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AMTA Submission

Australian Communications & Media Authority

Draft Five-Year Spectrum Outlook

2022-27



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>.



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Introduction

AMTA welcomes the opportunity to provide comments on the draft Five Year Spectrum Outlook (FYSO) for 2022-27, noting with appreciation, the ACMA’s well-established practice of publishing a FYSO and detailed work program.

Notably, AMTA values and supports the ACMA’s focus on the facilitation of 5G throughout the document, not least through the inclusion of a number of frequency bands either intended to be, or in the process of being, re-planned for 5G. The ACMA’s focus on supporting 5G is underscored from the beginning of the document, which opens with a statement that the ACMA “continues to undertake extensive planning activities focused on bringing 5G spectrum to market”, which we support.

We have provided commentary in relation to Parts 1 and 2 of the FYSO below.

Part 1: Overview

Demand for mobile broadband is unrelenting

The demand for mobile broadband continues to grow, with Ericsson forecasting that by 2027, 5G networks will carry 62% of the world’s mobile data traffic and cover 75% of the world’s population, as 5G cements its position as the world’s fastest-deployed mobile technology generation to date.¹ We acknowledge the ACMA’s recognition of this in its statement that it “anticipates the pressure on spectrum required to support the ever-increasing growth in mobile and fixed WBB applications and mobile data will continue in the short- and medium-term”.

In terms of the current state-of-play, Ericsson announced that 5G had already reached 660 million subscriptions late last year¹. GSA announced that as of January 2022, there are 200 live 3GPP 5G networks and over 870 commercially-available devices—an increase of over 15% of commercial 5G devices over Q4 2021².

5G in numbers

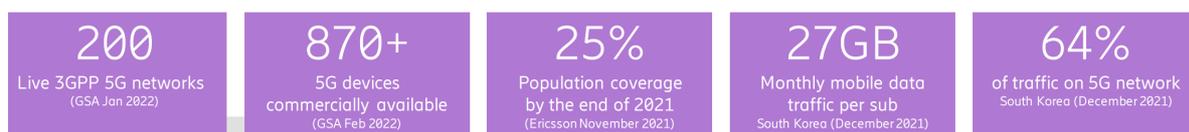


Figure 1—Ericsson snapshot of the latest 5G market statistics

¹ Ericsson Mobility Report, Nov 2021

² GSA, 5G Ecosystem February 2022

Australia is currently a world leader in the deployment of 5G and economic modelling by Deloitte Access Economics shows that 5G will increase Australia’s Gross Domestic Product (GDP) by \$67 billion in 2022 dollars by 2030. Further, accelerating 5G adoption could add an uplift of \$27 billion to the current forecast.³

Mid-band spectrum and the need to plan ahead

AMTA is of the view that the Australian market will need approximately 8 GHz in total spectrum assignments for IMT by 2030, as outlined in our spectrum policy position paper, *Future Spectrum Requirements for 5G and Beyond*.⁴ In doing so, AMTA is not suggesting that the ACMA adopt a target-setting approach to the FYSO work program.

In fact, we support the current band-planning process in the FYSO and agree that it has been a flexible and responsive way of addressing changes in spectrum demand and ensuring the delivery of spectrum to market. Through this process, which has been in the FYSO for at least 5 years, the ACMA has kept mobile broadband (MBB) — and now more broadly wireless broadband (WBB) — at the forefront of its work activities, and has progressed the pioneer 5G bands in C-band and mmWave, along with the 850/900 MHz auction and the optimization of 2.3 GHz, 800 MHz and 1800 MHz.

The spectrum demand forecasts were commissioned to provide a substantive and rigorous analysis of this complex area and support AMTA’s high-level position that Australia needs to remain vigilant and proactive with respect to spectrum for 5G and beyond, and that we cannot be complacent on the matter. As such, AMTA considers it critical for Government to adopt a long-term perspective on spectrum demand.

AMTA sees mid-band spectrum as the next immediate priority for allocation to ensure sufficient spectrum is available in a timely manner for the continued enhancement of Australia’s 5G mobile networks. An Australian analysis by Coleago⁵ shows that in Sydney there is a need for 1,230 to 1,440 MHz of mid-band spectrum compared to 703 MHz currently assigned to operators. Therefore, to deliver the city-wide 5G user experience in an economically- and technically-feasible manner in the 2025-2030 timeframe, an additional 527 to 757 MHz of mid-bands spectrum is required. For Melbourne an additional 587 to 827 MHz is needed and for Brisbane it is an additional 379 to 569 MHz. This is summarised in the Exhibit below.

