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Australian Competition and Consumer Commission's (ACCC)

Comments on the ACCC Consultation Paper "Allocation limits advice for the 26 GHz spectrum allocation" February 2020

In response to the Australian Competition and Consumer Commission's (ACCC) "**Allocation limits advice for the 26 GHz spectrum allocation**" published in February 2020 OneWeb submits the following comments.

Sincerely,

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Introduction

OneWeb is pleased to submit comments in response to this consultation. These comments are closely linked to previous submissions made by OneWeb to the ACMA's consultations concerned with 26/28 GHz planning, and the development of a technical framework for licensing of Wide area Wireless Broadband in the 26 GHz band, and FWA in the 28 GHz band[1], and the development of a technical framework for licensing of Wide area Wireless Broadband (WWB) in the 26 GHz band, and FWA in the 28 GHz band[2] . While the ACCC consultation primarily addresses competition related issues concerned with mobile WWB in the 26 GHz band that will be subject to spectrum licensing and focusses on the spectrum requirements for the provision of competitive services in this band, it nonetheless also addresses spectrum related issues of significant concern to stakeholders with an interest in the 28 GHz band that are not directly related to the provision of mobile WWB.

Specifically, the paper also addresses the topic of "*Potential use cases and demand for 26 GHz and 28 GHz*" in section 7. The OneWeb response is focused on this aspect of the consultation. In offering its remarks OneWeb wishes to emphasise the importance of recognising both the contents of the Government's "Communications Policy Objectives for the allocation of the 26 GHz band" [3] cited in the consultation together with recent ACMA's Planning decisions and follow up consultations concerned with the development of a technical framework for licensing of services in the 26/28 GHz band.

In this respect OneWeb wants to stress from the outset its view that that competition policy concerned with terrestrial 5G applications in the 26/28 GHz band should be considered in a broader context that takes due account of other services for which access to significant portions of the 26/28 GHz band is vital, and for which licensing regimes other than spectrum licensing are appropriate.

Background information on the OneWeb global satellite broadband initiative

OneWeb is a global telecommunications provider, headquartered in London in the United Kingdom. The OneWeb system will provide low latency, high capacity, connectivity solutions to customers through a new generation of low-earth orbit (LEO) satellites.
OneWeb believes that satellite systems have a key role to play in a multi-network broadband ecosystem, often in a complementary way to terrestrial telecommunication solutions.

[1] ACMA - *Future use of the 28 GHz band Planning decisions and preliminary views -SEPTEMBER 2019*

[2]*ACMA - Development of the 26 GHz spectrum licence technical framework Technical Liaison Group Consultation Paper - NOVEMBER 2019*

[3] https://www.communications.gov.au/documents/communications-policy-objectives-allocation-26-ghz-band

Satellites already play significant roles in today's 2G, 3G and 4G/LTE networks and are well placed to continue playing such roles for 5G networks. This is especially the case with the new generation of LEO satellites, such as OneWeb's, that will be able to provide low latency (<50msec delay round trip on RF paths), high-speed connections. OneWeb's satellite service will be supported by innovative low-cost user terminals that can provide 3G, 4G LTE, 5G and Wi-Fi connectivity, thus bringing high-speed access to surrounding areas of a satellite terminal independent of 5G terrestrial mobile cellular coverage.

OneWeb will enable terrestrial 5G operators to extend their connectivity to those places that are not so well-connected or will provide broadband connectivity where terrestrial networks would not or cannot otherwise reach (e.g. remote areas, aircraft, ships, and trains). OneWeb has commenced work on the establishment of three gateway uplink facilities in Australia that are critical to deliver broadband access to rural and remote areas in Australia and in the Asia-Pacific Region, as well as to mobile terminals for aeronautical, maritime and land applications. In order to truly broadband services required by existing and future applications in an efficient manner, OneWeb gateways require access to 3.5 GHz of bandwidth including the entire 28 GHz band allocated to FSS on a primary basis.

OneWeb's primary objective in responding to this ACCC consultation is to reiterate its position that unconstrained access to the 28 GHz band is a pre-requisite for not only OneWeb, but also for the satellite industry more generally to complete their mission to provide timely additional broadband access to rural and remote population areas both in Australia and worldwide, and to explain why this requirement will not impede the provision of competitive mobile WWB via a spectrum allocation in the 26 GHz band, or the provision of competitive FWA services under a range of licensing options in the 26 and 28 GHz bands.

