

Australian Communications & Media Authority

Remaking the space object determinations and space object class license Consultation

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Introduction

Sateliot, founded in 2018, is the pioneering satellite operator to provide IoT (Internet of Things) connectivity via the 3GPP 5G NB-IoT Non-Terrestrial Network (NTN) standard. As the first company to extend terrestrial mobile network operators' (MNOs) reach through satellite constellations, Sateliot acts as a critical enabler of seamless global IoT connectivity. Our business model focuses exclusively on the wholesale provision of satellite capacity to MNOs and IoT operators. Through GSMA-standard roaming agreements, we ensure uninterrupted connectivity for commercial IoT devices, addressing the challenge of connectivity in rural, remote, and underserved areas.

Sateliot appreciates the opportunity to contribute to the Australian Communication and Media Authority's (ACMA) consultation on remaking the Space Object Determinations and Class Licences. We recognize that this consultation is crucial to ensuring that regulatory frameworks remain robust, adaptable, and aligned with international best practices. As a provider of satellite-based NB-IoT services, we rely on efficient and clear regulatory mechanisms to enable seamless operations and compliance. The continuation of an effective framework will help Australia remain at the forefront of satellite IoT technology and foster innovation while addressing critical connectivity gaps.

In 2023, Sateliot was granted an apparatus license in Australia by ACMA, to operate in the frequency bands of 2005.8–2006.8 MHz (uplink) and 2195.8–2196.8 MHz (downlink). Recently, we have applied for a carrier license to expand our capacity to serve the Australian market, with invaluable support and guidance from ACMA throughout this process. While Sateliot is not yet operational in Australia, these steps demonstrate the importance of maintaining robust and clear regulatory frameworks to facilitate the future operations of innovative satellite operators like Sateliot, while ensuring that connectivity reaches underserved areas effectively. Our operations are planned to begin in Q1 2025.

Sateliot commends the ACMA for undertaking this critical consultation on Remaking the Space Object Determinations and Class Licences. As the space industry continues to evolve, fostering a regulatory environment that is both forward-looking and adaptable is paramount to unlocking the full potential of satellite and NTN. By engaging stakeholders in this consultation, ACMA demonstrates its leadership in shaping the future of space-based services, particularly in enabling IoT connectivity, innovation, and the equitable use of spectrum. Sateliot is pleased to contribute to this important initiative and share insights based on our operational expertise and commitment to advancing global IoT connectivity.

1. ASO Determination (Australian Space Objects)

Sateliot welcomes the proposed changes to the ASO Determination, which aim to clarify the definition of Australian space objects and align terminology with the FSO Determination. Explicitly linking Australian space objects to frequencies in the CSO Class Licence is a valuable step towards ensuring greater transparency and precision in the regulatory framework. However, we recommend that ACMA explicitly confirm that foreign operators like Sateliot, who do not operate Australian-registered satellites, are explicitly excluded from this classification to avoid unintended regulatory burdens. This differentiation will prevent the imposition of obligations that should be non-applicable to non-Australian entities, preserving operational clarity. Such clarity is particularly critical for operators like Sateliot, whose wholesale business model depends on efficient regulatory environments that do not impose unnecessary obligations or costs.

The alignment of terms such as “owners, controllers, or operators” with the FSO Determination represents a positive development toward consistency under international treaties. Sateliot supports this alignment but urges ACMA to ensure that obligations for “operators” are appropriately proportional to their role. For instance, wholesale capacity providers like Sateliot should not face the same obligations as entities directly providing services to end-users. This differentiation will not only foster operational fairness but also encourage innovation by accommodating diverse business models in the satellite industry.

1. FSO Determination (Foreign Space Objects)

The Foreign Space Objects Determination (FSO) plays a critical role in enabling foreign satellite operators, including Sateliot, to provide services in Australia under clear and consistent regulatory guidelines. The proposed updates enhance this framework and ensure alignment with international best practices, which are essential to supporting innovative satellite services like ours.

Sateliot welcomes the removal of Section 5, which simplifies the regulatory approach by focusing on frequencies relevant to the CSO Class Licence. By eliminating redundant provisions, this change supports streamlined compliance and ensures that foreign operators can operate effectively within a well-defined scope. This simplification reduces regulatory complexity and aligns with ACMA's goal of fostering a business-friendly environment for satellite operators.

The inclusion of Sateliot as an “owner, controller, or operator” under the determination provides formal regulatory recognition of our operations. This acknowledgment strengthens our ability to collaborate with local MNOs and provide IoT connectivity solutions. However, we advocate for differentiated regulatory requirements for operators working in collaboration with local MNOs, like Sateliot. Such differentiation will ensure that obligations reflect the collaborative and wholesale nature of our services, rather than imposing the same requirements applicable to standalone operators directly providing end-user services. Tailored obligations will better reflect the operational realities of wholesale satellite providers and promote fair competition.

The addition of new foreign entities to Schedule 1 demonstrates ACMA's commitment to inclusivity and the recognition of diverse satellite operators. This is a commendable step toward fostering a dynamic and competitive satellite ecosystem in Australia. To build on this, Sateliot recommends that ACMA establish clear, transparent criteria for adding entities to the schedule. This transparency will promote fairness, encourage participation from innovative operators, and strengthen Australia's position as a leader in satellite-based connectivity.

