

28 April 2021

The Manager
Spectrum Management Outlook and Strategy Section
Spectrum Allocations Branch
Australian Communications and Media Authority
PO Box Q500
Queen Victoria Building NSW 1230

Via email to: spectrumworkprogram@acma.gov.au.

Re: Consultation on draft FYSO 2021-26

Dear Sir or Madam,

Omnispace Australia Pty Ltd ("Omnispace") appreciates the opportunity to submit a response to the Australian Communications and Media Authority's consultation draft of the "Five-year spectrum outlook 2021–26 work program" ("draft FYSO 2021-2026").

Omnispace provides its views and comments in response to the consultation issues for comment, and in particular on the implementation of the new 2 GHz MSS/CGC and satellite IoT services.

Background on Omnispace

Omnispace is particularly interested in the 2 GHz band implementation because the company is the owner and operator of the only currently on orbit global non-geostationary orbit ("NGSO") satellite system in the 2 GHz S-band (1980-2025 MHz earth-to-space / 2170-2200 MHz space-to-earth) that has been brought into use in accordance with applicable International Telecommunication Union ("ITU") regulations. Omnispace is leveraging over AUD\$1 billion of assets the company has acquired to deploy a global constellation in non-geostationary orbit (NGSO) to provide mobile-satellite service (MSS) and hybrid connectivity.

Omnispace is managed by veteran satellite industry executives and has investments from leading private equity firms and strategic partners with a successful track record in the wireless and satellite domains. Omnispace's shareholders include Columbia Capital LLC, Telcom Ventures LLC, Greenspring Associates, Fortress Investment Group, and Intelsat S.A.

Omnispace is currently offering MSS capacity in various markets through its existing operational on-orbit F2 satellite network. The F2 satellite network is the first element of the

NGSO constellation that will be capable of providing 24 x 7 coverage around the globe ("Omnispace System").

Omnispace's MSS Complementary Ground Component (CGC) system can provide a broad range of services, including a wide array of possible commercial and government communications:

- **Industries:** Commercial MSS services to enterprises in agriculture, mining, fishing, etc.;
- **Hybrid:** In areas that are lacking in coverage or capacity due to blockage or density;
- **Connectivity:** Internet connectivity in rural and remote areas;
- **Emergencies/Public Safety:** Communications during natural and man-made emergencies, as well as disaster warnings to the public and government agencies;
- **Defence:** Increased capacity and resiliency for mobile defence applications;
- **Internet of Things (IoT):** Connected car applications, smart city (urban and rural), transportation and logistics (on-shore and off-shore);
- **Unmanned Aerial Vehicles:** situational awareness for disasters such as fires, damage caused by weather events, delivery, insurance inspections; and
- **Aviation Networks:** hybrid network that utilizes both satellite and terrestrial networks to provide Internet access to airline flights.

Built around globally harmonized spectrum in the 2 GHz band and advanced technologies, the Omnispace System is ideally positioned to provide a wide array of commercial and government communications needs, subject to requisite licences and approvals. To that end, Omnispace appreciates ACMA renewing our Scientific Apparatus licence to conduct an experimental IoT agricultural service in the 2 GHz band.

Thank you again for the opportunity to provide comments on the Australian Communications and Media Authority's "draft FYSO 2021-2026" consultation paper. Omnispace is pleased that the ACMA is now planning the implementation of the 2 GHz band to facilitate the timely introduction of important new services. The Omnispace comments on the Consultation Paper are presented in Attachment 1.

Please contact me should there be a need for clarification or additional information.

Sincerely,

Les Davey ph: 0418 312 134
Managing Director
Omnispace Australia Pty Ltd

ATTACHMENT 1

Introduction

Omnispace is pleased to have the opportunity to provide these comments on the Australian Communications and Media Authority's "Five-year spectrum outlook 2021–26 work program" consultation draft ("draft FYSO 2021-2026"). Having participated in all of the ACMA previous proceedings related to the 2 GHz band replanning, the implementation of the outcomes to introduce MSS/CGC and satellite IoT services is the most important issue for Omnispace in this FYSO.

Omnispace considers that following the outcomes of the replanning of the 2 GHz MSS S-band, planning for early implementation of MSS/CGC should be undertaken in this FYSO period.

The discussion in the FYSO indicates that implementation has to wait for the existing TOB services to be transitioned to new arrangements anticipated to occur over 5 years. This is far too long, and Omnispace urges the ACMA to develop a transition mechanism that would allow an expedited transition of TOB to MSS/CGC when determining the method of allocation for MSS/CGC and satellite IoT services, for which there is an immediate demand. The ACMA should also establish a Technical Liaison Group to determine the technical sharing conditions, and adopt the appropriate regulatory framework to reinclude this band under Class licencing.

These activities should be scheduled and included in Table 1 (Band planning activities).

