Comments of

The Ultra Wide Band (UWB) Alliance

Before the

Australian Communications and Media Authority

Regarding

Five-year spectrum outlook 2026–31 and 2026–27 work program

April 30, 2026

About the UWB Alliance

The Ultra Wide Band (UWB) Alliance is a global not-for-profit organization that works to collectively establish ultra-wideband (UWB) technology as an open-standards industry. A coalition made up of vendors that either design, manufacture, or sell products that use ultra-wideband technology, the UWB Alliance aims to promote and preserve the current allocation of bandwidth as well as promote the continuing globalization of the technology. As part of our mission, we advocate UWB technology and use cases to promote verticals showing the value of UWB for IoT and Industry 4.0 and to build a global ecosystem across the complete UWB value chain, from silicon to service. In addition, the Alliance is promoting and assuring interoperability through its work with Standards Development Organizations such as the IEEE and ETSI and then working with members to define upper layers and testing to assure compliance. For more information, please visit us at www.UWBAlliance.org.

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General

The UWB Alliance thanks the Australian Communications and Media Authority (ACMA) for providing this opportunity to provide comments on the Five-year spectrum outlook 2026–31 and 2026–27 work program[1].

The UWB industry is providing spectrum-efficient solutions in a diverse set of applications that provide economic and social value. UWB use continues to expand and is now available in consumer products such as smartphones and personal accessory devices, cars, door locks, and audio devices. The unique characteristics of UWB include:

- The ability to operate at extremely low transmit power levels, with an extremely low probability of causing interference to other systems, enabling high spectrum reuse
- Highly accurate ranging that enables centimeter level precision for locating and tracking of things and people
- Precise detection of people, animals and objects with the ability to differentiate between adults, children, pets and inanimate objects
- High capacity data communications for latency critical uses
- Suitability for simple, energy efficient implementations

UWB has a presence in key markets including consumer electronics, automotive, manufacturing, industrial, residential and commercial. Application of UWB for uses such as access control, presence detection and high-definition audio are experiencing rapid growth. The technology provides unique performance capabilities that complement the uses of other wireless technologies with small spectral footprint supporting many concurrent users without the need for exclusive use of the spectrum.

There is an active, and growing, supporting ecosystem developing international standards and standards-based interoperability, with multiple industry organizations providing standards, specifications and certifications. We expect growth to continue to accelerate in the five year period covered by the spectrum outlook.

We agree with the approach and regulatory posture that continues to accommodate low-power, spectrum-sharing technologies such as UWB within increasingly congested bands, including 6 GHz. We

[1] https://www.acma.gov.au/sites/default/files/2026-03/Five-year%20spectrum%20outlook%202026-31.pdf

support the alignment with FCC, Europe and other regions that enable UWB operation and positive coexistence without requiring dedicated spectrum.

WRC-27 Agenda Item 1.7 and Use of the 7125-8400 MHz Band

We urge AMCA to take the position of “no change” to the allocations in this frequency range.

This frequency range is widely used by applications employing UWB technology. We note that the use of UWB technology has been shown through decades of experience to be compatible with the existing primary uses of the band in Australia, such as the defense purposes cited in the consultation. We agree with ACMA that it is critical to assess potential impacts of new allocations on these existing primary uses. We urge ACMA to also consider impacts on current uses operating on a non-primary basis. Allocations for purposes that may be disruptive to the existing primary services and non-primary uses, such as UWB, will limit overall value obtained from the spectrum.

We fully support ACMA’s efforts in developing the technical frameworks that establish co-existence arrangements between different uses and users. UWB is an effective means to share spectrum. Use of low and extremely low transmit power enables sharing via minimizing interference footprint and enabling higher spatial reuse of a given frequency range. This enables higher density of users in a given space increasing the overall capacity of the frequency band. Extremely low power also enables a diversity of compatible uses, which is an important metric for efficient use of spectrum.

Net-zero emissions

With respect to Australia’s goal to reduce energy consumption, we note that UWB is an energy efficient technology. We note that “the right tool for the job” is an effective means to reduce overall energy consumed. While the focus on infrastructure energy usage can yield significant gains, we also note that the “a lot of a little” approach can have a positive impact as well: reducing by small amounts the energy used by many millions of consumer devices sums to a significant impact. UWB enables reduced energy consumption compared with other technologies in uses such as:

- Ranging, sensing and locating: A typical UWB solution provides higher performance and lower energy consumption compared to alternatives such as Wi-Fi ranging and Bluetooth Low Energy; UWB operates compatibly with these technologies and when used in concert provides high performance and minimal energy usage.
- Audio: UWB implementations are providing high resolution low latency audios using less energy than BLE.

New implementations are further improving energy consumption and performance. When used with compatible technologies, the overall device energy consumption can be reduced.

International Standardization

The UWB industry ecosystem is well supported by international standardization supported by standards development organizations including IEEE Standards Association[2] and ETSI[3]. The standards developed in IEEE SA as IEEE Std 802.15.4z-2020 and included in IEEE Std 80215.4-2024[4], has become the foundation for industry interoperability standards and specifications from UWBA[5], CSA[6], FiRa[7], CCC[8], omlox[9] and others. The ETSI EN 302 065 family of harmonized standards supports multiple UWB applications.

Conclusion

We thank the ACMA for this opportunity to provide input to the on the Five-year spectrum outlook 2026–31 and 2026–27 work program. We encourage the ACMA to promote innovation and to raise expectations for efficient spectrum usage through sharing and positive coexistence. We encourage alternatives to exclusive and nearly exclusive use allocations and promote policies that encourage advancing technology through new thinking as well as leveraging what is proven to work, such as UWB. We strongly encourage ACMA to avoid repurposing spectrum in a way that reduces usability of bands for sharing-compatible technologies such as UWB.

[2] IEEE Standards Association, https://standards.ieee.org/
[3] European Telecommunications Standards Institute (ETSI), https://www.etsi.org/
[4] 802.15.4-2024 - IEEE Standard for Low-Rate Wireless Networks, https://ieeexplore.ieee.org/document/10794632
[5] UWB Alliance, https://uwballiance.org/
[6] CSA Aliro, https://csa-iot.org/all-solutions/aliro/
[7] FiRa Consortium, https://www.firaconsortium.org/
[8] Car Connectivity Consortium, https://carconnectivity.org
[9] The Open Locating Standard: omlox, https://omlox.com/