As per the GSMA’s report on *The Socio-Economic Benefits of Mid-Band 5G Services*⁶, mid-band spectrum will drive an increase of more than \$610 billion in global GDP in 2030, **producing almost 65% of the overall socio-economic value generated by 5G**, which adds further weight to the view that mid-band is the “heavy-lifter” of 5G spectrum. However, this estimate depends on adequate mid-band spectrum being available—an average of 2 GHz per country by 2030 according to GSMA.

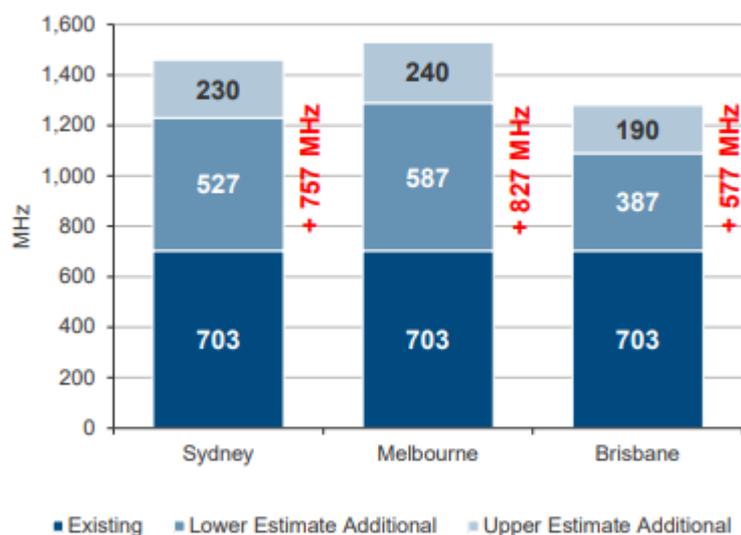
³ Deloitte Access Economics [5G Unleashed](#), March 2022.

⁴ AMTA spectrum policy position paper, [Future Spectrum Requirements for 5G and Beyond](#), Nov 2021

⁵ Coleago, [Demand for mid-band spectrum in Australia](#), Nov 2021

⁶ GSMA, *The Socio-Economic Benefits of Mid-Band 5G Services*, available here: <https://www.gsma.com/spectrum/resources/mid-band-5g-spectrum-benefits/>

Exhibit 1: Mid-band spectrum requirement for Australian cities



Source: Coleago

AMTA submits that Australia must start now to formulate a forward-looking policy position for mobile spectrum requirements into the next decade and beyond to ensure we are able to meet growing demand and retain and build on our 5G leadership as the new measure of global competitiveness.

Determining the highest value use of spectrum

The *Radiocommunications Legislation Amendment (Reform and Modernisation) Act 2020* (“the Modernisation Act”) has introduced an increased level of regulatory discretion for the ACMA in terms of both its roles in spectrum management activities as well as in its ability to determine the appropriate spectrum licensing arrangements for different spectrum bands. While we welcome this increased flexibility and its potential to lead to increased efficiency in how spectrum is managed, we are cautious about the need to match this with increased transparency around decision-making so that discretion is proportionately balanced with commensurate accountability.

In particular, we suggest that the ACMA could be more transparent with regard to how it determines the highest value use of any spectrum band. We understand that such a calculation will always involve both qualitative and quantitative analysis (including factors that are difficult to quantify such as community interest, public safety/national interest and public policy considerations), however, we consider that the ACMA should provide more information to stakeholders about how it determines highest value use. This would, in turn, enable the spectrum community to better understand, at a more granular level, exactly what evidence we need to provide to the ACMA in terms of demonstrating demand for additional spectrum as well as justification for one use over another competing use for the same spectrum.

