Australian Telecommunications Alliance

Setting The Standard.
Driving Progress.

AUSTRALIAN TELECOMMUNICATIONS ALLIANCE SATELLITE SERVICES WORKING GROUP SUBMISSION

To: Australian Communications and Media Authority

Re: Allocation design and technical matters for the 2 GHz MSS band

20 August 2025

TABLE OF CONTENTS

1. AUSTRALIAN TELECOMMUNICATIONS ALLIANCE

The Australian Telecommunications Alliance (ATA) is the peak body of the Australian telecommunications industry. We are the trusted voice at the intersection of industry, government, regulators, and consumers. Through collaboration and leadership, we shape initiatives that grow the Australian telecommunications industry, enhance connectivity for all Australians, and foster the highest standards of business behaviour. For more details, visit www.austelco.org.au.

For questions on this submission, please contact Mike Johns, m.johns@austelco.org.au.

2. RESPONSES TO THE CONSULTATION

The Australian Telecommunications Alliance (ATA) Satellite Services Working Group (SSWG) welcomes the opportunity to provide this submission in response to the Australian Communications and Media Authority's *Allocation design and technical matters for the 2 GHz MSS band* Consultation paper.

The SSWG would like to provide the following responses to the questions posed in the Consultation Paper. Each issue raised by ACMA is produced under the corresponding heading in italics, followed by the SSWG response as numbered paragraphs.

Note that this submission does not represent the views of Free TV.

2.1 LICENSING APPROACH

Issue for comment 1: Our preference is to support MSS by issuing space licences for the downlink and space receive licences for the uplink, with class licensing to authorise the earth stations and earth receive stations in the network. We invite comments on this proposed licensing approach for MSS and whether it is suitable for the provision of MSS.

2.1.1 The SSWG broadly supports the ACMA's proposals to licence the 2 GHz MSS Band. Class licensing is the preferred approach for mobile devices while space and space receive licences seem appropriate depending on allocation mechanism.

2.2 LICENCE TERM, COMMENCEMENT AND RENEWALS

Issue for comment 2: Our preference for a licence term of 5 or 10 years, with licences commencing as soon as possible after they are allocated and issued. Our preliminary view is not to include a renewal statement on licences. We are seeking views on the proposed licence term, commencement and renewal arrangements for 2 GHz MSS space and space receive licences. We seek information about likely deployment timeframes, where possible. If licence terms of greater than 10 years are preferred, please include reasons supporting the extended licence term.

2.2.1 Contemporary satellite constellations have long life cycles, well beyond five years and in many cases more than twenty years. In any case, and especially for the NGSO, once a constellation is launched and brought into use, design planning for replacement and upgraded constellation elements begins, extending the operational timeframe for the constellation and continuing for its lifetime. With this in mind, the SSWG

contends that the licence tenure should be at least 20 years.

2.2.2 Shorter terms, such as five or ten years would help to ensure an operator does not hold spectrum without providing service. The SSWG suggests that a renewal statement could be issued in this initial licence on the condition of meeting the 'use it or lose it' (UIOLI) requirements, which, once met during this initial licence duration, would result in a renewal for up to twenty years in accordance with the Radiocommunications Act.

2.3 LOT CONFIGURATION

Issue for comment 3: The ACMA's preference is to allocate spectrum in a 2 x 15 MHz and 2 x 10 MHz configuration in fixed frequency ranges. We invite comments from stakeholders on this preliminary view, and whether fixed frequency ranges for the configuration is suitable. In relation to 2 x 5 MHz lots, we seek feedback on the level of interest in single 2 x 5 MHz lots and the intended use-case for a single 2 x 5 MHz lot.

2.3.1 The SSWG unequivocally opposes the 2 GHz MSS Band being allocated using a price-based allocation mechanism for the reasons given in Section 2.4. Therefore, our response avoids the reference to 'lots' in order not to mislead the ACMA in what is the view of the SSWG.

2.3.2 The SSWG supports the proposal for the 2 GHz MSS spectrum under this consultation to be allocated as a single 2 x 10 MHz pair and a single 2 x 15 MHz pair configuration.

Given the potential of this MSS 2 GHz spectrum to enable advanced MSS applications, including, for example, direct-to-device applications, particularly tapping into 3GPP NTN standard equipment (band n256) and its ecosystem, a contiguous channel bandwidth greater than 5 MHz could facilitate higher throughput than just a minimum supported bandwidth of 2 x 5 MHz.

The latter configuration, could theoretically accommodate up to five operators each with 2 x 5 MHz spectrum, however such arrangements are less efficient as the market may not need five operators but the artificial split would result in the operator(s) with real interest to deploy in Australia be confined with less spectrum.

