



By Electronic Filing

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Australian Communications and Media Authority
Level 32 Melbourne Central Tower
360 Elizabeth Street
Melbourne Victoria 3000

Re: Comments on Proposed Update to the Australian Radiofrequency Spectrum Plan

Amazon Kuiper Australia Pty Ltd (Kuiper Australia), an affiliate of Kuiper Systems LLC (together, Amazon), applauds the efforts of the Australian Communications and Media Authority (ACMA) to manage spectrum in a manner that is consistent with international standards, and respectfully submits these comments on the Consultation Paper on a Proposed Update to the Australian Radiofrequency Spectrum Plan (Proposal).¹

I. Background

Amazon initiated Project Kuiper to bring high-speed, affordable broadband to unserved and underserved communities around the world, including in Australia.² The U.S. Federal Communications Commission granted Amazon an Order and Authorization in July 2020 that permitted Kuiper Systems LLC to deploy a constellation of non-geostationary satellite orbit (NGSO) fixed-satellite service (FSS) satellites in low Earth orbit (LEO) using Ka-band frequencies (Kuiper System). Amazon has committed to invest over \$10 billion in the Kuiper System, and has taken significant steps toward deployment. Amazon has launched test satellites that successfully validated the Kuiper System design, expanded terrestrial gateway and communications infrastructure (including in Australia), and designed innovative customer terminals that offer high performance, small form factors, and affordable price points. Amazon plans to begin launch of its satellite constellation early next year and to begin offering commercial service across a number of countries in 2025 as Amazon continues to move toward its goal of providing high-speed, low latency broadband services to residential, governmental, and enterprise customers around the world. Project Kuiper will also benefit customers in Australia by providing access to ubiquitous broadband through the Kuiper System, enabling connectivity for even the least served customers in Australia.

II. Comments on the Proposal

Amazon commends the ACMA for its efforts to align its national spectrum allocation rules with the outcomes of the International Telecommunication Union (ITU) 2023 World Radiocommunication Conference (WRC-23). Particularly, Amazon supports the ACMA updating its national spectrum plan to include new arrangements for aeronautical and maritime earth stations in motion communicating with

¹ See Consultation on a Proposed Update to the Australian Radiofrequency Spectrum Plan, ACMA (Nov. 8, 2024).

² Kuiper Australia holds an ACMA Carrier License, a Nominated Carrier Declaration, and a Foreign Space Objects Determination. See ACMA Carrier License Number 617 (granted April 24, 2024); Nominated Carrier Declaration (granted August 28, 2024); and Radiocommunications Foreign Space Objects Determination 2014 (granted May 14, 2022).

NGSO space stations (A-ESIM and M-ESIM, respectively), and prospectively invites the ACMA to begin preparing for an FSS (space-to-Earth) allocation in the 17.3-17.7 GHz frequency band in Region 3. Amazon also applauds the ACMA for formally expanding spectrum allocated for Earth stations in motion (ESIM) Earth-to-space communications.

1. Proposed Addition of International Footnote 517B in the Australian Table of Allocations

Amazon supports the adoption of International Footnote 517B to allocate the 17.7-18.6 GHz, 18.8-19.3 GHz, and 19.7-20.2 GHz (space-to-Earth) and 27.5-29.1 GHz and 29.5-30 GHz (Earth-to-space) frequency bands to A-ESIM and M-ESIM communicating with NGSO FSS systems.³ Amazon further supports the ACMA in updating the Australian Table of Allocations to align with international standards set by ITU WRC-23 Resolution 123, which established the technical and operational conditions for NGSO A-ESIM and M-ESIM in the Ka-band.

