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| APTlogogreen3 | ASIA-PACIFIC TELECOMMUNITY | **Document:**  |
| **The 3rd Meeting of the APT Conference Preparatory Group for WRC-19 (APG19-3)** | **APG19-3/OUT-15** |
| 12 - 16 March 2018, Perth, Australia | **15 March 2018** |

Working Party 3

**PRELIMINARY VIEWs on WRC-19 agenda item 9.1 (Issue 9.1.2)**

**Agenda Item 9.1:**

*to consider and approve the Report of the Director of the Radiocommunication Bureau, in accordance with Article 7 of the Convention on the activities of the Radiocommunication Sector since WRC-15;*

**Issue 9.1.2**: *Resolution* ***761 (WRC-15)*** *- Compatibility of International Mobile Telecommunications and broadcasting-satellite service (sound) in the frequency band 1 452-1 492 MHz in Regions 1 and 3*

**1. Background**

The frequency band 1 452-1 492 MHz is identified for use by administrations wishing to implement IMT in accordance with Resolution **223 (Rev.WRC-15)**, Resolution **761 (WRC-15)** and RR Nos. **5.346**, **5.341B** and **5.346A**. Pursuant to Resolution **528 (Rev.WRC-15)**, in the interim period, broadcasting-satellite service (BSS) (sound) systems may only be introduced in the upper 25 MHz of this frequency band. Therefore, there is potential for interference between BSS (sound) and IMT applications. Currently, the coordination procedures RR Nos. **9.11** and **9.19** shall be applied in order to reach the required sharing and compatible conditions, and appropriate regulatory and technical studies are carried out in ITU-R in order to address WRC‑19 agenda item 9.1, issue 9.1.2 in accordance with Resolution **761 (WRC-15)**.

Within ITU-R, Working Parties 4A and 5D are the responsible groups for this Issue, and jointly developing the draft CPM text for WRC-19 agenda item 9.1, Issue 9.1.2 ([Annex 48 to Doc. 4A/675](https://www.itu.int/md/R15-WP4A-C-0675/en)) and the draft new Report ITU-R M.[IMT&BSS COMPATIBILITY] ([Annex 16 to Doc. 4A/675](https://www.itu.int/md/R15-WP4A-C-0675/en)).

**2. Documents**

* Input Documents : APG19-3/INP-23Rev1(KOR), 36(NZL), 43(AUS), 51(JPN), 61Rev1(THA), 77(INS), 84Rev1 (VTN), 88(CHN)
* Information Documents : APG19-3/ INF-4(BR, ITU), 6(CEPT)

**3. Summary of discussions**

**3.1 Summary of APT Members’ views**

**3.1.1 Korea (Rep. of)** - **Document APG19-3/INP-23Rev.1**

Korea (Rep. of) supports the ITU-R studies on compatibility between IMT and BSS (sound) in the frequency band 1 452 – 1 492 MHz in Regions 1 and 3, taking into account IMT and BSS (sound) operational requirements in accordance with Resolution **761 (WRC-15)**.

Korea (Rep. of) is of view that IMT should be protected from the emission of BSS space station through appropriate technical and/or regulatory actions such as establishing the pfd limit of BSS downlink.

**3.1.2 New Zealand** - **Document APG19-3/INP-36**

New Zealand supports the ITU-R studies undertaken in accordance with Resolution **761 (WRC-15)**, including a possible regulatory condition applicable to the frequency band 1 452-1 492 MHz that would reduce unnecessary coordination (e.g. under RR No. **9.19**) for countries wishing to implement IMT beyond an appropriate coordination distance from the edge of the BSS service area.

**3.1.3 Australia** - **Document APG19-3/INP-43**

Australia will monitor studies in ITU-R Working Parties 4A and 5D. The 1 452-1 492 MHz frequency band was identified by WRC-15 for use by administrations in Region 2, Region 3 and numerous countries in Region 1 wishing to implement International Mobile Telecommunications in accordance with Resolution **223 (Rev.WRC-15)**.

**3.1.4 Japan - Document APG19-3/INP-51**

Japan supports the regulatory and technical studies being conducted by ITU-R in order to achieve compatibility of IMT and BSS (sound) in the frequency band 1 452-1 492 MHz in Regions 1 and 3.

For the long-term stable operations of IMT systems in this frequency band, Japan believes that it would be preferable to establish a regulatory solution which stipulates a PFD limit for BSS (sound) in Table **21-4** under RR No.**21.16**.

**3.1.5 Thailand - Document APG19-3/INP-61Rev.1**

Thailand supports appropriate studies on the technical and operational measures to ensure the compatibility of International Mobile Telecommunications and broadcasting-satellite service (sound) in the frequency band 1 452-1 492 MHz in Region 1 and 3, with a view to protecting terrestrial IMT operating in the frequency band 1 427-1 518 MHz.

**3.1.6 Indonesia - Document APG19-3/INP-77**

Indonesia is of the view to support and follow up the compatibility studies in ITU-R Working Parties 4A and 5D in defining compatibility conditions, including at technical and operational measures with regard to IMT systems in order to ensure coexistence and compatibility between IMT terrestrial component (in mobile service) and BSS (Sound), in the frequency bands 1 452 – 1 492 MHz.

**3.1.7 Viet Nam –Document APG19-3/INP-84Rev1**

Viet Nam is of the view that:

* Support appropriate studies on the technical and operational measures to ensure the compatibility of International Mobile Telecommunications and broadcasting-satellite service (sound) in the frequency band 1 452-1 492 MHz in Region 1 and 3, with a view to protecting terrestrial IMT operating in the frequency band 1 427-1 518 MHz.
* Support a possible solution for providing the long-term stability is to specify a pfd limit for the BSS (sound) in the frequency band 1 452-1 492 MHz to protect the IMT systems.

