23 September 2020

The Manager

Spectrum Outlook and Strategy Section

Australian Communications and Media Authority

PO Box Q500

Sydney NSW 1230

Online submission

Dear Mr. George,

**Re: Apparatus licences in the 26 GHz and 28 GHz bands: Licensing, technical framework and pricing arrangements consultation paper (August 2020)**

Viasat welcomes the opportunity to respond to the ACMA’s above-referenced consultation paper (**Consultation Paper**) and associated attachments.

As a member of the Communications Alliance, Satellite Services Working Group (SSWG), Viasat supports the goals of the document being submitted by that organisation. There are, however, certain aspects of the Consultation Paper that have special impact on Viasat’s offerings. Viasat offers its comments on those aspects in the attached Annexure.

As the ACMA is aware, Viasat is building the world’s fastest and highest-capacity satellite broadband network, including for services to Australia and the rest of the Asia-Pacific region. Viasat intends to deploy a significant number of gateway earth stations throughout Australia. These earth stations, along with user terminals and earth stations in motion (ESIM) for use on aircraft, ships, trains, buses and other mobile vehicles will extensively reuse the 28 GHz spectrum to communicate with the ViaSat 3 Asia-Pacific satellite.

Viasat appreciates the ACMA’s efforts to develop a licensing arrangement that allows for the efficient and effective deployment of satellite-powered broadband for the benefit of all Australians. The ViaSat-3 network of satellites will provide high quality, affordable broadband to support a number of Australian sectors, including residential and enterprise customers, as well as Government, aviation and maritime broadband services.

Viasat would be happy to meet with the ACMA at any stage to discuss the matters raised in this response and looks forward to continued engagement with the ACMA and other commenters on these important spectrum matters.

Sincerely,

# Peter Girvan

Vice President and General Manager, Viasat Asia-Pacific

**Annexure A**

**General Comments**

Viasat provides the following general comments on the Consultation Paper:

1. Viasat’s comments on the ACMA’s proposed Area Wide Licences (**AWLs**) are confined to their application in the context of licensing for satellite gateways or satellite access nodes (SANs). Viasat notes that in the Consultation Paper the ACMA proposes “[e]xpansion of regulatory arrangements supporting ubiquitous earth stations below 28.3 GHz requires amendment to the CSO class licence which will be subject to a separate consultation process.”[[1]](#footnote-1) Viasat supports the expansion of ubiquitous earth station licensing via the CSO class license so as to maximise the benefit to all Australians.
2. Viasat understands that wireless broadband (**WBB**) will be limited to the frequency range 24.7-27.5 GHz, with no mobile broadband use above 27.5 GHz, only fixed wireless access (**FWA**).[[2]](#footnote-2) For the avoidance of doubt, Viasat seeks the ACMA’s confirmation that this prohibition on ‘mobile broadband’ use applies *only to terrestrial services*, and that the ACMA’s planning decision specifically contemplates satellite earth stations in motion (**ESIM**) being used throughout the 27.5-29.5 GHz (28 GHz) band.
3. As the new AWL licensing regime will directly impact earth station user terminals in metro areas, Viasat requests that the ACMA also commence a consultation on proposed satellite ubiquitous user terminal licensing in the 28 GHz band concurrently, including for ESIM.
4. Viasat also notes that the Consultation Paper does not address how the ACMA intends to handle the associated fixed satellite services (**FSS**) downlink segment (17.7–20.2 GHz band). Viasat urges the ACMA to open a consultation to address the licensing arrangement in the 18 GHz band for all types of earth stations. That is, gateways or SANs as well as ubiquitous earth stations including ESIM.

**Viasat Responses to Consultation Paper Questions**

1. The ACMA is proposing to use a two-stage administrative allocation for apparatus licences in certain segments of the 26 GHz band and in all of the 28 GHz band. Do stakeholders agree with this approach? If not, please explain why.

