Variations to the LIPD Class Licence

Response to submissions

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Introduction

The ACMA thanks all stakeholders who responded to the *Proposed variation to the Radiocommunications (Low Interference Potential Devices) Class Licence 2015* consultation paper. We received 13 submissions, which have been published on the [ACMA website](https://www.acma.gov.au/theACMA/variations-to-the-lipd-class-licence-2).

All 13 submissions supported the proposed variation. Suggestions raised during consultation were taken into account in making the Radiocommunications (Low Interference Potential Devices) Class Licence Variation Notice 2018 (No. 1) (the Variation).

This document summarises the issues raised by the submissions and our response to them.

# Response to submissions

## Overview of proposals

The ACMA sought comment on a draft of a proposed variation to the Radiocommunications (Low Interference Potential Devices) Class Licence 2015 (LIPD Class Licence) consisting of:

* adding the frequency range 122–122.25 GHz to arrangements for all transmitters, aligning with European arrangements
* supporting the operation of endoscopy capsules in the frequency range
430–440 MHz
* supporting wireless medical telemetry devices operating in the frequency range 2483.5–2500 MHz

revising technical limitations on existing arrangements for data communication transmitters operating in the 57–66 GHz band to align with changes by the US Federal Communications Commission (FCC).

In addition to seeking comment on the proposed variation, the ACMA sought:

* views as to whether we should consider in future variations arrangements similar to those introduced in the US in 2016 in the frequency range 64–71 GHz, which provide further options for data communications intended to support future ‘5G’ services
* views on which of the proposed changes should be considered in future standards updates

suggestions from industry and individuals on possible devices and technologies for inclusion in future updates.

We received 13 submissions from the Australian Mobile Telecommunication Associations (AMTA), Analyse Solve & Test (AST), Baumer Electric AG, Cambium Networks, GE Healthcare, Medtronic Inc., Microsoft Australia, Siklu Communications, Steven Forst, Superloop, Telstra, Vertical Telecoms Pty Ltd (Vertel) and WiFi Alliance.

Except for possible future updates, about which no suggestions were received, submissions covered all matters we sought comment on. Matters that we intend to consider in future LIPD Class Licence updates are outlined in our [*Draft five-year spectrum outlook 2018–22*](https://www.acma.gov.au/theACMA/draft-five-year-spectrum-outlook-2018-22).

We have outlined a summary of submissions and issues raised, as well as our response, below.

## Issues raised and responses

### Item 23A of Schedule 1—All transmitters 122 to 122.25 GHz

This proposal was supported by submissions from Baumer Electric, Steven Forst and Telstra. No further comments were received.

### Item 33 of Schedule 1—Medical implant communications systems transmitters

While no changes were proposed to item 33, Metronic noted that as a result of [2017 reorganisation by the FCC](https://www.fcc.gov/document/part-95-report-and-order), the requirements specified in item 33 limitation (b)(ii), which refer to FCC Rules Title 47 Part 95 Sections 627 and 635, are now contained elsewhere in the FCC rules.

ACMA response

The limitation has been updated and now refers to FCC Rules Title 47 Part 95 Sections 2573 and 2579.

### Item 34A of Schedule 1—Medical endoscopy capsule transmitters

Submissions from Medtronic, Steven Forst and Telstra supported the proposed arrangement for medical endoscopy transmitters operating in the 430–440 MHz band. The submission from AST commented on technical limitations.

Medtronic's submission also suggested that the proposed maximum equivalent isotropically radiated power limit be changed from 100 nW to 164 nW to align with limits in the European Telecommunications Standards Institute (ETSI) standard on medical endoscopy capsule transmitters (EN 303 520). The submission from AST noted a difference between the Australian technical limit being specified in equivalent isotropically radiated power (EIRP) and the ETSI use of effective radiated power (ERP), and suggested changes to the EIRP limit.

The submission from AST also commented on the proposed insertion of Note 3, which advises that a transmitter that complies with ETSI Standard EN 303 520 will meet the requirement not to exceed the maximum EIRP limit specified at item 34A. The AST submission suggested that the compliance with the referred ETSI standard should instead be included as a limitation (Column 4 of Schedule 1) rather than advice in a note. It was also suggested that the option of compliance with the relevant FCC provision should be included.

