Qualcomm

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1 Introduction

Qualcomm International Incorporated (Qualcomm) welcomes the opportunity to provide input to the Australian Communications and Media Authority (ACMA) regarding the *Draft five-year spectrum outlook 2026-31 and 2026-2027 annual work program* (the Draft FYSO).

Qualcomm is the world's leading wireless technology innovator and the driving force behind the development, launch, and expansion of 5G. When we connected the phone to the internet, the mobile revolution was born. Today, our foundational technologies enable the mobile ecosystem and are found in every 3G, 4G, and 5G smartphone. We also are actively developing 6G. We are bringing the benefits of mobile to new industries, including automotive, the Internet of Things (IoT), and compute, and we are leading the way to a world where everything and everyone communicates and interacts seamlessly and reliably.

Qualcomm supports the incorporation of stakeholder feedback into a forward-looking radio spectrum plan such as ACMA's Draft FYSO. Such consultations allow the mobile industry and related stakeholders to provide input on the suitability of the plan, the market readiness of technology, the state of development of product ecosystems, and allow prospective licensees to plan their future spectrum and network investments.

In this response, Qualcomm provides for ACMA's consideration comments regarding the upper mid-band spectrum and the direct-to-device (D2D) regulatory framework.

2 Upper mid-band spectrum (upper 6 GHz and 7/8 GHz)

Wireless connectivity has become the backbone of global digital transformation. The relentless demand for wireless data will continue to reshape the connectivity landscape as we march toward 2030 and the dawn of 6G deployments. The proliferation of smartphones, wearables, IoT devices and connected vehicles—each supported by wireless broadband—has driven a massive surge in data consumption. 6G deployments will be essential to meet this surge in demand that will be driven by enhanced mobile video streaming quality, the rise of extended reality (XR), cloud gaming, and the increasing prevalence of AI-fueled applications and services. With AI becoming an essential component of the edge user ecosystem, data demand – both uplink and downlink – is expected to rise tremendously. AI is reshaping data flows,

with global wide-area network (WAN) traffic projected to grow five to nine times from 2023 to 2033. By then, AI is estimated to account for 33% of all WAN traffic.[1]

Upper 6 GHz band

As noted in ACMA's Draft FYSO 2026-31, there has been significant interest in the 6 GHz band (5925-7125 MHz) for both radio local area networks (RLANs, most notably Wi-Fi) and international mobile telecommunication (IMT)/wide area wireless broadband (WA WBB). The 6G technology standard is expected to be finalized and ready for commercial adoption starting in 2029/2030, enabling new classes of devices, services, and deployments. This includes expanding fixed and mobile broadband networks towards pervasive spaces, spatial perception via Integrated Sensing and Communication (ISAC), and real-time control, bringing a wide range of new use cases such as hologram telepresence, collaborative robots, security applications including drone detection, human augmentation, and deeper immersion to the digital and virtual worlds. GSMA estimates that the number of 6G connections could reach more than 5 billion by 2040, nearly half of all mobile connections globally.[2]

As emerging and new technologies drive demand, additional greenfield spectrum will be needed to address surging traffic. Qualcomm supports regulatory efforts to make more spectrum available for WA WBB following WRC-27's anticipated identification of additional spectrum intended for 6G, and ACMA's intention to advance the process of enabling WA WBB in the upper 6 GHz band is in line with this view. As a leading provider of both IMT and RLAN technologies, Qualcomm has a unique viewpoint on the 6 GHz band. From 5G Advanced and 6G to Wi-Fi, Bluetooth, other delicensed technologies and beyond, we're driving foundational advancements across licensed and unlicensed bands to meet the connectivity demands of tomorrow. Aligning Australia's spectrum plans with WRC-27 outcomes and expanding spectrum availability for WA WBB is critical to unlocking the full benefits of the upper 6 GHz band. 6G deployments will use larger contiguous channel bandwidths (up to 400 MHz per mobile network operator) and this will require large amounts of spectrum, which is possible in the upper mid-band range.

Qualcomm appreciates and supports ACMA's efforts to facilitate improved broadband connectivity by leveraging the upper 6 GHz band in Australia and preparing for next steps including a spectrum re-allocation declaration and associated consultation and the development of a spectrum license technical framework. The upper 6 GHz band is the most promising spectrum opportunity to launch 6G in Australia later this decade. The availability of this band for reliable mobile services is vital for the successful introduction of 6G, and making the band available for mobile services is a key prerequisite to ensuring Australia's economic competitiveness and ambitions to keep pace with other leading world markets. In addition, 6G's ISAC capabilities transform mobile networks into strategic infrastructure that enhances Australia's national security.