The Government's mm wave 5G policy objectives and associated ACMA planning decisions.

It is notable that the Government's mm wave 5G policy objectives are focused on the 26 GHz band. This is echoed in the ACMA's planning decision for WWB where it is concludes that "*Considering all the competing demands for access to the 26 GHz and 28 GHz bands, the ACMA does not propose to develop arrangements for WWB in the 28 GHz band. It makes this decision, noting the 2.4 GHz of spectrum identified for WWB in the 26 GHz band and the fact there are numerous other mmWave bands under active consideration for WWB*" and clearly recognised in this consultation[4]

The ACMA came to this conclusion after receiving representations from mobile industry stakeholders that they were seeking up to 800 MHz of spectrum per operator, and also by taking into account the amount of

[4] From Introduction section 1.2. "*The ACMA plans to allocate a total of 2400 MHz of spectrum in the 26 GHz band across 29 defined areas. A list of these defined areas is provided at Appendix A.*"

spectrum made available for mm wave WWB in other developed countries for the provision of competitive services.

Noting that allocation decisions have already been made and that there are no indications that they are not supported by the Government, it is somewhat perplexing to now find the ACCC in its consultation (section 7) addressing matters concerned with "use cases" and "demand" that could be interpreted as potentially opening the door to for a subsequent re-examination of spectrum planning and allocation decisions based on competition related policy requirements, for example by posing questions 5 & 6 in section 7 namely "*We welcome stakeholder views on the likely intended use cases and demand for 26 GHz and 28 GHz spectrum*" and *"What do you consider is the optimal allocation of 26 GHz and/or 28 GHz spectrum to support your likely intended uses? What is the minimum allocation necessary?"*

OneWeb fully supports the development and implementation of sound competition policies and welcomes the initiative taken by the ACCC in addressing competition issues related to use of the 26 GHz for spectrum licensed WWB. We also acknowledge that the Minister has requested the ACCC to address apparatus licensing competition issues across the entire 26/28 GHz band[5] and see merit in so doing. We are nonetheless of the view that expanding the scope of the discussion to include issues of use cases demand along the lines of the question identified above is far too open ended and goes well beyond the Ministers request to the ACCC. Our major concern is that such questions could be interpreted to suggest that from the perspective of meeting the ACCC's competition policy objectives, the allocation of 2.4 GHz of spectrum in the 26 GHz band for spectrum licensed WWB may not be optimal i.e. inadequate, or that use cases other than the ones identified by the ACMA for 28 GHz in particular should be expanded to include mobile.

OneWeb is of the view that even if restricting the mobile element of WWB to 2.4 GHz in the 26 GHz band might be deemed sub-optimal based purely on competition criteria concerned with a specific service, this must tempered by other broader considerations such as ensuring sufficient spectrum allocations are made to facilitate the provision of other vital communications services by other technologies such as competitive satellite broadband and other types of terrestrial services. In this respect it is vital that the current planning decision to dedicate the 26 GHz band for WWB and retain the 28 GHz band primarily for satellite while precluding use of that band for mobile services and applications should be respected.

In relation to the provision of competitive terrestrial services under an apparatus licensing regime in the 28 GHz band, OneWeb again wants to reiterate its support for the ACMA's planning decisions. The ACMA has identified FWA and Point to Multi Point services as ones that have good prospect of viable sharing with satellite services in the 28 GHz band subject to the establishment of appropriate license conditions primarily

[5] The Minister has also asked that the ACCC consider whether there are any potential competition issues associated with the apparatus licensing regime across the entire 26 GHz and 28 GHz bands

aimed at protecting satellite services in the band. In general terms OneWeb supports the ACMA's technical conditions proposed in its recent consultations. The ACMA has clearly articulated the types of FWA and P-MP deployments that would facilitate sharing with satellite services, and is can reasonably be presumed that in making its allocation decisions they were mindful of the Final report on the "Review of the Australian Communications and Media Authority" dated October 2016 that dealt extensively with competition matters and the respective roles of the ACCC and the ACMA, and hence their obligation to consider competition related matters[6] in making its planning decisions.

It should be noted that for high population density areas, only 600 MHz is allocated on a primary basis for FWA/P-MP. This is underpinned by an assumption that spectrum in this band will be made available via a new type of "area based" apparatus license. It is evident that such a modest allocation is not suitable for the provision of competitive WWB services that require large blocks of contiguous spectrum per licensee (600 ~ 800 MHz) and wide areas such as those described in Appendix A of the consultation document.