2.3.3 The SSWG reminds ACMA that the SSWG believes the 2 x 5 MHz pair in 2005 – 2010 MHz and 2195 – 2200 MHz allocated for lower power narrowband MSS is unnecessary and the requirements over-protect Television Outside Broadcast (TOB). We maintain that geofencing continue to be utilised while TOB occupy the band which would make the full bandwidth available for generic MSS to service the rest of Australia where no TOB operates.

2.3.4 The SSWG supports an appropriate spectrum cap per operator of not less than 2 x 15 MHz.

2.4 ALLOCATION METHODOLOGY

Issue for comment 4: Our preliminary view is to allocate transmitter licences by price-based allocation via auction, or for pre-determined price where demand does not exceed supply. We invite comments on the proposed allocation methodology.

2.4.1 The SSWG does NOT support price based allocation of space spectrum, including for the 1980 – 2005 / 2170 – 2195 MHz band. This method of allocation is simply not suited to space networks because of the following reasons:

(i) It is not evident that spectrum demand warrants a competitive allocation process, because, in actuality, spectrum supply in the form of 1980 – 2010 / 2170 – 2200 MHz S-band may meet demand.

ACMA, despite mentioning multiple times in the consultation paper that it will need to seek advice from the ACCC on matters related to 'market', has not clearly provided a definition for the competitive market for mid-band MSS services.

The L-band in the frequency ranges 1518 – 1559 MHz, 1610 – 1660.5 MHz, 1668 – 1675 MHz, and other S-band MSS spectrum in the frequency range 2483.5 – 2500 MHz, may be considered as part of the same market as 1980 – 2005 / 2170 – 2195 MHz. Furthermore, recent use of mobile spectrum to deliver direct-to-device applications further expands the possible spectrum contributing to a competitive market definition for MSS services.

Further, ACMA has contributed to the situation of artificial spectrum scarcity, by segmenting the upper 2 x 5 MHz of the S-band for narrow band MSS services thereby removing it from use for generic MSS services and thus deviating from the *Technology Neutrality* objective as per ACMA Statement of Expectations.

In summary, the SSWG is of the view that the analysis provided by ACMA on its preferred allocation methodology (price-based) does not meet some of the fundamental conditions necessary to ascertain a situation of material spectrum scarcity and/ or excess demand. The SSWG is of the view that the existence of MSS uses in other bands (current and emerging), in addition to the existing segmentation in the upper S-band, provides for a set of supply/ demand conditions that ACMA has not fully considered. Consequentially, implementing a price-based allocation, while disregarding this full set of conditions, would result in artificial spectrum scarcity to the detriment of key ACMA's statutory objectives as set out in the ACMA's Statement of Expectations 2024.[1] In particular, we refer to points 2, 8, and 11 of the Government Policy Priorities.

(ii) It may impose high financial burden to satellite operator(s), particularly the need to pay the entire full auction price upfront plus annual licence fees, contrary to the ACMA's spectrum planning framework that emphasises minimising unnecessary costs and avoiding barriers to competition.

(iii) It does not ensure viable systems gain access to spectrum, produce allocation efficiencies, or guarantee market competition, as auction may favour financially dominant satellite operator(s), while potentially sidelining technically capable but financially constrained satellite operator(s). Moreover, price based allocation may not necessarily lead to real deployment.

(iv) Maximising revenue from the spectrum sale price should not be the driving objective for spectrum access, particularly considering this band is new for MSS in Australia. The focus should be on allowing the ecosystem to develop and on not removing investment resources from building such ecosystem.

(v) There is no metric to ensure best value services are provided.

(vi) The US FCC has abandoned price-based allocation of space spectrum. During the mid-1990s, the FCC adopted service and licensing rules for the MSS spectrum under the Big Leo MSS band plan using a comparative review and processing round system, not auctions.

(vii) In Saudi Arabia, the auction[2] of the same MSS 2 GHz band in late 2022 was won by Saudi Telecom Company (stc), a state owned[3] terrestrial MNO (winning both lots of 2 x 15 MHz), but real deployment to date is very limited. The SSWG notes that some of its members either participated in, and/or considered participating in, the 2022 auction in Saudi Arabia, and experience shows that the outcome of the auction was merely to insert an additional layer of resource management (a state owned MNO) between the resource manager (the regulator), and the actual spectrum user (the SNO). SNOs must now

[1] ACMA Statement of Expectations 2024 can be found at: https://www.infrastructure.gov.au/department/media/publications/australian-communications-and-media-authority-statement-expectations.

[2] https://www.cst.gov.sa/en/media-center/news/CST-Announces-the-First-of-its-Kind-Spectrum-Auction-for-Non--Terrestrial-Networks-on-the-2100MHz; CST Announces the First of its Kind Spectrum Auction for Non-Terrestrial Networks on the 2100 MHz Band.

[3] https://www.spa.gov.sa/w1822759; Public Investment Fund (PIF) of Saudi Arabia is the ultimate controlling shareholder of stc through its ownership of 64%.

negotiate access to spectrum with the successful MNO bidder, a result that is neither allocatively efficient, technically efficient, or one that leads to lower consumer pricing. Hence, it reenforces the point that auction may not necessarily lead to meaningful deployment or benefit to the community.