For example, we note that the ACMA’s decisions around the 3700-4200 MHz band have not entirely addressed AMTA’s contributions to the demand quanta. AMTA also maintains

reservations with the ACMA’s proposal to use AWLs for LA WBB deployment for 3800-4000 MHz, and with the ACMA’s current preference to allocate 3750-3800 MHz for AWLs in Regional areas (albeit in lieu of other spectrum lower in the band within the range 3475-3542.5 MHz). Although we understand that these objectives come from government policy beyond just the remit of the ACMA—for example in the Ministerial Policy Statement (MPS) on 3.4-4.0 GHz⁷—we do not agree with spectrum uses being determined by qualitative characteristics such as “diversity of use cases”. This should only be a factor for consideration where it is proven that such diversity does indeed lead to a higher economic value than if it were not supported. While such economic considerations were carried out years ago for the re-planning of the 3.6 GHz Band, we have not seen any such modelling for subsequent decisions to make spectrum available for AWLs⁸.

To summarise, AMTA does not support the ACMA’s previous conclusion that 100 MHz of contiguous spectrum for each WA WBB operator is sufficient for this band. AMTA’s Spectrum Policy Position Paper provides evidence of the need for an additional approx. 300 MHz of mid-band spectrum, by the middle of this decade, noting that in order to make contiguous allocations, a restack is required. As much as possible of this demand should be satisfied within the 3.4-4.2 GHz frequency range.

We therefore welcome further ACMA guidance and clarity on the types of information being sought from industry to ensure the information is relevant for informing the ACMA’s decision making processes.

⁷ Department of Infrastructure, Transport, Regional Development and Communications, 10 February 2022, *Ministerial policy statement for the 3.4-4.0 GHz spectrum band*,

<https://www.infrastructure.gov.au/department/media/news/ministerial-policy-statement-34-40-ghz-spectrum-band>

⁸ Pivotel has a different view on the issues mentioned in this paragraph and will present its views in its individual response to the FYSO 2022-27.

Part 2: The 2022-27 work program

AMTA notes the considerable number of activities in the work program and the corollary effect this has in terms of resource management for both the ACMA and for industry stakeholders. We appreciate the ACMA's efforts to balance progress of the work program activities with the need to ensure effective engagement with stakeholders via consultations and collaborative processes, including Technical Liaison Groups (TLGs). Consultations are likely to require longer timeframes if the ACMA adopts a "reply comment" approach—mentioned later in this response under "*Approaches to consultation*". We note that the challenge of resourcing is shared equally by the ACMA and stakeholders. We strongly support the need for the ACMA to be adequately resourced to effectively and efficiently implement the commitments contained in the work program.

We have outlined our views below on industry priorities for the forward work program, acknowledging that there is also significant work to be progressed by the end of 2023 with regard to the technical optimisation of bands. In our 2021 response to the draft FYSO, we noted that this would likely make 2022 the "year of harmonisation" due to the technical work required to harmonise the bands for 5G. This will need to continue well into 2023, although we recognise that the release of significant quanta of spectrum in the range 3.4-4.0 GHz is a major re-planning exercise — further propelling Australia into a "world-leading" position in terms of 5G spectrum — which is well beyond the scope of the optimisation and harmonisation activities referred to above and which will require significant ACMA, government and industry resources.

Industry priorities

AMTA supports the detailed work program, and we have outlined below industry's relative priorities in relation to making further spectrum available for 5G.

In general, AMTA's view is that the optimisation of the spectrum licence technical frameworks (SLTFs) at the implementation stage should be prioritised over the progression of other bands in the earlier stages. This does not mean that other bands *cannot* be progressed, or that bands need to be progressed *sequentially*, rather that resources should be focused on the completion of the highest priority bands.

Given these current activities and priorities, AMTA members have the following priorities in terms of the forward allocation workplan:

1. **3.4-4.0 GHz:** AMTA sees the need to make more mid-band spectrum available as the first priority for industry and we see the 3700-4200 MHz as the highest priority in terms of its potential to make more mid-band spectrum available for 5G. Our position in relation to this band was outlined in our submission responding to the ACMA's planning options paper.

We commend the ACMA for having made significant progress on the re-planning of the band 3.4-4.0 GHz over the past 12 months. We note that there are two concurrent

consultations related to this frequency range, in response to which we have just provided our views. We support the continued TLG work to be carried out in 2022 in relation to making spectrum available for WBB in metro and regional areas in 3800-4000 MHz.

