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AMTA Submission

Australian Communications & Media Authority

Review of the 1.5 GHz band Discussion Paper



About AMTA

The Australian Mobile Telecommunications Association (AMTA) is the peak industry body representing Australia's mobile telecommunications industry. Its mission is to promote an environmentally, socially and economically responsible, successful and sustainable mobile telecommunications industry in Australia, with members including the mobile network operators and service providers, handset manufacturers, network equipment suppliers, retail outlets and other suppliers to the industry. For more details about AMTA, see <http://www.amta.org.au>.



Introduction

AMTA welcomes the opportunity to provide comments on the ACMA’s *“Review of the 1.5 GHz band—Discussion Paper”* (“the discussion paper”). In general, we agree with the content of the discussion paper, in particular with the ACMA’s presentation of planning scenarios for WBB in the band 1427-1518 MHz, which is naturally the focus for AMTA (as opposed to the MSS bands above 1518 MHz). We note the ACMA’s disclaimer that the planning scenarios do not represent the ACMA’s preliminary view, however we believe that the band 1427-1518 MHz should be made available for WBB in the medium- to long-term, with due regard to incumbent services in rural and remote areas.

Allocation of 1427-1518 for WBB

AMTA wishes to highlight its comments in the AMTA submission to the ACMA’s Draft *Five Year Spectrum Outlook 2022-27* (“the draft FYSO”), specifically under the heading *“Mid-band spectrum and the need to plan ahead”* and *“Industry priorities”*. There we reiterate our view that approximately 8 GHz in total spectrum assignments for IMT will be required by 2030, and that as part of this, another 800 MHz of additional mid-band spectrum will be required. In our spectrum policy paper, *Future Spectrum Requirements for 5G and Beyond*, we pointed out that the main mid-band spectrum targets are in the ranges 3.4-4.2 GHz, 4.4-5.0 GHz and the Upper 6 GHz range (6425-7125 MHz).

In order to satisfy the growth in demand, and noting the incumbency issues in the 4 GHz and 6 GHz ranges, we also believe that the 1427-1518 MHz band could perform a key role in satisfying the growth in demand in the medium- to long-term. As such, and as we stated in our response to the draft FYSO, AMTA’s view is that the highest value use of the band in the long-term remains wide area wireless broadband (WA WBB).

Technical arrangements should be internationally harmonised

We are of the strong view that the arrangements that are introduced in the 1427-1518 MHz band, in support of WBB, should support 3GPP-compliant equipment and leverage international device ecosystems. This means that licensing arrangements—particularly emission limits—should not demand performance that is more stringent than what’s required for 3GPP, or at least align with regulatory limits adopted in other regions e.g. Europe.

As pointed out by the ACMA in the discussion paper, the ECC has harmonised frequency arrangements for mobile/fixed communications networks (MFCN) in ECC Decision (17)06, which in turn specify a 1 MHz guard band in 1517-1518 MHz, albeit with in-band power limits in the next 5 MHz block (1512-1517 MHz) to address potential blocking to MSS receivers. As such, we believe that the guard band at the top of the band should be no larger than 1 MHz. In case a larger guard band of 3 MHz is required, the additional 2 MHz should be applied above 1518 MHz. This applies to TDD only (explained below).

It is important to note that frequency arrangements in 1427-1518 MHz must also be compatible with Recommendation ITU-R M.1036, which has the upper band edge at 1517 MHz for TDD and SDL, but 1518 MHz for FDD. In the case of FDD, each sub-band is 43 MHz wide, which means that 3 MHz from each sub-band need to be turned into guard band simply to support 5 MHz channels.

Allow international developments to play out before re-planning

We note that use of the band around the world is in its early stages, even though it has been considered for some time, particularly in Europe (and Japan of course, which has been using FDD cellular networks in the band for several years). At this stage, most of the deployments have focused on supplemental downlink (SDL), although there does seem to be growing consideration of the band for TDD networks.

Given the early stage of deployments in the band, AMTA members have not yet formed a common view with respect to the preferred duplex arrangement in the band. AMTA members will provide their views on this issue in their individual submissions.

Therefore—while we do maintain the view that the highest value use of the band in the long-term remains WA WBB—at this stage it is better to hold off proceeding the band to the preliminary replanning stage. We recommend that this be revisited in early 2024.

Lastly, we have no objection to the ACMA proceeding to make the 1518-1525 MHz available for mobile-satellite service (MSS) downlinks. However, noting that compatibility between IMT below

1518 MHz and MSS above 1518 MHz is being studied in this WRC study cycle, we believe that this should be delayed until after the completion of this work (i.e. the end of this study cycle, which culminates in the WRC). That way, the international study on the matter can be used to inform interference management frameworks to be developed in Australia. We also believe that the conditions for adjacent-band compatibility could be de-coupled from some other aspects of replanning the 1427-1518 MHz band.

Conclusion

We believe that the band 1427-1518 MHz should be made available for WBB in the medium- to long-term, noting that WBB is the highest value use of the band. However, we believe that further re-planning work should be delayed until early 2024, thereby allowing the completion of compatibility studies between MSS and IMT, as well as further development of international deployments and device ecosystems. These developments will better inform key decisions in the replanning of the band.

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