**3.1.8 China - Document APG19-3/INP-88**

China is of the following preliminary views:

1. Considering that the current Radio Regulation and technical conditions could sufficiently ensure compatibility of IMT and broadcasting-satellite service (BSS) (sound) in the frequency band 1 452-1 492 MHz in Regions 1 and 3, China supports no change solution as the regulatory actions with respect to Issue 9.1.2;
2. In view of that the current coordination mechanism could reach long-term coexistence between IMT and BSS (sound) systems, China agrees it should keep the current application of RR No. **9.11** and **9.19** as the regulatory actions with respect to Issue 9.1.2, whereas the pfd threshold is exceeded, and there should be no pfd mandatory limitation imposed under RR Art. **21** to the BSS (sound) space station, and no pfd mandatory limitation for crossing borders in the 1 452-1 492 MHz frequency band. In additional, RR No. **21.2.1** should also be considered;
3. Pursuant to Resolution **761 (WRC-15)**, it should take into account BSS (sound) operational requirement and the pfd limitation when it is agreed to be proposed should firstly cover existing and planned BSS (sound) operational requirement, where it imposed a pfd limitation for BSS (sound) space station in the frequency band 1 452-1 492 MHz in Table **21-4** under RR No. **21.16.** China proposes that there should be no pfd limitation in the RR Art. **21** to the BSS (sound) space station in the 1 452-1 492 MHz frequency band.

**3.2 Summary of issues raised during the meeting**

APT members discussed regulatory and technical measures in order to resolve this issue taking into account the operational requirements and protection of both systems.

The technical values such as pfd limit as mandatory, pfd as coordination threshold level and coordination distance for compatibility between IMT and BSS (sound) need further studies in the ITU-R WP 4A & 5D.

Some administrations believe that the regulatory and technical studies on the compatibility between IMT application and BSS (sound) service under this issue shall be limited to the frequency band 1 452-1 492MHz pursuant to Resolution **761 (WRC-15).**

**4. APT Preliminary View(s)**

APT Members support the regulatory and technical studies being conducted by ITU-R in order to achieve compatibility of IMT and BSS (sound) in the frequency band 1 452-1 492 MHz in Regions 1 and 3 in accordance with Resolution **761 (WRC-15).**

APT Members are of view that appropriate regulatory and technical measures should be developed to ensure coexistence and compatibility between IMT and BSS (Sound) in the frequency bands 1 452 – 1 492 MHz taking into account the results of ITU-R studies.

**5. Other View(s) from APT Members**

Some APT Members have a view that the pfd limit for BSS (sound) should be established in the Table21-4 of Article 21 in the Radio Regulations to ensure the protection of IMT

Some other APT Members have a view that the current coordination mechanism could reach long-term coexistence between IMT and BSS (sound) systems without the pfd mandatory limitation.

**6. Issues for Consideration at Next APG Meeting**

Appropriate regulatory and technical measures will be discussed to achieve compatibility of IMT and BSS (sound) in the frequency band 1 452-1 492 MHz in Regions 1 and 3

APT Members are kindly requested to review the possible regulatory actions in the draft CPM text which are discussed in the ITU-R WP 4A & 5D and are encouraged to submit their contributions for further considerations at the next APG meeting.

In addition, APT Members are also requested to provide the operational requirement of IMT and BSS (sound) systems in their countries, as appropriate.

**7. Views from Other Organisations** (as provided in the information documents to

APG19-3)

**7.1 Regional Groups**

**7.1.1 ASMG** - **Document APG19-2/INF-01**

Follow up technical studies and note the technical characteristics of satellite broadcasting systems to ensure that there are no restrictions on the use of IMT applications for the frequency band 1 452-1 492 MHz.

**7.1.2 ATU** - **Document APG19-2/INF-07**

No preliminary position on this agenda item yet

**7.1.3 CEPT** - **Document APG19-3/INF-06**

CEPT has harmonised the frequency band 1 452-1 492 MHz for supplemental downlink under the mobile service. CEPT supports the protection of this application from BSS (sound).

In order to facilitate the coexistence between IMT and BSS in the band 1 452-1 492 MHz, the current regulatory procedures governing the relation between BSS and terrestrial services need to be modified by inserting a pfd value of -113 dBW/m²/MHz in Article 21 with the view to provide a more stable (long-term stability) situation to IMT.

RR Appendix 5 needs to be modified so as to enable countries wishing to continue to apply coordination procedure under RR No. 9.11 to do so. Therefore a pfd limit will apply to BSS with respect to all terrestrial services except for countries wishing to continue to apply
RR No. 9.11, because of more stringent protection requirement (e.g. in order to protect
telemetry systems).

**7.1.4 CITEL** - **Document APG19-3/INF-08 Rev.1**

**(IAP)** No Change to the regulations, outcome should not impact our region.

**7.1.5 RCC** - **Document APG19-2/INF-05**

The RCC Administrations are in favour of the development of relevant regulatory provisions and technical conditions in order to provide compatibility between IMT and broadcasting-satellite service (sound) in the frequency band 1452-1492 MHz in Regions 1 and 3, taking into account IMT and BSS (sound) operational requirements.

**7.2 International Organisations**

**7.2.1 IARU**

NONE

**7.2.2 ICAO**

NONE

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