2. **Review of 700 MHz and 2.5 GHz SLTFs:** AMTA supports the ACMA on including projects that consider optimising existing SLTFs in its work program. AMTA notes that we support the completion of the 2 GHz TLG (which is already underway), but that the band is not a priority for 5G at this time.
3. **1800 MHz in Remote Areas:** We note that the 1800 MHz is a key band for 4G/5G services, and we support the ACMA's plan to release a discussion paper in Q3/Q4 2022, which may consider reallocating this band in remote areas, potentially completing national spectrum licensing of this band.
4. **600 MHz Band:** AMTA notes that the 600 MHz band is likely to be the most promising source of further low-band spectrum for 5G. We strongly support maintaining 600 MHz in the band-planning process, even if at the Monitoring stage for now, considering that it is the subject of higher-level government processes. AMTA understands that the Government's broadcasting reform agenda is still in its early stages with the consultation of the Media Reform Green Paper concluding one year ago. In AMTA's response to the 2021 draft FYSO, we suggested that the ACMA could undertake further work in parallel to the policy reform process, to consider various options in relation to future use of this spectrum, should segments of this band be freed up as an outcome of broadcasting policy reforms. In this regard, AMTA is pleased with the Government's announcement of the Television Futures Research Program and that part of this is for the ACMA to carry out technical research on restack channel planning and licensing.
5. **Additional Mid-Band spectrum:** While we appreciate the ACMA's decision to recommend a re-allocation of the bottom 100 MHz (3700-3800 MHz) for spectrum licensing, we remain concerned there will be insufficient mid-band spectrum for IMT to satisfy forecast demand for the remainder of this decade (i.e. until 2030). We have outlined in Part 1 of our submission the substantial contribution IMT currently makes, and will continue to make to Australia's GDP and economic prosperity. Noting AMTA's earlier comments in the AMTA Policy Position Paper on Spectrum for 5G and Beyond (Nov 2021), additional mid-band spectrum may need to be brought to market by 2025—this could be in the order of half of the total 800 MHz additional mid-band spectrum forecast by 2030. We note that the main mid-band spectrum targets are in 3.4-4.2 GHz (addressed above), as well as in 4.4-5.0 GHz and in the 6 GHz band. At this stage it is difficult to quantify how much of this spectrum demand is being addressed by the imminent auctions and allocations in the range 3.4-4.0 GHz, noting (a) co-existence issues severely impacting the utility of Urban Excise spectrum, (b) AWL-licensing of 3800-4000 MHz, and (c) that potential competition limits are yet to be determined. What seems clear is that there will need to be progression on at least one

of the other mid-band spectrum targets—4.4-5.0 GHz and 6 GHz—in the longer term. Further detail below.

6. **mmWave spectrum ~40 GHz:** AMTA considers that further investigation of additional mmWave spectrum, such as the 40 GHz band, is not a short-term priority for industry, with the preferred timeframe for such work to commence being 2024. That said, we note that there is significant interest from the satellite industry in the spectrum between 40 and 50 GHz. If ACMA is planning to progress these bands, they should be considered in the context of coexistence between FSS and IMT services, because the mobile industry is indeed very interested in these bands for supporting long-term future growth. In this regard, we again refer to AMTA’s Spectrum Policy Position Paper, which identifies a potential future requirement for an additional 3.6 GHz of mmWave IMT spectrum by 2030.

Other band-specific comments

1.5 GHz Band

In the context of provision of additional mid-band spectrum, the 1.5 GHz Band could be important in addressing longer-term demand for mid-band spectrum. However, we note this band has complex incumbency issues, particularly in rural & remote areas, which support services used to meet Universal Service Obligations (USO).

AMTA’s view is that the highest value use of the band in the long-term remains WA WBB via spectrum licensing, at least in metro areas.

We will provide further details about our views in response to the review of the 1.5 GHz band consultation paper that was released on 5 May 2022.