We encourage ACMA to further clarify the obligations tied to foreign operators listed under the FSO Determination. For Sateliot, as a provider of wholesale satellite capacity, it is critical that compliance requirements align with the unique nature of our operations. This alignment will ensure a regulatory framework that supports innovative wholesale business models while maintaining compliance with Australian regulations. This approach will enable us to continue delivering cost-effective and efficient IoT solutions while ensuring compliance with Australian regulations.

2. CSO Class Licence (Communication with Space Objects)

Sateliot supports the updates to the CSO Class Licence, particularly the removal of subsection 7(2) regarding maritime GMDSS requirements. We view this change as a positive and necessary step because it addresses obligations unrelated to IoT and NTN services, which are already governed by other regulatory instruments. By removing these requirements, ACMA simplifies compliance for satellite operators like Sateliot and ensures the licence remains focused on its core purpose

The inherent flexibility of the CSO Class Licence is vital for enabling IoT and NTN services in Australia. This flexibility is critical in fostering innovation and allows operators like Sateliot to develop and deploy cutting-edge applications without being hindered by overly rigid frameworks. For Sateliot, the adaptability of the CSO Class Licence supports seamless collaboration with local MNOs and facilitates the expansion of IoT connectivity to underserved areas. By preserving this adaptability, ACMA ensures that the CSO Class Licence remains responsive to dynamic market needs and emerging technological trends.

Furthermore, under Sateliot's Apparatus License, we are well-positioned to support maritime IoT services that align with the allocated frequency ranges of 2005.8–2006.8 MHz (uplink) and 2195.8–2196.8 MHz (downlink). This capability enables Sateliot to deliver services such as vessel tracking, cargo monitoring, and fleet management, ensuring robust connectivity for maritime applications. The removal of GMDSS-specific obligations not only simplifies compliance but also enables Sateliot to concentrate on developing IoT innovations without being encumbered by unnecessary regulatory complexities.

In addition, Sateliot recommends that ACMA continues to ensure that the CSO Class Licence aligns with international standards, particularly 3GPP specifications. Maintaining alignment with these standards simplifies device certification and reduces integration barriers, and enhances interoperability between satellite and terrestrial networks. This approach further strengthens Australia's leadership in the global IoT sector.

Sateliot also suggests that ACMA explore opportunities to streamline processes related to spectrum use under the CSO Class Licence. Simplifying these processes would enable operators to scale services more efficiently and drive further innovation, ensuring the CSO Class Licence remains adaptable to the evolving needs of operators and end-users alike.

Additional Remarks

Sateliot takes this opportunity to address broader considerations that, while not the direct focus of this consultation, are critical to supporting the long-term growth and effectiveness of satellite-based IoT services in Australia.

License Duration and Renewal

The current five-year duration of Apparatus Licenses provides a baseline for operational stability. However, Sateliot strongly recommends extending this duration to ten years. Longer than 5 year term-licenses align better with the investment cycles and timelines required for satellite operations, offering greater predictability for operators. This extension would not only foster sustained investments

but also enable operators to develop long-term strategies for expanding services. In parallel, Sateliot advocates for a streamlined renewal process to minimize administrative burdens and avoid disruptions to ongoing services. Efficient renewals will ensure that operators with active customers can continue to provide seamless connectivity, reinforcing investor confidence and supporting the long-term growth of Australia's satellite ecosystem.

Adequacy of Spectrum Allocation and Bandwidth

The 3GPP standard for NB-IoT specifies minimal bandwidth requirements for this service typology, making 1 MHz sufficient for Sateliot's service delivery. This allocation allows Sateliot to deliver robust IoT connectivity while maintaining operational efficiency. To address the growing demand for IoT solutions, Sateliot recommends that ACMA maintain the reserved portions of standard frequencies specifically for IoT and NTN services. Ensuring scalability and preventing congestion in these frequencies will be critical as more operators and applications enter the market. Furthermore, maintaining flexibility in spectrum allocation policies is vital to fostering innovation. By adapting to evolving technologies and use cases, ACMA can ensure that spectrum remains a valuable resource for operators and end-users alike, enabling Australia to lead in satellite IoT deployment globally.

Importance of Coexistence Policies

Sateliot's business model relies on the coexistence and coordination of satellite and terrestrial networks to deliver seamless IoT connectivity. ACMA's balanced approach to spectrum sharing has been instrumental in enabling this coexistence. To further enhance this framework, Sateliot encourages ACMA to prioritize policies that promote spectrum flexibility and address connectivity gaps in underserved regions. Satellite IoT solutions offer a unique opportunity to complement terrestrial networks, bridging these gaps and advancing national connectivity objectives. Policies that encourage satellite-terrestrial synergies will empower operators like Sateliot to play a pivotal role in achieving Australia's connectivity and innovation goals.

Conclusion

Sateliot reaffirms its commitment to collaborating with ACMA to ensure that the renewed framework not only supports innovation, connectivity, and efficient spectrum use but also aligns with global best practices. By proactively addressing key regulatory considerations and embracing tailored approaches to emerging technologies, ACMA can continue fostering an environment that enables groundbreaking satellite IoT solutions. Sateliot welcomes ongoing dialogue and looks forward to contributing technical expertise to support ACMA's efforts. We remain dedicated to expanding IoT connectivity to underserved regions and advancing Australia's position as a leader in satellite-enabled IoT services.

Sincerely,

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