ACMA response

The limits, as proposed, reflect the ACMA’s understanding of maximum EIRP for medical endoscopy capsule transmitters intended to be used in Australia. We further reviewed arrangements for medical endoscopy capsule transmitters under the European Radiocommunication Committee (ERC) Recommendation 70-03, and associated ETSI standard EN 302 520, and decided to specify radiated power limits in the same units as in the European arrangements. This has been achieved by removing the maximum EIRP limit for this item from Column 3 of Schedule 1, and including limitations for this item (Column 4 of Schedule 1) in terms of a maximum effective radiated spectral density of –50 dBm per 100 kHz and a total effective radiated power of –40 dBm in 10 MHz. These limitations are equivalent to radiated power limits for medical endoscopy capsule transmitters under the ERC Recommendation 70-03 and ETSI standard EN 302 520.

For the proposal that the advice of Note 3, for item 34A, be included as part of the Limitations (Column 4 of Schedule 1), we believe that the set of technical requirements specified under the Limitations (Column 4 of Schedule 1) is sufficient for interference management purposes. Note 3 is provided, as advice, on a relevant industry standard if more information is required. As a general principle and if appropriate, the ACMA does include both FCC and ETSI requirements. In this case, we are not aware of equivalent FCC provisions for medical endoscopy capsule transmitters in
430–440 MHz, so no reference has been included for this item.

### Item 35A of Schedule 1—Medical body area network transmitters

This proposal was supported by submissions from GE Healthcare*,* Steven Forst and Telstra. No further comments were received.

### Item 35B of Schedule 1—Low-power active medical implant

This proposal was supported by submissions from Steven Forst and Telstra. No further comments were received.

### Item 65 of Schedule 1—Digital communication transmitters 57–66 GHz

Seven submissions were received on this proposal, from Cambium Networks, Microsoft, Siklu, Communications, Steven Forst, Superloop, Telstra and WiFi Alliance. All were supportive. In addition, the submission from Siklu Communication recommended removing the maximum EIRP limit and replacing it with a direct reference to FCC requirements of Part 15 Section 255, to avoid potential duplication and possible inconsistency should FCC equipment rules change in the future.

Siklu Communication also considered that directly referencing FCC requirements would remove any ambiguity on whether higher powered directional point-to-point links were supported under the LIPD Class Licence as they are under FCC Part 15 Section 255 paragraph (b)(1)(ii).

ACMA response

It is not intended that higher power directional point-to-point links be supported under this item and the EIRP limit shall remain at 20 watts. Higher powered transmitters (150 watts) are authorised by item 64 (59–63 GHz) of Schedule 1. We will review support for point-to-point links under of both of these items when considering arrangements similar to those introduced in the US in 2016 in the frequency range
64–71 GHz to provide further options for data communications intended to support future ‘5G’ services.

### Terminology for limitations specifying compliance with a standard

A submission on this issue was received from AST recommending replacing the term ‘must comply’ with ‘shall comply’ to ensure consistency with Standards Australia drafting requirements and the AS/NZS 4268 Standard.

ACMA response

The ACMA is of the view that the term ‘must comply’ better reflects the regulatory nature of the LIPD Class licence.

### Future changes for data communications systems to support 5G systems

We received eight submissions on the issue of whether we should consider arrangements similar to those introduced in the US in 2016 in the frequency range
64–71 GHz to provide further options for data communications intended to support future ‘5G’ services. Six of the submissions (Cambium Networks, Microsoft Australia, Siklu Communications, Superloop, Vertel and WiFi Alliance) supported the ACMA considering such arrangements.

Submissions from AMTA and Telstra, while supporting the ACMA monitoring developments, considered that with the band 66–71 GHz being considered for global harmonisation as an ITM-2020 band at the ITU-R World Radiocommunication Conference 2019 (WRC-19), no decision should be taken until after WRC-19.

Industry also commented on this issue in submissions to the [*Five-year spectrum outlook 2017–21*](https://www.acma.gov.au/theACMA/five-year-spectrum-outlook-2017-21) and the 2017 consultation on [Spectrum for broadband in mmWave bands](https://www.acma.gov.au/theACMA/spectrum-for-broadband-in-mmwave-bands). In response to those consultations, particularly the mmWave issue, a number of respondents (Airbus, Facebook, Intel, Microsoft, SES, Tasmanet and WISPAU) also suggested that the ACMA consider expanding current arrangements. AMTA and Telstra expressed a view that any decision should be deferred until after WRC-19.

ACMA response

The ACMA is of the view, as outlined in the [*Draft five-year spectrum outlook 2018–22*](https://www.acma.gov.au/theACMA/draft-five-year-spectrum-outlook-2018-22) released for comment on 18 May 2018, that there is significant interest in Australia in progressing this work, in parallel with ITU consideration, as has been done in a number of other jurisdictions. We will continue to investigate, with a view to developing a proposal for consideration in the next LIPD update.

