

**Sirion Global comments on
New Approaches to Spectrum Sharing Consultation, IFC: 25/2019**

23 September 2019

Introduction

Sirion Global is pleased to provide this submission in response to ACMA's consultation on new approaches to spectrum sharing. Sirion has proposed a novel method of sharing spectrum between terrestrial mobile and mobile satellite in response to ACMA's 2 GHz band consultation.

The approach Sirion is proposing will enable the most efficient use of the 2 GHz band, bringing greater benefits to users across Australia.

Response to Discussion Points

1. *Given current momentum in international markets and opportunities for other sharing modes offered by 5G technologies, is it timely to develop a more detailed consideration of spectrum sharing opportunities in Australia?*

Yes. It is worthwhile for the ACMA to take the time to ensure the most efficient use of spectrum through spectrum sharing, where it makes sense. To this end, ACMA should examine band specific approaches, given that each frequency band is different - including its technical characteristics, its incumbent uses and the like.

2. *Are there recent developments in sharing techniques that industry and ACMA should be aware?*

As the ACMA recognized in its 2 GHz consultation, sharing between mobile satellite and terrestrial has been successful in other parts of the world through a regime whereby a single operator is licensed for both the space and ground components. Such interservice sharing by a single operator has the benefit of having two ubiquitous uses being able to share the same frequency band in a fully coordinated basis. This provides the ability for a network operator to utilize space-based and ground-based technologies in a manner that makes the most sense based on the demands and requirements of the users.

3. *What are the (potentially new) use cases that might benefit from secondary or tertiary access to spectrum and who benefits?*

In the case of the 2 GHz band and a mobile satellite service with a ground component being authorised, the internet of things is a very good example of a still burgeoning use case that could benefit. The satellite/ground component operator will be able to deploy a network for IoT that is global and can provide service in rural and urban areas in the most efficient manner possible.

4. *What are the potential challenges/impediments to the introduction of DSA in Australia - technical, industry capability, licencing and regulatory frameworks?*

DSA does not seem compatible with satellite services, particularly in the 'space transmit' segment or where a low power low gain system, such as in IoT applications, is present. It would be difficult for a DSA system to sense transmitters in that environment.

5. *Facilitating spectrum access (e.g., monitoring, control, reporting, assignment) logically necessitates involvement for both government and industry. Are there any early thoughts on what an appropriate industry/government balance might look like? How might the ACMA facilitate shared spectrum access? How might the ACMA address this?*

No comment.

6. *What is the relevance of DSA examples such as the CBRS arrangements to the Australian spectrum environment? Are there other or lower cost alternatives to help inform access control and assignment systems of incumbent usage in a timely manner>?*

No comment.

7. *Under a multi-tier DSA approach:*

Tier 1 (highest priority or incumbent) users would be expected to share spectrum with lower tier users when not being utilised. Are there any specific licensing and/or other regulatory arrangements that might incentivise the tier 1 users to realise unutilised spectrum for lower-tier access?

Tier 2 and 3 users need to vacate spectrum (regardless of their service type or communications urgency) for tier 1 users to operate seamlessly. Do we see potential services/service types in Australia who fit the criteria of second or third tier users? What are the incentives to adopt a condition (lower priority) spectrum than an unconditional (full access) spectrum?

No Comment.

Conclusion

Sirion supports the efforts of the ACMA to facilitate sharing of the spectrum resource to enable its most efficient usage. However, any such effort must be decided on a band by band basis and should consider the technical uses of the spectrum, and the current incumbents. The 2 GHz band, like other bands that are allocated to both mobile satellite service and mobile service, is particularly well-suited to authorize mobile satellite service operators who can offer a ground component to their network. By so doing, the network operator can respond to the demands and requirements of users. This is especially important to support IoT services, which are ubiquitous in nature and operate in both urban and rural regions.

Accordingly, Sirion urges the ACMA to initiate a consultation to adopt licensing requirements for the 2 GHz band for mobile satellite service with a ground component licensee.