However, if the intended FWA service is local or P-MP as is currently the case for Wireless Internet Service Providers (WISPS) and as envisaged by the ACMA in making its 28 GHz planning decisions, the situation is very different. For example coupling modest license areas with technical conditions appropriate for local area FWA or P-MP such as transmit power restrictions and maximum spectrum block sizes of around 200 MHz, many competitive services could be accommodated in the 27.5 to 28.1 GHz (600 MHz) primary allocation via a new type of area based apparatus licensing scheme[7].

Conclusion

The foregoing suggests that for the 26 GHz WWB case competition issues can be managed via the imposition of spectrum holding caps (allocation limits), and in the case of FWA or P-MP apparatus licensing in 28 GHz, no significant competition issues are likely to arise if the ACMA's planning decisions and associated technical framework proposals for licensing are maintained and the FWA and P-MP deployment concepts that underpin the ACMA's planning decisions are adhered to.

Furthermore from the perspective of a satellite operator it is crucial that recently announced planning decisions arrived at after extended in depth consultation with all interested stakeholders are not revised based on a simplistic notion that making more spectrum available for a particular service will be definition

[6] See Recommendation 18 of the Report stating that "*The ACMA have regard to the importance of promoting competition, innovation and efficient investment.*"

[7] The wide-area term introduced by the ACMA for a new type of apparatus license needs further explanation and clarification, however it seems it was adopted to differentiate the new license type from current apparatus licenses that are based on specific transmitter/receiver locations as distinct from areas. In the case of WWB it has been made explicit that this in the context of the requirement to license very large areas possibly Australia wide.

increase competition while ignoring broader spectrum allocation considerations that take account of the protection requirements and legitimate spectrum demands from other services.

REPLIES TO ACCC QUESTIONS

OneWeb provides the following answers on matters that are relevant to its interest:

3. Do you have any competition concerns about the relationship between spectrum and apparatus licences in the 26 GHz and 28 GHz bands? If so, how do you think these concerns should be addressed?

A: The services expected to be deployed in 26 and 28 GHz respectively will be different. For example WWB in 26 GHz and satellite and FWA in 28 GHz. As explained in the discussion section above OneWeb does not have any competition concerns provided the ACMA planning decisions are maintained. The Apparatus licensing framework proposed by the ACMA currently under review concerned with the development of a technical framework for licensing of services is most relevant whilst spectrum licensing is not.

5. What are the likely intended uses of 26 GHz and/or 28 GHz spectrum in Australia? Do you expect these intended uses to change over the term of the licence/s?

A: 26 GHz is suitable for IMT, as decided by WRC-19, which identified this band globally. The 26 GHz band together with other globally identified mmWave bands provide a total of 33 GHz of spectrum for IMT.
The 28 GHz band is not identified for IMT by the International Telecommunication Union and has been designated by ACMA primarily for satellite services with the exception of sharing with FWA in certain part of the band. OneWeb strongly supports this planning decision and will, like the rest of the satellite industry, use the 28 GHz band in the next decades to come for the provision of critical broadband services.

6. What do you consider is the optimal allocation of 26 GHz and/or 28 GHz spectrum to support your likely intended uses? What is the minimum allocation necessary?

A: See detailed response above. In summary 26 GHz is suitable for WWB and 28 GHz for satellite and some types of terrestrial services such as localised FWA and P-MP as summarised in Figure 1 of the consultation paper.

8. Does your demand for spectrum differ across geographic areas, such as metropolitan and regional areas? If so, please provide examples.

A: OneWeb and the rest of the satellite industry will use the 28 GHz to provide directly or support the provision of a mixture of fixed and mobile applications that will be ubiquitous. Hence it is critical that satellite services have access to the entirety of the 28 GHz without geographical restrictions.

13. Do you have any views on the state of competition in the relevant markets?

A: See comments in the above discussion section.

15. Do you consider that substitutable spectrum exists for the likely intended uses of the 26 and 28 GHz spectrum? To what extent are these fully effective substitutes?

A: Given the different services and applications envisaged for the 26 and 28 GHz bands respectively, the bands must be treated differently in terms of licensing and technical conditions and to that extent there is no scope for substitutability.