Several spectrum regulators around the world have or are considering similar arrangements. For example, US FCC[[1]](#footnote-1) has already opened the band under an ‘unlicensed’ option. Innovation, Science and Economic Development (ISED) Canada[[2]](#footnote-2) and the United Kingdom’s communication regulator Ofcom[[3]](#footnote-3) are also considering the ‘licence exempt’ options for this band. The Radio Spectrum Policy Group[[4]](#footnote-4) of the European Commission has recommended a general authorisation regime for the
66–71 GHz band.

### Requirement for consequential standards updates

The ACMA received four submissions commenting on the need for consequential standard updates. Three submissions (Siklu Communications, Superloop and Telstra) supported the need for a standard update to reflect proposed changes to the digital communication transmitters operating in the 57–66 GHz band. One submission (AST) recommended that all items be considered in a revision to the Standards Australia standard AS/NZS 4268 (Radio equipment and systems – Short range devices – Limits and methods of measurement).[[5]](#footnote-5)

The submission from AST also discussed the time delay that occurs between the ACMA updating the LIPD Class Licence and any necessary consequential revisions to the Standards Australia AS/NZS 4268. The submission outlined changes included by the Standards Australia RC-006 committee (which included ACMA representatives) in the last update to the AS/NZS 4268, which could provide a pathway to removing the time delay. The submission recommended the ACMA make changes necessary to the LIPD Class Licence to ensure automatic updates to the standard for future variations to the LIPD Class Licence.

ACMA response

The delay between ACMA making a variation to the LIPD Class Licence and consequential standard updates to the Standards Australia AS/NZS 4268 is a known issue. While to date it has not presented an interference management risk, we welcome suggestions on how to address the delay. We have been considering possible changes to the equipment rules resulting from spectrum review implementation work and are wary of making changes that might later be replaced through this work. Nonetheless, we have been considering whether there is a simpler and more effective way to address the delay issue in future variations to the LIPD Class Licence that minimises both the work of Standards Australia and the ACMA.

Our proposed approach is to amend the Radiocommunications (Short Range Devices) Standard 2014 by specifying that the standard for performance is the standard listed in Column 4 of Schedule 1 of the LIPD class licence or, if no standard is listed, the requirements of the AS/NZS 4268. For this to occur, we’ll be consulting on a [draft amendment to the Short Range Devices Standard](https://www.acma.gov.au/theACMA/proposal-to-amend-short-range-devices-standard-and-make-new-intelligent-transport-system-standard). If implemented, we would publish additional guidance on how to determine and where to find applicable standards.

We do not agree that all devices supported under the LIPD Class Licence should be automatically subject to a standard, given the regulatory burden that compliance with a standard brings for industry. Our view is that the needs for each device should be individually considered, in consultation with industry, for the intended application, operating environment, potential consequences of interference (should it occur) and likely numbers of devices to be used. Given its low power, and controlled environment when being used, the ACMA does not see the need for a radiocommunications standard for medical endoscopy capsule transmitters (Item 34A). However, a note is to be included for the item in the LIPD providing advice on a relevant industry standard if more information is required. For all other proposed changes, being subject to a standard is considered appropriate.

1. Refer FCC rules Part 15 section [255.](https://www.ecfr.gov/cgi-bin/text-idx?SID=c985a609358690f15fa7272a80e2d60f&mc=true&node=pt47.1.15&rgn=div5%20-%20se47.1.15_1255#se47.1.15_1255)  [↑](#footnote-ref-1)
2. Refer ISED June 2017, [*Consultation on Releasing Millimetre Wave Spectrum to Support 5G*](http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf11298.html) *and* [*Spectrum Outlook 2018 to 2022*](http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf11403.html) June 2018. [↑](#footnote-ref-2)
3. See Ofcom consultation, [*Fixed wireless spectrum strategy: Consultation on proposed next steps to enable future uses of fixed wireless links*](https://www.ofcom.org.uk/consultations-and-statements/category-2/fixed-wireless-spectrum-strategy). [↑](#footnote-ref-3)
4. See Radio spectrum policy group, RSPG Second Opinion on 5G networks (Strategic Spectrum Road Map Towards 5G for Europe), January 2018 at [Document RSPG 18-005](https://circabc.europa.eu/sd/a/fe1a3338-b751-43e3-9ed8-a5632f051d1f/RSPG18-005final-2nd_opinion_on_5G.pdf). [↑](#footnote-ref-4)
5. The ACMA’s Radiocommunications (Short Range Devices) Standard 2014 references the Standards Australia industry standard AS/NZS 4268 (as in force or existing from time to time). Typically, Standards Australia updates the AS/NZS 4268 after the ACMA makes a variation to the LIPD Class Licence as a part of regular procedural review. [↑](#footnote-ref-5)