

# Public Consultation 1710 to 2300 MHz Response of APWPT



## *Introduction*

The Radio Spectrum Management (RSM) of the Ministry of Business, Innovation and Employment (MBIE) provided on its webpage a “1700-2300 MHz Discussion document for Consultation” and requests public comment on the proposals for sub-bands of the 1700-2300 MHz band.

See: <https://www.rsm.govt.nz/projects-and-auctions/consultations/1700-2300-mhz-discussion-document-for-consultation/>

The Public Consultation of RSM proposes new uses for

- the 1800 MHz duplex gap,
- the lower and upper portions of the paired 2200 MHz band, and
- proposes options for the paired 2100 MHz band expansion.

RSM is seeking

- comment on these proposals, or
- on any alternative proposals for these spectrum bands.

Association of Professional Wireless Production Technologies (APWPT) would like to thank MBIE and RSM for the opportunity to participate in this work.

APWPT's mission is to represent the interests of

- local production teams of event and content production,
- international production teams who have to work temporarily in New Zealand,
- manufacturers of equipment for event and content production and
- their service providers.

## *Support for a new Frequency Range for Audio PMSE*

APWPT welcomes the intended opening of the duplex gap 1785-1805 MHz for wireless microphones and In-Ear-Monitoring (Audio PMSE) in New Zealand. This frequency range is already harmonised in the Europe Union<sup>1</sup> and supported by European countries. Other countries, e.g. Australia and United Arab Emirates have also already implemented this frequency range nationally. Since PMSE equipment is available on the market for this band this is a very good step towards global harmonisation for Audio PMSE.

## *Adjacent out-of-band Emissions limit the Production Quality of Audio PMSE*

The public consultation of RSM does not cover the radio spectrum usage parameters for the wireless applications in the bands 1710-1785 MHz and 1805-1880 MHz. Therefore, APWPT suggests, the out-of-band emissions of these adjacent wireless applications should be taken into account to support the high-quality use of Audio PMSE in 1785-1805 MHz.

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<sup>1</sup> Commission Implementing Decision 2014/641/EU of 01/09/2014 on spectrum use by wireless audio PMSE  
<https://ec.europa.eu/digital-single-market/en/news/commission-implementing-decision-01092014-spectrum-use-wireless-audio-pmse>

### *APWPTs' Answers to the Questions of RSM in Section 3.1*

#### **Question 1:**

*Do you agree with the RSM proposal to use the 1800 MHz duplex gap (1785-1805 MHz) for radio microphones?*

APWPT supports the opening of this frequency range for Audio PMSE. In addition, it is pointed out that high quality use depends on the out-of-band emissions of wireless devices below 1785 MHz and above 1805 MHz. APWPT is concerned about potential interference from adjacent wireless applications operated below 1785 MHz and above 1805 MHz.

Please note that the UHF-TV band keeps being the core band for audio-PMSE due its physical characteristics and the necessary high-quality requirements of content and event production. Therefore, the band 1785-1805 MHz cannot be a substitute for the loss of radio spectrum below 1 GHz.

#### **Question 2:**

*What size guard band would be appropriate for achieving compatibility between radio microphone use and mobile networks operating below 1785 MHz and above 1805 MHz?*

APWPT would like to note that this topic was studied in CEPT and suggests to consider the protection parameters published in ECC Report 191<sup>2</sup>.

### *APWPTs' Answer to the Questions of RSM in Section 3.2*

#### **Question 3:**

*Do you agree with RSM's proposal to postpone a decision on the Unpaired 2000 MHz band (2010-2025 MHz) until there is clarity on international harmonised use for the band? If not, what is the best value use for this band?*

APWPT would like to note that this band is already harmonized in Europe for Video Cameras (Video PMSE)<sup>3</sup>. New Zealand's support of Video PMSE in this frequency range, can support the flexible work and reduced costs of national and international content and event production teams. Compatibility information can be found in ECC Report 219<sup>4</sup>.

### *APWPTs' note on DECT Equipment*

APWPT would also like to point out that 1880-1900 MHz is used by DECT equipment of the content and event production teams, comparable to Europe. These applications include e.g. A/V conferencing solutions and solutions for talkback, security and blue light services at media, content and event productions.

### *Final note*

APWPT would like to thank MBIE and RSM for the opportunity to participate in this work. Please feel free to contact APWPT via [office@apwpt.org](mailto:office@apwpt.org)

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<sup>2</sup> Adjacent band compatibility between MFCN and PMSE audio applications in the 1785-1805 MHz frequency range <https://www.ecodocdb.dk/document/298>

<sup>3</sup> EC Decision (EU) 2016/339; <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32016D0339>

<sup>4</sup> ECC Report 219, Characteristics of PMSE digital video links to be used in compatibility and sharing studies <https://www.ecodocdb.dk/document/326>

## Annex: Additional Information

### *Radio spectrum for Audio and Video PMS in Europe*

Europe publishes in ERC/REC 25-10 the audio and video frequency ranges for PMSE. Please find via this link more information: <https://www.efis.dk/views2/pmserec2510.jsp>

### *Which frequency ranges are suitable for use by Audio PMSE?*

- For handheld equipment it is relatively easy to find replacements - above 1 GHz.
- But for equipment operated close to the body, the UHF TV range below 1 GHz must remain open. In the background are studies on the so-called Body Effect, please see here: <https://www.apwpt.org/terminologies-a-i/b/body-loss-effect/index.html>
- Reliable study results must be available on necessary PMSE frequencies for daily event and content production and for special events.

### *Additional frequency band studied in Europe*

CEPT studied and recommend for national implementation of Audio PMSE:

- 1350-1400 MHz
- 1518-1525 MHz

In addition, European countries continue the operation of PMSE in the harmonized duplex gap in the 800 MHz band and the United Arab Emirates have also implemented this duplex gap nationally. Some countries continue the operation of PMSE in the duplex gap in the 700 MHz band.

Note: the basis for this decision were detailed compatibility studies. Before the European study results can be transferred to other regions, comparable studies are required.

Please find some background information here:

<https://www.apwpt.org/regional-information-1/d-f/europe/index.php>

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