

The Manager
Spectrum Planning Section
Australian Communications and Media Authority
Belconnen ACT 2616

Re: Variation to the Low Interference Potential Device Class Licence Consultation Paper October 2022

Blulen Pty Limited welcomes the opportunity to make this submission in response to the ACMA consultation on the Variation to the Low Interference Potential Device Class Licence Consultation Paper.

Background

Blulen Pty Limited has been providing compliance services to equipment manufacturers for over 20 years. The main products we supply this service for are Short Range Devices covered by the LIPD class licence and cellular data products covered by the TLN for customer equipment. We also supply information relating to EME requirements and the CSO class licence.

Blulen has decided not to comment on every question but just on those we have the relevant experience.

RLAN radiocommunications transmitters in the 5150–5250 MHz band

Question 1

Should a separate new item be introduced to facilitate higher-power RLAN transmitters in 5150–5250 MHz, or should existing item 61 be modified?

Blulen submits that the existing item should be modified to include the new requirements.

Question 2

Which of the 2 simple emission masks outlined in ITU Resolution 229 (Rev. WRC-19) should be implemented in Australia for 1 W RLAN transmitters in the 5150–5250 MHz band?

Whilst we are not familiar with the emission masks, we would ask that whatever one is chosen that it is similar to the New Zealand requirement, as laid out in Special Condition 18 of their 2022 SRD GURL.

In the band 5150 – 5350 MHz, when operating above -7 dBW e.i.r.p. (200 mW) the following e.i.r.p. vertical radiation angle mask shall be complied with, where θ is the angle above the local horizontal plane (of the Earth):

Maximum permitted mean power density Elevation angle above horizontal

-13 dB(W/MHz) for $0^\circ \leq \theta < 8^\circ$

-13 - 0.716(θ - 8) dB(W/MHz) for $8^\circ \leq \theta < 40^\circ$

-35.9 - 1.22(θ - 40) dB(W/MHz) for $40^\circ \leq \theta \leq 45^\circ$

-42 dB(W/MHz) for $45^\circ < \theta$;

Question 3

Subject to which emission mask is implemented (see Question 2), would a device registration system (or similar – see Canadian approach above) be needed for outdoor deployments exceeding 200 mW (23 dBm) transmission power? Note that such a regime would require further regulatory development. Accordingly, a decision to implement such a regime may delay access under those arrangements.

No Comment.

Question 4

What should be the maximum EIRP for WMAS devices in the 520–694 MHz and 1785–1800 MHz bands?

No Comment.

WMAS technologies for wireless audio transmitters

Question 5

Should a maximum bandwidth limitation be implemented for WMAS devices? If so, what should the maximum emission bandwidth be?

No Comment.

Question 6

Should a WMAS emission in 520–694 MHz be limited to fall entirely within a single TV channel? For emissions greater than a single TV channel, should a whole number of TV channels be required (for example, emission bandwidths of 7 MHz or 14 MHz)? Should any other limitations regarding the relative positioning of WMAS emissions with respect to the TV channel raster be implemented?

No Comment.

Question 7

Should a minimum spectral efficiency limitation be implemented for WMAS devices? If so, what should the minimum spectral efficiency be?

No Comment.

Question 8

Should WMAS devices be required to comply with ETSI Standard EN 300 422?

Blulen's position is that if there is a suitable international standard that meets the proposed Australian requirements, it is preferable to adopt that rather than create an Australian specific standard.

Question 9

Should new items be added to Schedule 1 of the LIPD class licence to facilitate WMAS, or should existing items be modified?

Blulen's preference would be for a new item(s) to be added rather than modifying the existing items.

Underground Wireless Broadband

Question 10

Have third-party access arrangements to spectrum-licensed bands been explored? Should we consider the introduction of arrangements in the LIPD class licence to facilitate underground communications in the 700 MHz, 800 MHz and/or 900 MHz bands? What technical limitations should be included in these arrangements if they are introduced?

Blulen submits that this should not be in the LIPD class licence as these bands are mobile telephone bands, equipment using these bands in this situation would then become subject of the Short Range Devices Standard as well as the requirements of the Telecommunication (Labelling Notice for Customer Equipment and Customer Cabling) Instrument, which could cause confusion amongst equipment manufacturers.

Blulen would support the creation of a separate class licence for base stations using these bands in underground situations.

Radiocommunications receivers communicating with satellites in the 915–928 MHz and 2400–2483.5 MHz bands

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:

- > What is an appropriate power for such services so that there is no impact on other services? While some might operate at power levels slightly higher than those currently supported under the LIPD class licence, others could at operate higher levels. The impact also depends on other technical parameters such the orbital characteristics, number of satellites and what types of services are sharing the band. Such considerations suggest a case-by-case approach (more akin to an apparatus licensing regime) may be required.
- > What effect, if any, will the proposed use have on existing services such as the amateur-satellite services and services authorised under the LIPD class licence? For example, Wi-Fi, Bluetooth and radio frequency identification devices (RFID).
- > Do systems need to be brought under the scope of the Radiocommunications Act via variations to the Radiocommunications (Australian Space Objects) Determination 2014 or the Radiocommunications (Foreign Space Objects) Determination 2014?

> 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?
> If apparatus licensing is used, are the current apparatus licence fees and taxes appropriate? (Assuming the entire band is licensed, for the 915–928 MHz band, the annual tax for an Australia-wide space licence is estimated as \$36,673; for the 2400–2483.5 MHz band, the annual tax for an Australia-wide space licence is \$235,194.)

Blulen submits that the LIPD class licence is not the appropriate legislative instrument for these devices and that the CSO class licence is the appropriate legislative instrument.

Radiocommunications receivers communicating with satellites in the 915–928 MHz and 2400–2483.5 MHz bands

Blulen does not support this inclusion. We believe such devices should be contained in the CSO class licence.

Frequency hopping radiocommunications transmitters in the 5925–6425 MHz band

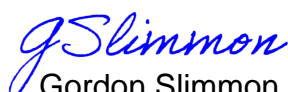
Blulen supports this inclusion.

Definition of ‘indoor’

Periodically, the lack of an explicit definition of the word ‘indoor’ in the LIPD class licence has been raised. This includes confusion as to whether indoor use includes use inside vehicles such as cars and planes.

To rectify this issue, we are proposing the insertion of a definition of indoor in subsection 3A(1) of the LIPD class licence based on the definition developed for items 63A and 63B of Schedule 1. This clarifies that the intention of indoor use is to limit use to within buildings, and not to include use within vehicles.

Blulen supports this change.



Gordon Slimmon

Director

30 November 2022