4.5/4.8 GHz Bands

AMTA notes that the ACMA is monitoring international developments in the 4.4-5.0 GHz band. This band, standardized by 3GPP as band n79, is becoming increasingly popular for mobile broadband (5G). Although the market is at an early stage, an increasing number of countries are considering this spectrum for IMT. Sub-bands in the 4400-5000 MHz range have co-primary mobile allocations. At WRC-19 over 40 countries identified some of the spectrum in the upper part of this range for IMT. A few countries have assigned spectrum in this range already. Specifically, in ITU Region 3; China, Hong Kong SAR, and Japan have assigned spectrum; in Region 1 South Africa has assigned spectrum in this range. As noted by the ACMA in the FYSO (pg 28), Brazil and Russia are also considering use of all or part of the 4400-5000 MHz band for WBB.

Recalling the WRC-15 preparatory process and specifically WRC-15 Agenda item 10 considering the WRC-19 Agenda, domestically Australia did not support the study of 4500-4800 MHz due to sensitivities around Appendix 30B of the Radio Regulations (RR), in addition to the Defence

incumbency which also complicates the 4.5 and 4.8 GHz Bands (as defined in the FYSO). Noting the international progress on the broader range 4.4-5.0 GHz, we believe that avoiding discussions on the band 4500-4800 MHz due to Appendix 30B is no longer justified, particularly noting that this band is not used for FSS downlinks in Australia. The current 4.5 GHz and 4.8 GHz Bands in the FYSO only consider the bottom 100 MHz and top 190 MHz, but ignore the 300 MHz in between. As such, **AMTA requests the inclusion of the range 4500-4800 MHz in the Monitoring stage of the FYSO.**

We leave it to the ACMA to decide whether to package the entire range 4.4-5.0 GHz into a single band (noting that comments made on the 4.5 GHz band on pg 28 are also relevant to the 4.8 GHz band on pg 29), or to introduce a new “4.6 GHz” or “4.7 GHz” Band to cover the 4500-4800 MHz range in between.

6 GHz Band

We also note the opportunities for additional mid-band spectrum in the 6 GHz band and our views on this band have been outlined in our submission in response to the ACMA’s 2021 consultations on RLAN use in the 5 GHz and 6 GHz bands.

Globally, 6 GHz is emerging as the main option for the expansion of 5G mid-band spectrum.

- The 6 GHz band has the potential to offer multiple operators access to large contiguous bandwidth to meet 5G mid-band needs—noting that in Australia there are incumbency & coexistence issues, primarily with fixed links, that need to be resolved.
- 6 GHz has wide support across the mobile industry: a GSMA survey finds that 90% of mobile operators see 6 GHz as high priority for the future.
- 3GPP standardisation work on 6 GHz as a new licensed IMT band is ongoing and is scheduled for completion by this year.
- The entire frequency range 6425-7125 MHz is already allocated to the mobile service on a primary basis.

Under WRC-23 Agenda item 1.2, the main band of interest for Australia is the 6 GHz Band (6425-7125 MHz). AMTA is working within the Government’s WRC-23 preparatory process to advocate for Australia’s support for the band 7025-7125 MHz to be identified for International Mobile Telecommunications (IMT) in Region 3 (Australia’s Region, the Asia-Pacific). The remainder of the band was not included for study in Region 3, although it is being studied for identification for use by IMT in Region 1—Europe, Africa and the Middle East. While it is not appropriate for Australia to be directly involved in the matters of Region 1, Australia could indeed benefit from device ecosystems emerging overseas if the band was successfully identified for IMT in Region 1 (or a significant part thereof). As such, **domestically, the entire 6425-7125 MHz should be maintained in the Band-planning process.**

In light of the above, and noting the ACMA’s response in its Outcomes paper⁹, we don’t agree with the ACMA’s decision that the WRC-23 outcomes are of less importance because only 100 MHz are

⁹ ACMA, March 2022, Proposed updates to the LIPD Class

being considered in Region 3. That said, in the Outcomes paper, the ACMA has recognised that it's important to monitor international harmonisation and standardisation developments, and we support the ACMA in this more cautious "wait-and-see" approach, especially noting that an additional 500 MHz has recently been made available for WiFi. Our main concern is that a rushed decision to make a further 700 MHz available for WiFi will be impossible to reign in after these class-licensed devices begin to proliferate, if it proves to be the wrong decision.