7/8 GHz band

We urge ACMA to continue progress toward making the upper 6 GHz band available for WA WBB use, while also preserving flexibility to modify its approach to incorporate WRC-27 outcomes, as the upcoming conference is expected to address plans for IMT use of the adjacent 7/8 GHz band (7125-8400 MHz). The 7/8 GHz band offers a rare combination of wide contiguous bandwidth and the potential for global harmonization, making it key to future 6G capacity and innovation. The 7/8 GHz band will be essential for mobile operators both because it will address growing demand for spectrum and because operators will

[1] Nokia, 2024, Global network traffic report, https://onestore.nokia.com/asset/213660.
[2] GSMA, The Mobile Economy 2026, https://www.gsma.com/solutions-and-impact/connectivity-for-good/mobile-economy/wp-content/uploads/2026/02/The-Mobile-Economy-2026.pdf.

be able to efficiently re-use existing infrastructure to deploy 6G in this band.[3] There is also a significant longer-term opportunity for international harmonization in the 7/8 GHz band, especially given global movement to use spectrum in the upper 6 GHz band for IMT (in the EU, Brazil, India, and China), which can be used alongside lower 7 GHz frequencies for contiguous bandwidth to support high-capacity, low-latency applications.[4] This is essential both for leveraging economies of scale that can bring the costs down and thus improve the affordability of the nascent technology and for enabling the uses cases that are expected to proliferate with 6G. Importantly, recent technological developments and network design techniques demonstrate the capability of this spectrum to enhance terrestrial networks. Qualcomm's chipsets will allow end user devices to seamlessly support the Upper 6 GHz band and the 7 GHz band.

We anticipate that WRC-27 outcomes will impact IMT-related spectrum planning in jurisdictions around the world. This is reflected, for example, in the Radio Spectrum Policy Group (RSPG) plan to wait for WRC-27's decision on the upper 6 GHz as stated in its *Opinion on Long-term vision for the upper 6 GHz band* as indicated in the Draft FYSO.[5]

A potential WRC-27 IMT identification follows studies conducted in line with Agenda Item 1.7, which are considering technical, operational, and regulatory issues related to the use of the 7/8 GHz band for the terrestrial component of IMT. Aligning Australia's approach to upper mid-band spectrum with WRC-27's outcomes related to the 7/8 GHz band should be important to enabling these services.

3 1.5 GHz Band

Qualcomm supports ACMA's intention to review the 1427-1535 MHz range for terrestrial (non-satellite) services in Q2 2026, including consideration of the need to ensure compatibility with mobile-satellite service (MSS) operations above 1518 MHz. As noted in the Draft FYSO, there is interest among WA WBB stakeholders in enabling the use of this range for WBB. This would align with regulatory actions to enable IMT use of spectrum below 1518 MHz in Asia-Pacific jurisdictions such as India, Indonesia and Japan as well as in countries in the Americas, Europe, and the Middle East.

Qualcomm looks forward to responding to the anticipated consultation paper in the coming months.

4 Satellite Direct-to-Device Technology

Qualcomm supports ACMA's activities clarifying the regulatory framework related to Low Earth Orbit (LEO) satellite-based D2D services. Satellite D2D technologies serve as a vital extension of terrestrial networks, delivering mobile coverage and emergency communications where cellular infrastructure is absent. For users in remote or underserved areas, including hikers and emergency responders, reliable D2D connectivity can be lifesaving. As a result, the market demand for D2D services is increasing. For example, Omdia forecasts that global satellite D2D services are projected to reach 411 million monthly active users and generate revenue of nearly USD 12 billion by 2030.[6]

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[4] GSMA, Where are we now with 6 GHz?, December 5, 2025, https://www.gsma.com/connectivity-for-good/spectrum/one-year-since-wrc-23-where-are-we-now-with-6-ghz/.

[5] Radio Spectrum Policy Group, June 17, 2025, https://radio-spectrum-policy-group.ec.europa.eu/document/download/1436dce2-8160-470e-9db0-0b70ec9e7a74_en?filename=RSPG25-018final-Draft-RSPG_Opinion_Upper_6GHz.pdf.

[6] Omdia, Smartphone satellite direct-to-device service revenue to approach $12 billion by 2030 (March 2, 2026), https://omdia.tech.informa.com/pr/2026/mar/smartphone-satellite-direct-to-device-service-revenue-to-approach12-billion-dollars-by-2030.

Qualcomm supports the Draft FYSO objective of promoting technology-neutral frameworks and notes that a clear framework for D2D is useful to enabling a predictable regulatory environment and a competitive market. Three WRC-27 agenda items (1.12, 1.13, and 1.14) address the concept of providing satellite connectivity to devices. There are currently discussions on regulatory frameworks, spectrum bands, and other aspects within ITU-R. The decisions on these issues are expected to be finalized at WRC-27.

Given the strategic importance of satellite D2D technology in Australia, we encourage ACMA to continue active coordination with industry stakeholders and international counterparts to maintain globally harmonized spectrum access for these services in order to reduce the cost of D2D-enabled devices as well as to have visibility into ecosystem development.

5 Conclusion

The Draft FYSO acknowledges the pressing need for additional spectrum for emerging technologies. Qualcomm urges ACMA to ensure that its upper 6 GHz plans incorporate WRC-27 outcomes, necessarily increasing spectrum availability for IMT while aligning with international approaches. Qualcomm also supports ACMA's intention to consider the use of the 1.5 GHz band for WBB services as well as to ensure clear regulatory frameworks for D2D services. Implementing these policies and practices is key to facilitating early and widespread adoption of emerging wireless technologies.

We appreciate the opportunity to provide feedback on ACMA's Draft FYSO and would be happy to provide further information to assist in ACMA's spectrum planning process, particularly with respect to spectrum for 6G services.

Sincerely,



Nies Purwati
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Qualcomm International Inc.
[redacted]