**Viasat Response**: Yes. Viasat supports the two-stage administrative allocation process for apparatus licences. In line with the SSWG comments, however, Viasat urges that the ACMA separate the 26 and 28 GHz processes. The 28 GHz band that is heavily used by satellite networks and users has additional and different requirements for than the lightly used 26 GHz band that need to be fully considered, for example:

1. Gateway earth stations or SANs require access to reliable fibre and, therefore, need access to contiguous spectrum inside large population centres, including in the 27.5-28.1 GHz segment of the 28 GHz band.
2. The ACMA should clarify the licensing framework in the segments of the 28 GHz band where FSS is the sole primary service (i.e., 28.1-29.5 GHz) and confirm that Class Licensing will be available for FSS earth stations throughout the band with priority over secondary FWA services.
3. No paired licensing is as yet proposed in the 18 GHz downlink satellite band where gateways require protection from interference from other devices operating in the band. Whether or not the AWL model makes sense for the fixed service (**FS**) in the 18 GHz band, the regulatory fee structure in the 18 GHz band should be re-examined to be more commensurate with the proposed AWL fee structure in the 28 GHz band.
4. Do stakeholders have any concerns with the licence duration and renewal policy for AWLs in the 26 GHz and 28 GHz bands?

**Viasat Response**: Viasat notes that the ACMA is proposing to authorise access under AWLs for up to five years in duration, even if a longer duration becomes available.

The *Radiocommunications Legislation Amendment (Reform and Modernisation) Bill 2020* (**Bill**) was introduced into the Australian Parliament on 27 August 2020 and includes a proposal that the maximum duration for apparatus licences be extended to 20 years. The Explanatory Memorandum (page 111) notes that (emphasis added):

*Schedule 11 increases the maximum duration of both spectrum licences and apparatus licences to 20 years, as a way of adding flexibility to the licensing framework. This will help the ACMA make decisions which balance the benefits that longer licences can present in some cases (by providing greater certainty and encouraging innovation and investment) with the need to retain flexibility in spectrum management processes (such as by issuing shorter duration licences where appropriate) in order to adapt to changing circumstances.*

Viasat considers that, if available, the ACMA should allow for a maximum of up to a 20-year licence term for AWLs with satellite operations in the 28 GHz band. Extending the licence term would be appropriate and consistent with the Explanatory Memorandum to the *Reform and Modernisation Bill*. A longer licence timeframe would correspond with the operational life of most satellite networks and assist in ensuring a level of stability that satellite operators need when making investment decisions to deploy satellite networks, which require a significant amount of investment.

1. The ACMA is proposing that AWLs be available for issue for the operation of FSS earth stations in the 27–29.5 GHz range. Do stakeholders support this proposal? If not, please explain why.

**Viasat Response**: Viasat generally supports the proposal to extend the AWL licensing concept across the 27.5-29.5 GHz band for gateway or SAN licensing. Viasat, however, has concerns arising from comments in the ACMA paper titled “*Future use of the 28 GHz band: Planning decisions and preliminary views*” (September 2019), where the ACMA proposed that (i) FWA would operate on a co-primary basis with FSS for gateways or SANs inside large population centres (metro) in the 27.5 – 28.1 GHz band and that (ii) FSS would operate on a primary basis in the 28.1–29.5 GHz band Australia-wide. This proposed allocation is also repeated in the Consultation Paper.[[3]](#footnote-3)

It is unclear to Viasat whether or not the proposed AWLs would be issued for satellite-only services or also to terrestrial services. If terrestrial services were to be included in the AWL regime in the 28.1-29.5 GHz segment, it could only be permitted on a secondary basis to all types of FSS operations, including ubiquitous earth stations and ESIM, and upon a suitable showing that such terrestrial services would not interfere with satellite receivers operating in the band. Viasat urges the ACMA to clarify the proposal before moving forward so that there are not uncertainties about the intent.

While the question was limited to FSS earth stations, which Viasat interprets to mean gateways or SANs for the purpose of the Consultation Paper, Viasat seeks clarification from the ACMA as to how it intends to handle satellite user terminal licensing and the timing for those decisions. Viasat urges the ACMA to address satellite user terminal licensing, including for ubiquitous fixed and ESIM user terminals, concurrently with this consultation or as soon as possible so that the spectrum environment can be addressed holistically.