In our Spectrum Policy Position Paper and our response to the 6 GHz consultation¹⁰, we referenced the Windsor Place Consulting (WPC) paper¹¹, which made the case for partitioning the broader 6 GHz band for WiFi in the lower 500 MHz and IMT in the upper 700 MHz. Earlier this year, GSMA released a cost-benefit analysis¹² showing that socio-economic benefits of this same partitioned configuration are greater compared to those under an "all-WiFi" scenario, i.e. one with all 1200 MHz across the lower and upper bands being allocated to 'unlicensed' uses.

Lastly, we note the ACMA's statement that "*arrangements already exist in Australia for RLANs in the 5150–5350 MHz band (for low power indoor use only) and the 5725–5850 MHz band*". For completeness, this should also list the bands 5470-5600 MHz and 5650-5725 MHz, for which there are also provisions for RLAN in the LIPD Class Licence.

13 GHz (12.75–13.25 GHz)

In Australia, the 13 GHz band is currently used to support fixed point-to-point (PTP) services and television outside broadcast (TOB) services. Our members use this band extensively for the provision of fixed microwave links. As the consultation paper acknowledges (p.30), there are over 2200 PTP links licensed in the band. While we acknowledge there is a growing interest from the satellite community in this band, it is important for the current arrangements in the 13 GHz band supporting PTP links to continue.

Microwave fixed link bands

Mobile network operators (MNOs) currently use microwave fixed link bands for network backhaul more generally, and also to provide connectivity to rural and remote areas where fixed-line connectivity is not viable. As data traffic demand increases, so too does the demand for backhaul capacity. As such, we believe that this justifies the consideration of facilitating wider channels 112

Licence for 6 GHz RLANs—Outcomes paper

¹⁰ October-December 2021, ACMA, *Radio local area networks (RLANs) in the 6 GHz band - consultation 37/2021*, available here: <https://www.acma.gov.au/consultations/2021-10/radio-local-area-networks-rlans-6-ghz-band-consultation-372021>

¹¹ Windsor Place Consulting, October 2021, *Optimising IMT and Wi-Fi mid-band spectrum allocation: The compelling case for 6 GHz band partitioning in Asia-Pacific*, available at: https://www.mcmc.gov.my/skmmgovmy/media/Spectrum-File/23b_WPC.pdf

¹² January 2022, GSMA, *The socioeconomic benefits of the 6 GHz band*, <https://data.gsmaintelligence.com/api-web/v2/research-file-download?id=69042233&file=310121-The-socioeconomic-benefits-of-the-6-GHz-band.pdf>

MHz wide in the microwave bands 6 GHz, 8 GHz and 18 GHz. Furthermore, we request wider channels 28 MHz wide in the 7.5 GHz Band, which is currently limited to 14 MHz max.

Lastly, the 13 GHz band can be optimised by swapping PTP links on Channel 5 (both in the Main and Interleaved rasters) with TOB services on Channel 4 such that the PTP links would be consolidated in the bottom 4 channels of the band and the TOB services to the top 4 channels. This would then allow for introduction of wider channels i.e. 56 MHz channels which will support higher capacity backhaul radio links and further improve the efficiency of this band.

Terahertz spectrum

The ACMA has noted early developments with respect to “terahertz” spectrum above 100 GHz, increasing interest in this spectrum frontier, and asked questions about whether Australia should follow the UK and the US in establishing dedicated spectrum management arrangements, or wait for technological and business landscape becomes clearer. Noting the current loading of the workplan and the requirements for additional low- and mid-band spectrum over the horizon, we believe that terahertz spectrum is of low priority, and that a “wait-and-see” approach should be adopted, rather than investing stretched resources on investigating this spectrum.

Technical Liaison Groups – working together effectively

AMTA believes that the continued preparation of spectrum to be “5G-ready” will require industry and the ACMA to focus on optimisation work in relation to several bands via further TLGs.

AMTA members agree on the following priorities for the TLG work program over 2022 and 2023:

- 3.4-4.0 GHz
- 1.8 GHz in Remote areas
- 2.1 GHz
- 700 MHz optimisation
- 2.5 GHz

AMTA also notes that the ACMA work program in relation to the review of spectrum licence technical frameworks is substantial and that it is not always easy to predict how straightforward the consultation process around the review of a technical framework will be.

AMTA does have some concerns regarding how the consultation processes around some of the TLGs have progressed over the past two years.