Ongoing access to the Ka-band spectrum (broadly the 27.5-30 GHz (Earth-to-space) and 17.7-20.2 GHz (space-to-Earth) frequency bands) is essential for FSS and ESIM service offerings. Alignment of national and international ESIM standards by the ACMA will facilitate the delivery of global systems, reduce barriers to entry, and encourage broad participation of NGSO systems in Australia. These outcomes will, in turn, benefit customers in Australia through increased competition, affordability, and consumer choice in broadband services. Permitting aeronautical and maritime ESIM operations will enable the Kuiper System to bring connectivity to more unserved and underserved customers across Australia. Amazon welcomes the implementation of ITU WRC-23 Resolution 123 in Australia, and encourages the ACMA to implement the equivalent isotropically radiated power (EIRP) and power-flux density (PFD) restrictions in Annex 1 of ITU WRC-23 Resolution 123 only in frequency bands and geographies where NGSO FSS earth stations are co-frequency with terrestrial system stations.

2. Proposed Addition of Australian Footnote 108 in the Australian Table of Allocations

Amazon supports the ACMA's proposed adoption of Australian Footnote 108, thereby formalising its 10(10) decisions from October 2017 that approved the use of the 28.5-29.1 GHz frequency band for Earth-to-space communications by NGSO ESIM operating in the FSS, expanding spectrum allocated for ESIM Earth-to-space communications.⁴ Australian Footnote 108 and International Footnote 517B, as described above, are essential to the operation of aeronautical, maritime, and land-based ESIM as these footnotes allocate the 17.7-18.6 GHz, 18.8-19.3 GHz, and 19.7-20.2 GHz (space-to-Earth) and 27.5-29.1 GHz and 29.5-30 GHz (Earth-to-space) frequency bands for ESIM use.

3. Region 3 FSS space-to-Earth Allocation in the 17.3-17.7 GHz Frequency Band

Amazon supports the ACMA in aligning its treatment of the 17.3-17.7 GHz frequency band with ITU WRC-23 outcomes, and further invites the ACMA to prospectively prepare for an FSS space-to-Earth allocation in the 17.3-17.7 GHz frequency band in Region 3.⁵ ITU WRC-23 Resolution 726 invites the ITU Radiocommunication Sector to study an FSS space-to-Earth allocation in the 17.3-17.7 GHz frequency band in Region 3, the results of which will be considered at the ITU 2027 World Radiocommunication Conference (WRC-27). WRC-27 may therefore result in a globally harmonized FSS space-to-Earth allocation in the 17.3-

³ See Proposal at 7, 9; ITU WRC-23 Final Acts, Article 5, MOD 5.517B; Draft Australian Radiofrequency Spectrum Plan (2025 Update) 2021 (Marked Up) ("Marked Up Draft") at 200.

⁴ See Proposal at 7-9; Marked Up Draft at 110.

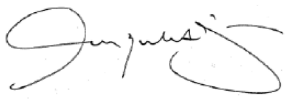
⁵ See Proposal at 8. International Footnotes 484A, 515A, 515B relate to the 17.3-17.7 GHz frequency band. See ITU WRC-23 Final Acts, Article 5, MOD 5.484A, ADD 5.515A, ADD 5.515B; Marked Up Draft at 188-89, 198. ITU WRC-23 Resolution 726 invites consideration of No. 5.516. ITU WRC-23 Resolution 726(1).

17.7 GHz frequency band. Amazon respectfully requests that the ACMA support investigations, preliminary replanning, and implementation preparation for this allocation prior to or at the time of WRC-27. Preparing for a 17.3-17.7 GHz frequency band FSS space-to-Earth allocation will support more rapid and diverse deployment of satellite offerings for customers in Australia.

III. Conclusion

Amazon thanks the ACMA for the opportunity to contribute to this consultation proceeding, and looks forward to working with the ACMA to expand broadband access and increase customer choice for more households and businesses across Australia. Amazon welcomes the opportunity to meet with the ACMA to discuss these comments or any other issues of interest in this submission.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Gonzalo de Dios', with a stylized flourish at the end.

Gonzalo de Dios
Head of Global Licensing
Project Kuiper