CSIRO Submission on "Variation to the Low Interference Potential Device Class Licence" Consultation Paper

30 November 2022

Introduction

CSIRO welcomes this opportunity to provide a submission in relation to the Consultation Paper: "Variation to the Low Interference Potential Device Class Licence."

CSIRO Space & Astronomy builds and operates national facilities for radio astronomy and for the space research service. In particular, CSIRO manages Inyarrimanha Ilgari Bundara, the CSIRO Murchison Radio-astronomy Observatory (hereinafter "the Observatory") which is explicitly protected from terrestrial class-licensed devices under the LIPD Class Licence.

CSIRO's comments relate only to the proposal on "Radiocommunications receivers communicating with satellites in the 915–928 MHz and 2400–2483.5 MHz bands". CSIRO does not offer any views on the other issues raised in the discussion paper (Questions 1 – 10).

Discussion

The Low Interference Potential Devices Class Licence provides a restriction on the use of class-licensed equipment within the Inner RQZ "if the transmission will cause interference with the operation of radio astronomy observations by the Observatory." Based on this restriction, CSIRO have employed signs, formal advice to mining interests and local pastoralists, and briefings for visitors to the Observatory. This has been successful in preventing widespread interference to radio telescopes at the Observatory.

In particular, the frequency range 700 – 1000 MHz shows extremely low levels of RFI at the Observatory, primarily due to the lack of satellites in this range. This has enabled world-class scientific discoveries which would not have been possible elsewhere, due to the heavy use of this band by mobile broadband services and class-licensed devices.

CSIRO therefore has significant concern with the proposal to authorise space station transmitters in the 915 – 928 MHz and 2400-2483.5 MHz bands under a revised Class Licence. This would create new and problematic RFI issues for the radio telescopes at the Observatory. We are even more concerned with the proposal that power levels higher than currently permitted under the LIPD class licence may be authorised in these bands, as this would make the RFI problems even worse.

Response to question 11 posed in the Consultation Paper

Question 11

Should we consider the introduction of arrangements to facilitate systems that utilise space-based transmitters that operate in the bands 915–928 MHz and 2400–2483.5 MHz at power levels higher than currently permitted under the LIPD class licence? If so, what matters should be considered in the regulatory framework? In particular, comment is sought on:

- …
- Is the LIPD class licence or the communication with space objects (CSO) class licence the appropriate legislative instrument to be used to facilitate such systems?

CSIRO opposes the authorisation of space-based transmitters in the 915 – 928 MHz and 2400 – 2483.5 MHz bands at the power levels currently in the LIPD or higher levels unless clear protection is provided for radio astronomy services. CSIRO would similarly oppose such authorisation in the CSO Class Licence.

Conclusion

CSIRO values the opportunity to provide input to this consultation process. We are available for further discussion if necessary.

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