In particular, AMTA notes that TLGs necessarily include a broad range of stakeholders, all with varying concerns at stake in the outcome of the technical framework. However, despite varying levels of risk between stakeholders, the contributions/or lack of contributions from any particular stakeholder hold no more or less weight than any other.

AMTA suggests that for TLGs to work effectively, TLG stakeholders must be reasonably compelled to provide evidence and substantiation of claims made in any TLG as the TLG process can only be successful when all stakeholders participate within a co-operative, collaborative forum and no single participant is able to unnecessarily or unreasonably delay or deter a fair and equitable outcome for all parties.

Specifically, we suggest that the TLG process should be punctuated with appropriately timed and scoped, ACMA-facilitated discussions to ensure that all participants, from multiple industries and spectrum use cases, have the opportunity to understand the ACMA's intent and objectives for any given TLG as well as the views of other participants. For example, one way to achieve this would be to have a general discussion one week after the commencement of a TLG to identify major issues, complemented by issue-specific discussions if enough participants feel that to be necessary.

Approaches to consultation

We will consider the ACMA's proposal to adopt a consultation period (e.g. 60 days) followed by "reply comment" period (e.g. another 30 days)—in which industry reviews the responses from the rest of industry—and provide our views in due course.

Licensing and licensing systems

AMTA notes the work being undertaken in relation to licensing activities for 2022-23, partly as a result of the implementation of the Modernisation Act. We will continue to engage with the appropriate ACMA teams in relation to most of the project priorities outlined in the table at page 59 of the FYSO. We have particular interest in the review of prohibition declarations and exemption determinations, as well as, drone regulation, the RNSS repeater trials and the ongoing trial of mobile phone jammers in NSW prisons.

Renewal processes

AMTA notes that the 800 MHz and 1800 MHz bands—due to expire in 2028—will be the first set of spectrum licences to be renewed under the auspices of the new legislative framework established by the Modernisation Act. We support the ACMA's view that licence renewal should start to be considered 5 years from expiry, and appreciate the ACMA's inclusion of the 800 MHz and 1800 MHz spectrum licence renewal in its Forward allocation workplan.

We note that—in relation to the renewal processes for expiring spectrum licences and the matters that the ACMA would consider in assessing whether the renewal is in the public interest—the ACMA states that one matter that it may consider is whether or not the spectrum is in use. Further, it refers to a 'precedent' related to AWLs where the ACMA has stated that it may decide not to renew AWLs if they have not been used.

AMTA stresses that spectrum licences and AWLs are not comparable in this context, and so the ACMA's considerations regarding "use-it-or-lose-it" for AWLs are not applicable to the case of spectrum licences. Spectrum licences—and indeed AWLs in populated areas and/or where

demand exceeds supply—are subject to competitive bidding process and/or high costs for access to the spectrum which make it unlikely that a licensee would obtain a licence without good reason. However, the fact that AWLs can cover any area with a high-degree of granularity—including *inter alia* the intentional avoidance of populated areas and/or application for small bandwidth—means that they can easily be applied for over-the-counter without significant investment by an applicant. This can lead to anti-competitive behaviour including outright “spectrum squatting” which does indeed warrant having a “use-it-or-lose it” condition for AWLs.

Compliance and international engagement

As per previous AMTA responses to draft FYSOs, we wish to express our support for the ACMA to remain heavily involved in and leading on compliance & international regulatory activities. It is of utmost importance for the ACMA to be adequately resourced to carry out these duties.

Sunseting Instruments (Appendix A)

We note that the *Radiocommunications Advisory Guidelines (Additional Device Boundary Criteria – 1800 MHz Lower Band) 2012* is the only SLTF document that the ACMA is considering allowing to sunset. We note that this instrument supports continued operation of fixed link transmitters under spectrum licences in the band, which do not align with the FDD duplex arrangement employed for the WBB services in the band, and under which only low-site, low-power transmitters operate in the 1800 MHz Lower Band. As such, we recommend that this instrument be included with the other 1800 MHz SLTF instruments and labelled as “Q4 2022: consult”.

Conclusion

AMTA recognises and appreciates the efforts of the ACMA in planning for and progressing spectrum bands for 5G and looks forward to continued engagement across the work program.

Contact:

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