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| Summary:  |
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| Proposal: |
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1. The following pages are intended to be compiled in one CEPT Brief on AI 9

DRAFT CEPT BRIEF ON AGENDA ITEM 9.1 Issue 9.1.2

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

# ISSUE

Under this issue, the ITU is to conduct the appropriate regulatory and technical studies, with a view to ensuring the compatibility of 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 and to prepare, inter alia, regulatory action that could be taken, based on the studies, in order to facilitate long-term stability of IMT and BSS (sound) in the frequency band 1 452-1 492 MHz in Regions 1 and 3 (see Resolution 761 (WRC-15)).

# Preliminary CEPT position

CEPT has harmonised the frequency band 1 452-1 492 MHz for supplemental downlink under the mobile service. Therefore CEPT supports the protection of this application from BSS (sound). CEPT is of the view that the new harmonized solution in the addressed Regions is necessary to be developed.

In order to facilitate 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 -112 dBW/m²/MHz for Regions 1 and 3 in Article 21 RR with the view to provide a more stable (long-term) situation to IMT.

RR Appendix 5 needs to be modified so as to enable countries of Regions 1 and 3 that wish to do so to continue to apply coordination under RR No. 9.11. Therefore a pfd limit will apply to BSS in Regions 1 and 3 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 aeronautical telemetry systems (ATS)).

# Background

The frequency band 1 452-1 492 MHz is allocated to the fixed service (FS), mobile service (MS), broadcasting service (BS) and broadcasting-satellite service (BSS). Based on the outcome of WRC-15, the frequency band 1 452-1 492 MHz is identified by a country footnote for use by Region 1 (see RR Nos. 5.346, no countries in Europe) and Region 3 administrations (see RR Nos. 5.346A) wishing to implement IMT in accordance with Resolution 223 (Rev.WRC-15) and Resolution 761 (WRC-15).

In CEPT the frequency band 1 452-1 492 MHz is harmonised for terrestrial mobile/fixed communications networks supplemental downlink (see ECC Decision (13)03). This band has remained almost unused in a large part of the world although some BS, BSS, and AMT systems have been introduced in some countries.

Currently RR No. 9.11 applies with respect to the coordination for potential interference from a BSS (sound) space station into IMT receivers but does not provide long-term stability for the operation of IMT due to the fact that only IMT systems that would come into operation within the next three years after successful coordination would be protected and only for those three years. This situation implies that IMT systems may not be protected appropriately in those countries planning to deploy them in future, if the territory of those countries were covered by a satellite network service area provided by another country’s BSS (sound) system(s).

ITU-R WP 4A and WP 5D jointly developed relevant studies and Draft CPM text under this issue. WP 4A was responsible for the studies requested in the resolves to invite ITU-R with respect to the BSS (sound) service, taking into account the technical and operational characteristics provided by WP 5D. WP 5D was responsible for the studies requested in the resolves to invites ITU-R with respect to IMT, taking into account the technical and operational characteristics provided by WP 4A.

# List of relevant documents

ITU-Documentation (Recommendations, Reports, other)

Recommendations: [ITU-R BO.789](https://www.itu.int/rec/R-REC-BO.789/en), [ITU-R BO.1130](https://www.itu.int/rec/R-REC-BO.1130/en), [ITU-R P.452](https://www.itu.int/rec/R-REC-P.452/en), [ITU-R P.1546](https://www.itu.int/rec/R-REC-P.1546/en), [ITU-R P.2001](https://www.itu.int/rec/R-REC-P.2001/en), [ITU-R M.2101](https://www.itu.int/rec/R-REC-M.2101/en)

Reports: [ITU-R M.2292](https://www.itu.int/pub/R-REP-M.2292)

ITU-R WD towards a PDN Report ITU-R M.[IMT&BSS COMPATIBILITY]

ITU-R Handbook: [DSB Handbook − Terrestrial and satellite digital sound broadcasting to vehicular, portable and fixed receivers in the VHF/UHF bands](http://www.itu.int/pub/R-HDB-20/en)

Recommendation [ITU-R P.452](https://www.itu.int/rec/R-REC-P.452/en) is a path specific interference prediction method which requires a terrain profile. Recommendation [ITU-R P.1546](https://www.itu.int/rec/R-REC-P.1546/en) is a path general terrestrial model derived from measurements over gently rolling terrain.

CEPT and/or ECC Documentation (Decisions, Recommendations, Reports)

* ECC/DEC/(13)03

EU Documentation (Directives, Decisions, Recommendations, other), if applicable

* Commission Implementing Decision (EU) 2015/750 of 8 May 2015 on the harmonisation of the 1 452-1 492 MHz frequency band for terrestrial systems capable of providing electronic communications services in the Union

# Actions to be taken

Support/Finalise ITU-R WD towards a PDN Report ITU-R M.[IMT&BSS COMPATIBILITY]

# Relevant information from outside CEPT (examples of these are below)

## European Union (date of proposal)

## Regional telecommunication organisations

APT (June 2018)

Preliminary view

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.

Other views

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.

ATU (October 2018)

No information

ASMG Arab Group (7-11 April 2018)

No restrictions on the use of IMT applications for the frequency band 1452-1492 MHz.

No change to the ITU RR for protection for Broadcasting Satellite Service with proposing setting PFD limits on BSS in Article 21 of the RR or to 5.345 AA of RR to ensure IMT protection

CITEL (December 2017)

IAP

Argentina, Brazil, Canada, Colombia, Ecuador, United States of America, Guatemala, Uruguay

NOC to Article 5 – Section IV – Table of Frequency Allocations

Reasons: WRC-19 issue 9.1.2 is limited to technical and regulatory studies of the mobile (IMT) and broadcasting satellite (sound) services in the band 1452-1492 MHz in Regions 1 and 3 only. Therefore, there is no basis for any changes to the Radio Regulations that would impact the services in the frequency band1452-1492 MHz in Region 2 under this issue. Therefore, NOC is proposed with respect to any change to Article 5 that could impact Region 2 services in the frequency band 1452-1492 MHz.

RCC (October 2018)

The RCC Administrations do not oppose the development of relevant regulatory and technical conditions in order to provide compatibility between IMT and broadcasting-satellite service (sound) in the frequency band 1 452-1 492 MHz in Regions 1 and 3. These conditions shall only be applied in the territory of countries where this band is identified for IMT.

The RCC Administrations consider that technical conditions and regulatory provisions developed within the framework of conducted studies should also take into account the need to protect aeronautical telemetry systems in aeronautical mobile service.

## International organisations

IATA (date of proposal)

ICAO (date of proposal)

IMO (date of proposal)

NATO (23 June 2017)

This NATO military assessment summary is a common military assessment of the NATO Nations on the potential impacts and benefits of Agenda Item 9.1, Issue 9.1.2. It does not constitute a common position of the NATO Nations.

From a military perspective, studies under this issue present a limited risk on NATO military usage in adjacent bands.

SFCG (date of proposal)

WMO and EUMETNET (date of proposal)

## Regional organisations

ESA (date of proposal)

Eurocontrol (date of proposal)

## OTHER INTERNATIONAL AND REGIONAL ORGANISATIONS

EBU (date of proposal)

GSMA (date of proposal)

CRAF (date of proposal)