1. The draft technical framework is optimised for both wireless broadband and FSS earth stations. Fixed earth stations in the range 29.5–30 GHz are still authorised under a fixed-earth apparatus licence. We are seeking views on a proposal to authorise FSS in the 29.5–30 GHz range with AWLs. Do stakeholders have any comments about this proposal?

**Viasat Response**: Viasat supports the extension of AWLs and the associated pricing structure to FSS gateway or SAN earth stations licensed in the 29.5–30 GHz range. Viasat requests that the ACMA clarify that this proposal only applies to satellite services in the 29.5-30 GHz band and would not include terrestrial services at all. The 29.5-30 GHz bands is one of the few bands where satellite broadband services have exclusive global access. Viasat would strongly oppose any proposal to introduce terrestrial services in the 29.5-30 GHz band, including through the introduction of AWLs in the band to support services other than FSS.

1. Do stakeholders have any specific comments about the draft AWL LCD or RALI [new] or updated RALI MS 38?

**Viasat Response**: Viasat broadly supports the draft AWL LCD or RALI [new] or updated RALI MS 38. Specific areas of concern for Viasat, however, are proposed changes in the TRP levels as discussed in Schedule 1.1 and the “Operation only at fixed location” in 1.2.

Viasat believes that the TRP levels in Schedule 1.1 for FWA base stations from 25 dBm/200 MHz to 30 dBm/200 MHz could cause interference to satellite receivers in space. Unlike the 26 GHz band, where there are few satellites, there are over a hundred satellites that are operational in the 28 GHz band, a number serve Australia today and additional satellites, like ViaSat-3 that will be operational and serving Australia in the near term. Any additional power in the 28 GHz band caused by relaxed TRPs for FWA transmitters could cause aggregate interference into satellite networks. Viasat urges the ACMA not to increase the power for FWA in the 28 GHz band.

As for Schedule 1.2 “[o]perational only at fixed locations,” Viasat understands this restriction only applies to terrestrial services in the 28 GHz band and does not apply to satellite services. Out of an abundance of caution, however, Viasat requests that the ACMA clearly state that the limitation on mobility in this range is for terrestrial operations only and does not apply to ESIM.

1. Do stakeholders agree with the proposed apparatus licence tax? As explained in Appendix A, at this time in Australia there is limited information about the value of the spectrum on offer for administrative allocation. The ACMA is open to reviewing the apparatus licence tax for AWLs in light of developments in domestic markets that have occurred or will occur over time. What considerations should the ACMA take into account?

**Viasat Response**: In the Consultation Paper, the ACMA notes that “*There is limited information about spectrum valuations for mmWave spectrum in the Australian market. The ACMA is proposing to review the pricing arrangements for AWLs in the 26 and 28 GHz bands as more information becomes available, such as after the spectrum auction*.”[[4]](#footnote-4)

Viasat considers that certainty is crucial to deploying satellite networks and generally agrees with the approach adopted by the ACMA. Given the 26 GHz auction is to be conducted in March 2021, and the ACMA intends to begin the process to issue AWLs in October 2020, Viasat does not consider it appropriate for the ACMA to revise apparatus licence taxes after the 26 GHz spectrum auction as the services and systems are entirely different. For example, Viasat will not be offering terrestrial mobile service to users in the 28 GHz AWLs under the AWL, as is the case for terrestrial operators who are expected to secure AWLs to offer service directly to consumers inside the AWLs. Instead, Viasat will be using AWLs for gateway or SAN operations and seeking a Class License for user terminals and ESIM to offer service to Australians on a nationwide basis. Therefore, it would not be appropriate for the ACMA to compare 26 GHz auction pricing arrangements to satellite services offered under AWLs in the 28 GHz band.

1. Consultation Paper at p. 15, footnote 15. [↑](#footnote-ref-1)
2. ACMA has limited terrestrial use of the 28 GHz band to fixed only services known as FWA. Therefore, Viasat will refer to the terrestrial services in the 28 GHz band as FWA. [↑](#footnote-ref-2)
3. Consultation Paper at p. 12. [↑](#footnote-ref-3)
4. Consultation Paper at 10. [↑](#footnote-ref-4)