Rapid implementation will facilitate the timely introduction of innovative new services in Australia, which are of a very high value compared to the existing limited and intermittent services being provided by TOB.

As evidenced by the responses to the ACMA's 2019 Planning the 2 GHz Band discussion paper, there is strong interest from various companies in providing service using the S-band in Australia. Many other countries have recently licenced the band or are undertaking regulatory proceedings to determine how to licence the 2 GHz band, including Mexico, New Zealand, Brazil, and Saudi Arabia.

Many of these countries have noted the advantages of licencing hybrid satellite/terrestrial systems such as supporting innovative services to isolated and rural communities, leveraging the global allocation for both MSS and MS, the spectrum efficiency of getting two services for one allocation, and having end-to-end connectivity for proliferating IoT systems whether urban, suburban or rural.

Issues for Comment

In this section, Omnispace responds specifically to the issues for comment that have been raised by the ACMA's draft FYSO 2021-2026.

Part 1

1. **Do you have any feedback on the ACMA's approach to the five-year spectrum outlook?**

Omnispace applauds ACMA's efforts to inform stakeholders of its upcoming priorities and plans as such a transparent process provides information that is essential for not just Australian businesses, but for global satellite enterprises like Omnispace. In addition, Omnispace supports ACMA's approach to the FYSO as it provides an opportunity for satellite operators to advise ACMA of important developments in the fast moving satellite industry, and how early planning and implementation for these services can benefit Australia.

2. **Are there other technology developments or sources of spectrum demand that the ACMA should be aware of in considering spectrum management over the next 5 years?**

Omnispace believes that one of the technology developments that the ACMA should be watching during the next 5 years is 5G Non-Terrestrial Networks (5G NTN). 5G NTN is a valuable solution to complement terrestrial networks in countries like Australia with large unserved and underserved geographical areas. 5G NR (New Radio) NTN is currently being standardised at 3GPP and is expected to be included in Release 17, which is in its final stages of review. 5G NTN is the latest innovation in MSS/CGC services which the ACMA has already determined to licence in Australia. However, the apparent delay in licensing MSS/CGC as indicated in the draft FYSO 2021-2026 may cause Australians to miss out on this state-of-the-art technology that is designed to satisfy requests of anywhere/anytime connections by offering wide-area coverage and ensuring ubiquitous service availability, continuity and scalability.

Part 2

3. **Do you have any feedback on the ACMA's plans for monitoring, initial investigation, preliminary replanning or implementation of bands?**

As already stated in the introduction above, the potential delay of 5 years in the implementation for the replanned 2 GHz band is far too long and Omnispace urges the ACMA to develop a mechanism that would allow an expedited transition of TOB to MSS/CGC. Because there is an immediate demand for MSS/CGC licences, various alternatives exist to provide incentives to the TOB licensees to transition earlier and ACMA should explore those before determining the method of allocation for MSS/CGC and satellite IoT services. In addition, because the deployment of TOB in the 2 GHz S-band is uniquely Australian, moving the few TOB licensees to other bands, such as the 7 GHz band, where there is more equipment available should result in long-term savings due to economies of scale.

4. Do you have any comments about the ACMA's approach to forward allocations?

In Table 1 of the "Band-planning and forward spectrum planning" section of the draft FYSO 2021-2026, the approach to the 2 GHz band is a bifurcated process, whereby the consultation paper on updates to RALI FX 3 is scheduled for Q3 2021 and the consultation on updates to the TOB band plan is scheduled for Q4 2021. To advance the process of replanning the 2 GHz band, the ACMA should consider running these two consultations simultaneously in Q3 2021 as they are closely related to one another. This would have an additional benefit of giving the ACMA more time to develop and explore applicable transition mechanisms to allow an expedited transition of TOB to MSS/CGC.

As already stated in the introduction above for the 2 GHz replanning implementation, Table 2 should be revised to implement new MSS/CGC and satellite IoT services much quicker than the Q3 2023 apparatus licence date. Making operators wait more than two years for a licence to provide MSS/CGC service when the ACMA is aware of interest in this band is too long. Moreover, for new services not to be able to commence until TOB services have transitioned to new arrangements, which is anticipated to occur over 5 years, lengthens the time to deploy innovative 5G NTN as described in our response to question 2.

5. Do you have any other comments on Part 2?

No further comments.

Overall: FYSO format

6. How do you use the FYSO (for example, read once a year or regularly refer to)?

Omnispace's main use of the FYSO is in the consultation phase to be advised of ACMA's forward planning, and to make a submission to advise ACMA of the issues that are of critical importance in Omnispace's business planning for its Australian service/s.

7. Do you find the 6-month and annual progress reports useful?

Omnispace finds all ACMA reports useful in Omnispace's business planning for its Australian service/s, as well as its global services.