2.4.2 The SSWG would prefer ACMA examine potential contenders for the spectrum and administratively license it to proven satellite operator(s) that promises viable services for the societal benefit of the Australian community.

2.4.3 The SSWG holds the view that licenses within of these bands should only be administratively granted to viable satellite operator(s) who have a proven track record of delivering services or in the case of emerging networks can demonstrate a high likelihood of service delivery noting the UIOLI mechanism described above provides some protections.

2.5 AUCTION FORMAT

Issue for comment 5: We propose 2 auction format options for a 2 x 15 MHz and 2 x 10 MHz lot configuration with fixed frequency ranges, and one auction format option for 5 generic lots of a 2 x 5 MHz lot configuration. We have no preference for a particular auction format, and seek stakeholder views.

2.5.1 The SSWG does not support the price based allocation methodology.

2.6 COMPLEMENTARY GROUND COMPONENT (CGC) / DIRECT AIR-TO-GROUND COMMUNICATIONS SERVICES (DA2GC)

Issue for comment 6: We have not formed a preliminary view on licensing arrangements for CGC/DA2GC. We are seeking comments from parties interested in MSS licences on:

i. Demand for a licence authorising stations for CGC or DA2GC, and timing for implementation.

ii. Intended use cases, including the number of stations to be authorised.

iii. Preferred licensing approach, if there is one.

iv. Whether the intended use requires an entity other than the 2 GHz MSS licensee to be the licensee for CGC/DA2GC.

2.6.1 Direct-Air-to-Ground Communications (DA2GC) is deployed in Europe in this band under the European Aviation Network in a different context from that of Australia. In Australia, satellite-based in-flight connectivity using Ku and/or Ka band solutions has been adopted.

2.6.2 The SSWG is of the view that this spectrum should only be made available to operating MSS networks and should not be licensed or made available to terrestrial mobile networks.

2.6.3 Noting ACMA's technology-neutrality objectives, the SSWG is of the view that 2 GHz MSS should also be allocated using a generic MSS allocation approach and would not recommend the ACMA to make the 2 GHz MSS spectrum specifically available for CGC/DA2GC technology.

2.7 SPACE REGULATORY MATTERS

Issue for comment 7(i): We seek comment on:

i. The information proposed to be required to update the ASOD or FSOD, and the ACMA's view that, in order to participate in an allocation process, prospective licensees have access to an ITU satellite filing for the 2 GHz MSS band in relation to Australia that meets certain requirements such as the satellite filing has been brought into use in accordance with ITU requirements (refer section on Space regulatory matters).

2.7.1 The SSWG supports this proposal.

2.7.2 The SSWG also agrees with ACMA that the frequency assignments of the satellite system in 2 GHz MSS band must be published as being in conformity with the Radio Regulations and must not identify use under No. 4.4 of the Radio Regulations.

2.7.3 Furthermore, recognising the global nature of NGSO satellite communications, satellites duly authorised by another country and coordinated through the ITU process should carry capacity that is available for use in Australia, that all satellite operators are treated the same, i.e. domestic satellite operators should not be provided preferential treatment.

Issue for comment 7(ii): We seek comment on:

ii. Proposals for mobile earth station total radiated power levels, requirements for consistency with ITU satellite filings and potential for considering lower total radiated power levels than specified in a filing.

2.7.4 The SSWG notes that the ability to provide higher digital bandwidths is dependent on a number of things, including power. ACMA should not seek to reduce earth station powers as along as the system operates in conformity with its ITU filings and coordination agreements.

2.8 TECHNICAL MATTERS

Issue for comment 8: We seek views on:

i. Our proposed technical parameters and coordination requirements for 2 GHz MSS, including CGC.

ii. Implementing our proposal as set in our November 2023 discussion paper, that for 2 GHz MSS narrowband requirements, the emission limit for earth station transmitters at the 2010 MHz boundary can be changed from –66 to –60 dBW/MHz EIRP.

2.8.1 In terms of the Technical Matters posed in the Consultation Paper (section 8) the SSWG is of the view that:

(i) With regard to the coordination with the Radio Astronomy site (the Midwest RQZ), RALI 32 (page 6) does not include space licences (not in scope), and MSS space licences are part of that existing arrangement. Hence, the SSWG has no additional views on the applicability of the current RALI 32.

(ii) The SSWG supports the increase in low power MSS to –60 dBW/MHz noting we do not support partitioning the 2 x 5 MHz pair in 2005 – 2010 MHz and 2195 – 2200 MHz for low power applications.

Ends

Australian
Telecommunications
Alliance

Level 25 / 100 Mount Street
North Sydney NSW 2060

T 02 9959 9111
E info@austelco.org.au
W austelco.org.au

ABN 56 078 026 507