



Australian Communications and Media Authority

C/o [REDACTED]

31 January 2024

Dear Sir/Madam,

RE: Satellite direct-to-mobile services: regulatory issues consultation

EchoStar Global Australia Pty Ltd welcomes the opportunity to make a submission to ACMA on its satellite direct-to-mobile services: regulatory issues consultation.

EchoStar Global Australia is an Australian mobile satellite service (MSS) low earth orbit satellite operator in the 1980-2010 MHz and 2170-2200 MHz band (2 GHz band).

We hold International Telecommunications Union (ITU) spectrum rights through our Australian Sirion-1 ITU filing. This filing is being brought into use for a non-geostationary orbit MSS S band satellite network named Lyra.

Lyra is currently in the manufacturing stage with plans for its deployment to begin in 2024. The network will bring global IoT including LoRa services to users across Australia.

EchoStar Global Australia's parent company, EchoStar Corporation, has extensive experience with Direct-To-Mobile Services (DTM).

EchoStar Corporation has been a leader in the evolution of 3GPP non-terrestrial network 5G standards and recently supported the WRC-27 Agenda Item (at WRC-23) to conduct studies to identify spectrum for the terrestrial component of International Mobile Telecommunication (IMT) for DTM.

Through Skylo, the Bullitt 3GPP-NTN service using the 2 GHz MSS band, EchoStar Corporation has DTM available to users across Europe.

EchoStar Corporation is testing similar services in the United States using the 2 GHz MSS band and is also exploring the use of its licensed terrestrial mobile spectrum to provide DTM in the United States.

For these reasons, EchoStar Global Australia commends the ACMA for beginning to examine an appropriate regulatory framework for what will be an important part of the 5G ecosystem.

DTM are being developed according to two models. Therefore, it is important for the ACMA to consider how to separately address the two types of DTM as it creates a regulatory framework.

The first model relies on the use of MSS spectrum (e.g. 2 GHz and L band) to support DTM.

Under this model, there is no need for any changes to the Australian (or international) regulatory regime to enable DTM.

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The allocation to MSS and accompanying technical rules enables the use of DTM without concerns about harmful interference into the same or adjacent bands.

However, it is key that the ACMA does not impose use or other restrictions on MSS spectrum as such actions would constrain the use of these bands for DTM and limit their overall efficiency.

Additionally, because of the demand for DTM, it is critical that the ACMA act (in the near term) to make additional MSS spectrum available for such uses at WRC-27 as demand grows for these services. This should be done by advancing access to the 2 GHz band and supporting efforts in Agenda Item 1.14 at WRC-27 which will look at allocating additional conventional MSS spectrum globally.

The second DTM model can use the frequency bands identified for the terrestrial component of IMT for DTM.

Unlike the first model, there is no MSS allocation in most of these frequency bands. Accordingly, use of these frequency bands would be under Article 4.4 of the ITU Radio Regulations and must operate on a non-harmful interference basis and is intended for limited use – not mass communications as envisioned by DTM.

As the ACMA would be aware, such operation raises concerns, including very real concerns about harmful interference to services in the same and adjacent bands.

EchoStar Global Australia supports the approach being studied under Agenda Item 1.13 at WRC-27. This Item will see studies conducted on relevant bands to consider an allocation for some or all bands on a secondary basis to MSS and that use tied to the terrestrial component.

If Australia decides to enable DTM using IMT terrestrial spectrum before the above studies are conducted (in approx. four years), EchoStar Global Australia recommends that a consultation is conducted by the ACMA that examines adopting secondary MSS allocations for the relevant bands and tying use in these frequencies to the terrestrial component, as well as any potential for interference in the same or adjacent bands.

EchoStar Global Australia also urges that the international use of the MSS system be limited to operating on a non-harmful interference basis, consistent with Article 4.4 of the ITU Radio Regulations.

By establishing this framework, the ACMA can limit the potential for harmful interference into the same and adjacent bands through adoption of appropriate technical and operational rules. However, it is important to note that this approach may still result in unexpected harmful interference in Australia or internationally.

These studies and this approach can also be fed into the studies being performed for global secondary MSS allocations under Agenda Item 1.13 at WRC-27, helping to develop the necessary international framework for this use.



By enabling both types of DTM as outlined above, the ACMA can be confident that a truly competitive market for DTM is created while protecting other users of the spectrum resource from interference.

In conclusion, EchoStar Global Australia urges the ACMA to:

- Finalise its rules for the 2 GHz band and begin the licensing process as soon as possible.
- Open a consultation on creating secondary domestic MSS allocations in relevant frequency bands that are identified for the terrestrial component of IMT, while ensuring such use is tied to the terrestrial component and limiting such use to operating on a non-harmful interference basis.
- Support the efforts leading up to WRC-27 to make available (on a global basis) additional conventional MSS spectrum.
- Actively participate in the studies on Agenda Item 1.13 and 1.14 leading up to WRC-27.

By taking these actions now, the ACMA will be at the leading edge of creating a competitive environment for DTM in Australia and globally.

Yours sincerely,

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EchoStar Global