

10 June 2022



The Manager

Wireless Broadband Section
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Dear sir

RE: Review of the 1.5 GHz band

The Communications Alliance Satellite Services Working Group (SSWG) welcomes the opportunity to comment on the Australian Communications and Media Authority (ACMA)'s Discussion paper on Review of the 1.5 GHz band.

The SSWG observes that this review is at a very early stage in the possible future re-planning of the 1.5 GHz frequency band and that a decision is still to be made on whether to proceed to even the preliminary replanning stage. Nevertheless, the SSWG would like to table its initial comments on the questions asked in the Discussion paper and looks forward to commenting further if the band is ultimately replanned.

Our responses to the questions posed in the Discussion paper as follow.

1. Are there any international arrangements or technology trends that the ACMA should be aware of?

The SSWG notes that international sharing and compatibility studies, on how to optimally share radiofrequency spectrum around 1518 MHz between existing mobile satellite services (MSS) and future terrestrial (IMT) services, have been proceeding in the ITU-R for the past 7 years. However, while significant progress has been made in Working Parties 4C and 5D to date, further work is still needed before a proposed new ITU-R Recommendation will be available to assist national administrations wishing to re-plan the 1.5 GHz frequency band.

At this stage, due to the complexity of the ongoing ITU-R studies, it is unlikely that the proposed sharing Recommendation will be agreed for some time. It is also expected that, once the sharing Recommendation is published, there may need be consequential changes to the 1.5 GHz frequency arrangements for terrestrial IMT.

Noting both the importance of these international developments and the discussions ongoing regarding IMT SDL and IMT TDD as well as the general question of LTE demand requirements and interest, Communications Alliance wonders whether the ACMA may want to delay the start of the domestic replanning of the matter below 1518 MHz until these matters are settled.

2. What is the demand for access to the 1.5 GHz band for WBB, MSS and broadcasting services? Are there any other new services that should be considered?

MSS services have used the 1525 to 1559 MHz / 1626.5 to 1660.5 MHz bands in Australia for land, maritime and aeronautical operations for a considerable time and are also planned to be introduced in the 1518 to 1525 MHz / 1668 to 1675 MHz MSS bands via recently launched, high performance 'hybrid' MSS satellites.

The 1.5 GHz frequency band remains the cornerstone band for Australian MSS operations.

3. What are the ongoing requirements for incumbent services in the 1.5 GHz band? Are there any viable alternative options?

As indicated in our response to Question 2, the demand for 1.5 GHz MSS services and applications is expected to keep increasing in Australia. As a major 1.5 GHz incumbent service, MSS needs to be able to continue operating without harmful interference from future 1.5 GHz IMT / WBB services.

4. What planning scenarios should be considered in the 1.5 GHz band?

While the 1427 – 1518 MHz band was identified for International Mobile Telecommunications (IMT) at WRC-15, after some 7 years of ITU-R study, there is still no agreed way for IMT and MSS to harmoniously use adjacent band spectrum without harmful interference being caused to MSS across the 1518 MHz band edge partition due to the high power of terrestrial base stations operating adjacent to MSS receivers receiving signals from 35,786 km from earth. The interference mechanisms include out-of-band emissions from IMT / WBB transmitters and receiver overload in the MSS terminals.

While the SSWG is not in a position to support particular planning scenarios at this stage, we would nevertheless expect that there will be a need to have a frequency guard band applied to IMT/WBB services operating below 1518 MHz to provide compatibility with MSS services operating above 1518 MHz. Depending on the size of the guard band, there may still be a need for additional compatibility measures.

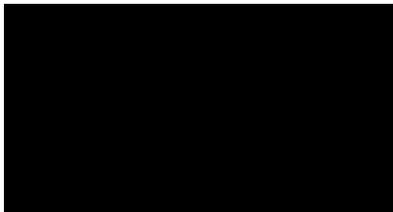
5. Comment is sought on the coexistence scenarios identified, including the ACMA's preliminary thinking on these scenarios. Are there any other coexistence scenarios the ACMA should consider?

The SSWG supports the ACMA's view that specific coexistence measures will need to be developed between IMT/WBB and MSS to protect MSS receivers from potential harmful interference with the measures expected to be available in the ITU-R Recommendations currently being jointly developed by ITU-R Working Parties 4C and 5D.

If the ACMA did decide to proceed with the 1.5 GHz replanning without having the benefit of the published ITU-R Recommendations, it would be possible to minimise interference to MSS by constraining IMT/WBB to a limited frequency range; for example to spectrum below 1492 MHz and/or reduced power levels (in the upper part of the band).

If you have any questions with respect to this submission, please contact Mike Johns at Communications Alliance on 0414 898 841.

Yours sincerely,



John Stanton
Chief Executive Officer

About Communications Alliance

Communications Alliance is the primary telecommunications industry body in Australia. Its membership is drawn from a wide cross-section of the communications industry, including carriers, carriage and internet service providers, content providers, equipment vendors, IT companies, consultants and business groups.

Its vision is to be the most influential association in Australian communications, co-operatively initiating programs that promote sustainable industry development, innovation and growth, while generating positive outcomes for customers and society. The prime mission of Communications Alliance is to create a co-operative stakeholder environment that allows the industry to take the lead on initiatives which grow the Australian communications industry, enhance the connectivity of all Australians and foster the highest standards of business behaviour. For more details about Communications Alliance, see <http://www.commsalliance.com.au>.