper 6 GHz band, per Option 1, is particularly important for enabling the aforementioned applications in dense residential settings and for scaling them in enterprise and industrial environments, where multiple sessions must operate simultaneously and in close proximity.

The availability of numerous channels across a range of widths (20 MHz to 320 MHz) enables more modular and flexible deployments that allow scaled operation of services in the above-mentioned target industries. Per Option 1 in the *Draft Opinion*, with access to additional 320 MHz channels, Wi-Fi devices can build upon IEEE Std. 802.11az-2023 to offer sub-1 meter positioning accuracy for multiple users, which results in new innovative use cases such as micro-targeting for retail and warehouse asset tracking. Thus, in addition to additional coverage and capacity, additional spectrum also augments new Wi-Fi locationing capabilities. Some examples include multi-layer operation, service segmentation and prioritisation, context-aware wireless networks, and hyper-aware access point deployments. Highly secure communication with WPA3 security, which is required for Wi-Fi devices operating in the 6 GHz band, further enhances these services and addresses new uses cases as well. The current worldwide availability of Wi-Fi devices that can access and use the entire upper 6 GHz band means that most enterprises and industries in Europe will see immediate and sustained economic benefit from license-exempt access to the upper 6 GHz band.

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.

Prioritised Band-Split (Option 5 in the “Draft Opinion”)

Although the IEEE LMSC strongly favors Option 1 for the upper 6 GHz band allocation to WAS/RLAN (Wi-Fi), if a full-band allocation is not achievable due to specific requirements of certain European administrations, a band split approach, prioritising WAS/RLAN as outlined in Option 5 of the *Draft Opinion*, is considered the next best alternative. This approach would accommodate future national decisions to allocate parts of the upper 6 GHz band to MFCN in specific areas. In such a band-split scenario, we urge the RSPG to prioritise at least 160 MHz, and ideally 320 MHz, of the upper 6 GHz band for license-exempt use, under rules aligned with those governing the lower 6 GHz band (i.e., 5945 MHz to 6425 MHz). Access to this additional spectrum would allow Wi-Fi manufacturers to bring new equipment to the European market promptly, without requiring future changes to spectrum designations.

Article 3 of Commission Implementing Decision (EU) 2021/1067 stipulates that new applications in adjacent bands must not restrict WAS/RLAN operations in the lower 6 GHz band. We interpret this to mean that MFCN use in the upper 6 GHz band must not cause harmful interference to WAS/RLAN operations in the 5945 MHz to 6425 MHz range. If WAS/RLAN is granted prioritised access to a portion of the upper 6 GHz band, we believe this portion should also fall under the protection of Article 3. Consequently, any new MFCN applications above the band-split must not interfere with WAS/RLAN operations in either the lower 6 GHz band or the prioritised portion of the upper band. The technical measures required to ensure compliance, such as guard bands or limits on out-of-band emissions, should be addressed at the CEPT level and harmonized across Europe.

Non-Prioritised Access for WAS/RLAN above the Band Split per Option 5

MFCN is unlikely to be deployed uniformly across entire national territories in the upper 6 GHz band above the band-split, and not all EU countries are expected to utilize the full MFCN-prioritised portion for mobile services. Moreover, trials have shown that outdoor-to-indoor MFCN connectivity in this band does not provide reliable deep indoor coverage, leaving substantial portions of the spectrum, particularly indoors, underutilized. Therefore, authorising non-prioritised WAS/RLAN Low Power Indoor (LPI) access to the MFCN-prioritised portion of the upper 6 GHz band would be appropriate under defined conditions.

As Europe develops regulatory frameworks to meet its specific needs, it is crucial that consumers and businesses can fully leverage existing standards and commercially available equipment. Above the band-split in the upper 6 GHz range, neither WAS/RLAN terminals (client devices) nor MFCN user equipment (UEs) should be required to detect the band-split location or implement additional sharing mechanisms. Effective bandsharing coexistence mechanisms between WAS/RLAN and MFCN can be achieved through coordination at the network level, via WAS/RLAN access points (including software and cloud-based management systems) and MFCN base stations.

Therefore, we encourage European regulators to permit the deployment of WAS/RLAN terminals capable of operating across the entire 6 GHz band within the European market.

Regulatory Implications of Option 5

To facilitate sharing in the upper 6 GHz band, it is important that future regulatory changes can be supported by devices already deployed in the market.

A practical approach would be to require manufacturers to ensure that upper 6 GHz-capable access points (APs) are field-upgradable. This would allow most devices to be updated in line with new regulations as they are introduced. However, a small subset of devices may not be easily upgradable or compliant with future changes. To address this, regulations should permit manufacturers to design Wi-Fi devices that operate on specific channels expected to remain prioritised for Wi-Fi use. For example, the additional 160 MHz (or 320 MHz) spectrum in the upper 6 GHz band (adjacent to the lower 6 GHz) could be designated as license-exempt, following the same rules as the lower 6 GHz band.

For client devices, the situation is more straightforward, as they only operate on the channels used by the AP they connect to. Therefore, client devices can be authorised to operate across the widest possible

frequency range. Very Low Power (VLP) operations could initially be limited to prioritised Wi-Fi channels. This would give CEPT time to evaluate VLP use in MFCN-prioritised portions of the band, if supported by industry, while still allowing other types of WAS/RLAN devices access to the spectrum.

Conclusion

IEEE 802 LMSC thanks RSPG for the opportunity to provide this submission and respectfully requests consideration of the responses provided in this document. In summary, the IEEE LMSC strongly favors Option 1 for the upper 6 GHz band allocation to WAS/RLAN (Wi-Fi). If a full-band allocation is not achievable due to specific requirements of certain European administrations, a band split approach, prioritising WAS/RLAN as outlined in Option 5 of the *Draft Opinion*, is considered the next best alternative.

Respectfully submitted,

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