



**IFC 54/2014
Open Spectrum
Submission**

Proposed frequency
coordination procedures for
apparatus licensed wireless
audio devices

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Mr. Mark Arkell
Manager, Spectrum Engineering Section
Spectrum Planning and Engineering Branch
Australian Communications and Media Authority
Red Building, Benjamin Offices, Chan Street
Belconnen ACT 2617

(by email to: freqplan@acma.gov.au)

Dear Mr. Arkell,

Introduction

Open Spectrum thanks the ACMA for consulting on the proposed frequency coordination procedures for apparatus licensed wireless audio devices ('the proposed RALI'), and appreciates the opportunity to provide comments. Open Spectrum agrees with the contents of the proposed RALI, and applauds the ACMA's comprehensive background information on apparatus licensing.

Open Spectrum's interest in the proposed RALI lies in the fact that Open Spectrum is equipped to assess interference potential to digital television terrestrial broadcasting (DTTB) services and is accredited to carry out coordination and frequency assignment for wireless audio devices proposed to operate under apparatus licences.

Scope of the proposed RALI

Open Spectrum understands that initially, the RALI is intended to establish provisions allowing apparatus licensing of wireless audio devices in 520-694 MHz that satisfy the conditions corresponding to wireless audio transmitters in the *Radiocommunications (Low Interference Potential Devices) Class Licence 2000* (the LIPD class licence). This is explicitly stated in Section 3.1—*Coordination criteria—520-694 MHz*—"this criteria is deemed to be successful if... the operation of a wireless audio device would otherwise be authorised by the LIPD class licence". Furthermore, apparatus licensing allows for registration of a wireless audio device in the ACMA's Register of Radiocommunications Licences, an observation which is supported by "wireless audio usage at a major event to provide visibility of spectrum usage to assist coordination with other wireless audio devices".

However, some text indicates that the RALI can provide for coordination for systems that do not satisfy the relevant conditions of the LIPD class licence, and therefore contradicts the coordination criteria of Section 3.1. To avoid confusion and provide clearer guidance in the proposed RALI, Open Spectrum proposes deletion or revision of the following paragraphs in Section 1.2—*Scope*:

- "The arrangements in this RALI are intended to provide additional spectrum options when operation of the wireless audio devices under the conditions set out in the LIPD class licence is unable to be achieved, but operation can be technically configured so not to cause interference to other services."
- "The focus of this RALI is on providing coordination criteria that can be used to demonstrate that operation of wireless audio devices outdoors within the frequency range 520-694 MHz can be achieved without causing interference to broadcast television reception. For example, operation outdoors, co-channel and in the coverage area of a broadcast television service is not supported by the LIPD class licence. Arrangements

outlined in this RALI provide wireless audio device users with additional options to access spectrum in such scenarios provided it can be achieved without causing interference to the reception of broadcast television.”

Television service coverage

The aforementioned coordination criterion of Section 3.1 refers to, *inter alia*, the condition “transmission in a broadcasting services bands channel must not originate in the coverage area of a broadcasting station or a datacasting service station (including a repeater or translator station) operating in the same channel”. In Annex A to the proposed RALI, the ACMA has specified ‘coverage area’ as the area within which the median field strength (i.e. that exceeded for 50% locations and 50% time) is predicted to exceed a minimum specified level at 10 m above ground (e.g. 54 dB μ V/m for 610-694 MHz). Open Spectrum believes that there are cases in which this criteria may unnecessarily prevent apparatus licensing of wireless microphone devices. For example:

- a DTTB service may only be intended to provide coverage to suburban or urban areas for which the minimum median field strength is considerably higher than the values listed in Annex A to the proposed RALI
- an area within which a wireless audio device is proposed to operate is predicted to be within the coverage area of a co-channel DTTB service, but that area is also predicted to receive a much higher field strength from another non-co-channel DTTB service.

Would the ACMA be willing to incorporate such considerations, along with, for example, required propagation model(s) and digital elevation model(s), in the development of the proposed RALI?

Special Conditions

Open Spectrum also understands that Special Condition 27 (no interference, no protection) is to be applied. With regards to area of use of wireless audio devices authorised by a sited land mobile apparatus licence, does the ACMA envisage that such apparatus licences will:

- authorise operation within 2 km of the site as per the definition of a low power service in the *Apparatus Licence Fee Schedule*?
- be subject to Special Condition 12 which “limits operation to within premises for containment of interference”?
- be subject to a Special Condition specific to the case of apparatus licensed wireless audio devices?

Summary

In summary, Open Spectrum:

- thanks the ACMA for the opportunity to provide comment on the proposed RALI
- is well placed to perform frequency assignment in accordance with the proposed RALI
- proposes revisions to the proposed RALI with respect to:
 - the RALI’s scope in Section 1.2
 - the definition of DTTB coverage in Annex A
- seeks clarification on Special Conditions applicable to land mobile apparatus licences authorising the use of wireless audio devices.

Open Spectrum looks forward to continue working with the ACMA and the wider radiocommunications industry.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Juan Pablo Casetta', written over a light grey rectangular background.

Juan Pablo Casetta
Director, Open Spectrum Pty Ltd
121/1 Mouat Street, Lyneham, ACT 2602
P: (02) 6299 2948
M: 0402 565 574
E: juanpablo@openspec.com.au

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