

December 19, 2022

VIA [ELECTRONIC FILING](#)

The Manager
Spectrum Planning Section
Australian Communications and Media Authority
PO Box 78
Belconnen ACT 2616

Re: New arrangements for low interference potential devices - consultation 35/2022

Meta is pleased to submit the following comments to the Australian Communications and Media Authority ("the ACMA") regarding the New arrangements the Radiocommunications (Low Interference Potential Devices) Class Licence 2015 (LIPD class licence)¹. Meta welcomes the ACMA's proposal to include the new arrangements intended to support new technology applications and bring Australia into line with international arrangements. Low Interference Potential Devices (LIPD) such as Wi-Fi, delivers the highest societal benefits (for schools, hospitals, SMEs, public buildings) and remains the single most effective wireless technology to extend broadband connectivity to the user, and we encourage the ACMA to keep working for the future of this technology.

The consultation addresses new arrangements on 2 topics that Meta would like to focus its comments on; (i) the frequency-hopping radiocommunications transmitters in the 5925–6425 MHz band and (ii) the proposed definition of indoor.

I. Frequency-hopping radiocommunications transmitters in the 5925–6425 MHz band

Meta would like to recognize and applaud the ACMA's recent decision on adding the 5925-6425 band (the lower 6 GHz band) for Low Interference Potential Devices, a step forward to enabling greater use of this spectrum. We also urge the ACMA to consider, in the near future, opening the

¹ "New arrangements for low interference potential devices - consultation 35/2022" at <https://www.acma.gov.au/consultations/2022-10/new-arrangements-low-interference-potential-devices-consultation-352022#the-issue> ("Consultation paper").

upper part of the 6 GHz band (6425-7125 MHz band) for Wi-Fi and other technologies for the benefit of Australians.

As per the draft Radiocommunication LIPD Class Licence Variation 2022 (No. 2), the ACMA is proposing to insert at Schedule 1, table 57A to authorise Frequency hopping transmitters in the 5925-6425 band, with a higher power spectral density of 10 mW for narrowband) devices.

While Meta supports decisions that allow spectrum sharing by different technologies, we urge the ACMA to exercise caution in allowing frequency hopping in the 6 GHz band. Wi-Fi in the 6 GHz band will be critical in enabling and driving the use of immersive technologies such as Augmented Reality and Virtual Reality (AR/VR) in Australia. Hence, rules to authorize other unlicensed technologies such higher powered narrowband devices, should ideally include practical co-existence means with RLAN technologies in the 6 GHz Band.

Wi-Fi devices utilize listen-before-talk (LBT) for coexistence among different devices using the unlicensed spectrum. The ACMA should ensure that devices with higher power spectral density (PSD) implement a suitable mechanism that can facilitate fair and effective sharing of the spectrum. While narrowband devices with a higher PSD were allowed by the ECC Decision (20)01 on the basis of compatibility with incumbent users, it is important to keep in mind that it is ETSI - not the ECC - which is responsible for defining practical coexistence means between Wi-Fi and narrowband (NB) licence-exempt devices. ETSI currently identified LBT as a potential requirement to avoid interference between Wi-Fi and NB devices. LBT is required for narrowband devices in the 6 GHz in the draft ETSI European standard, EN 303 687². Without such a suitable sharing mechanism, narrowband devices with higher power spectral density would impact both LPI and VLP devices operating in the 6 GHz band according to studies presented in ETSI BRAN. Without LBT or other similar interference mitigating mechanisms, NB devices would negatively impact the development of new and novel technologies such as AR/VR in Australia. It is also unclear why narrowband devices require access to the 6 GHz band, the only new band for wideband RLANs, let alone on a interfering basis. There seems to be ample spectrum available in 2.4 and 5GHz bands for narrowband devices and therefore little justification for triggering risks of interference to Wi-Fi 6E and Wi-Fi 7 devices by enabling narrowband devices in the 6 GHz band.

II. Definition of Indoor Space

ACMA is inserting at the Subsection 3A(1) a definition of Indoor as a space on or above land that is (a) enclosed by permanent walls on all sides, a permanent roof and a permanent floor; and (b) permanently fixed to the land.

² 6 GHz WAS/RLAN; Harmonised Standard for access to radio spectrum.

https://www.etsi.org/deliver/etsi_en/303600_303699/303687/01.00.00_20/en_303687v010000a.pdf

Meta understands the need for ACMA to add a definition of indoor in its Radiocommunication LIPD Class Licence Variation 2022 but urges ACMA to consider the adoption of a less restrictive definition. As an example, the FCC³ adopted equipment-related hardware requirements that are designed to keep low-power access points indoors:

1. access point devices cannot be weather resistant.
2. low-power access points have integrated antennas and prohibit the capability of connecting other antennas to the devices, which will prevent substituting higher gain directional antennas and make the devices less capable or suitable for outdoor use; and
3. Prohibition of low-power access points from operating on battery power.

We believe these requirements are consistent with ACMA's intent to make outdoor operations impractical.

III. Conclusion

Meta appreciates the opportunity to respond to the ACMA's consultation.

Sincerely,

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³ FCC Report & Order 20-51 <https://www.fcc.gov/document/fcc-opens-6-ghz-band-wi-fi-and-other-unlicensed-uses-0>