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| **Radiocommunication Study Groups** |  |
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| Received: 20 October 2021 | **Document 6-1/68-E** |
| **21 October 2021** |
| **English only** |
| Egypt (Arab Republic of), Saudi Arabia (Kingdom of), United Arab Emirates |
| Proposal for Modifications of section 2 of the draft CPM text for WRC-23 agenda item 1.5 |
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Introduction

Resolution **235 (WRC-15)** calls for review of the spectrum use and needs within the frequency band 470-960 MHz in Region 1, and to take appropriate regulatory actions including potential allocation to mobile service and/or identification of IMT within the whole band, or parts thereof.

There was good progress in the last Task Group (TG) 6/1 meeting on Section 2 of the draft CPM text while maintaining the objectives of the background to:

– Reflect the scope of the Resolution **235** **(WRC-15)** without interpretation.

– Maintain the clarification of the studies planned in this AI.

– Maintain the list of current primary and secondary allocations of services within the range as per ITU RR.

– Avoid any promotional text for any of the services, applications or systems to avoid controversial issues.

In addition, there were discussions on the scope of this WRC-23 AI 1.5 and whether studies are limited to the primary services. During the last WG 3 session of the last TG 6-1 meeting, two views were expressed in the *editorial note* in section 2 of the draft CPM text on whether or not to consider the secondary service within the WRC-23 AI 1.5 studies. However, these views were not reflected in the working document on draft CPM text by the TG 6/1 chairman in the last plenary session without even any discussion.

Proposal

The modifications proposed to section 2 of the draft CPM text are provided in the attachment based on the above objectives.

In addition, the co-signing Administration(s) support to maintain the views represented by number of Administrations during the last meeting.

**Attachment:** 1

Attachment

Working document towards Draft CPM Text
for WRC-23 agenda item 1.5
(Attachment to ANNEX 8 TO TASK GROUP 6/1 CHAIRMAN'S REPORT)

CHAPTER 1

Fixed, Mobile and Broadcasting issues

(Agenda items 1.1, 1.2, 1.3, 1.4, 1.5)

Agenda item 1.5

**(TG 6/1[[1]](#footnote-1)\* / WP 3K, WP 3M, WP 5A, WP 5B, WP 5C, WP 5D, WP 6A, WP 7D)**

*1.5 to review the spectrum use and spectrum needs of existing services in the frequency band 470-960 MHz in Region 1 and consider possible regulatory actions in the frequency band 470-694 MHz in Region 1 on the basis of the review in accordance with Resolution* ***235 (WRC-15)****;*

Resolution **235 (WRC‑15)** – *Review of the spectrum use of the frequency band 470-960 MHz in Region 1*

# 1/1.5/1 Executive summary

*[Text of the executive summary, not more than half a page of text to describe briefly the purpose of the agenda item, summarize the results of the studies carried out and, most importantly, provide a brief description of the method(s) identified that may satisfy the agenda item. See also § A2.1 of Annex 2 to* [*Resolution ITU-R 2-8*](http://www.itu.int/pub/R-RES-R.2-8-2019)*.]*

[TBD]

# 1/1.5/2 Background

This agenda item addresses the future spectrum use of the band 470-694 MHz in Region 1. In that regard, a review of the current spectrum use and a study of future spectrum needs in the frequency band 470-960 MHz were requested as well as an assessment of the results of sharing and compatibility studies in relation to possible mobile (except aeronautical) use of the band 470-694 MHz (while also providing protection of systems of existing primary services), in order to consider possible regulatory action taking into account the result of the studies.

[Editorial note: The following views were presented regarding the scope of AI 1.5 and that it is limited to primary services only:

View 1

In view of some administrations, only primary services should be considered under the scope of WRC-23 agenda item 1.5. The scope of WRC-23 agenda item 1.5 is limited to primary services while secondary services should be excluded completely from any studies planned under AI 1.5 on spectrum needs, requirement or protection due to the following:

– Resolution **235** **(WRC-15)**, *considering i)*, stated clearly that protection should be limited to primary services as follow:

*i) that it is necessary to adequately protect all****primary services****in the frequency band 470‑694 MHz and in adjacent frequency bands.*

– Resolution **235** **(WRC-15)** resolves to study particularly the requirement and coexistence between broadcasting and mobile, except aeronautical mobile, services. Any other services should have primary allocation. Secondary service should be explicitly mentioned in the Res in order to be considered in the studies, which is not the case.

– On the other hand, there is no reference to the secondary service in the Resolution **235 (WRC-15)**, and accordingly we should not make any precedence in such situation by considering secondary services in the study.

– The agreed principles in Annex to the Report of CVC meeting for our guidance stated clearly that secondary service should explicitly mentioned in the Resolution in order to be considered:

• "3 This principle is important to identify all services in the frequency band under study.

 The impact of the incoming in-band service subject to the agenda item with respect to in-band secondary services need to be assessed if **it is mentioned in the resolution supporting that agenda item**. **In the absence of guidance from the resolution, the matter is to be treated in accordance with the relevant provisions of the Radio Regulations**.

 The protection of primary services in the adjacent frequency band is to be treated in accordance with the relevant provisions of the Radio Regulations."

– As per the ITU Radio Regulations, Article **5** – Section 2, on Categories of services and allocations, the primary service is only subject to protection and secondary services should not claim protection and accordingly are not subject to AI 1.5 studies:

***5.28*** *3) Stations of a secondary service:*

***5.29*** *a) shall not cause harmful interference to stations of primary services to which frequencies are already assigned or to which frequencies may be assigned at a later date;*

***5.30*** *b) cannot claim protection from harmful interference from stations of a primary service to which frequencies are already assigned or may be assigned at a later date;*

*…*

***5.33*** *5) Where a band is indicated in a footnote of the Table as allocated to a service “on a primary basis”, in an area smaller than a Region, or in a particular country, this is a primary service only in that area or country.*

– Resolution **235 (WRC-15)** addresses the existing primary services in the band 470‑960 MHz which include mobile and broadcasting services. In addition, Resolution **235** **(WRC-15)** resolves to invite WRC-23 to consider possible regulatory actions in the frequency band 470-694 MHz in Region 1, which includes the primary mobile allocation and identification to IMT. The agenda item is intended for primary allocation to Mobile (so, the argument that why we study Mobile without currently having primary allocation in RR is not valid).

Taking into account that

– Resolution **235 (WRC-15)**, *considering i)*, that it is necessary to adequately protect all **primary services** in the frequency band 470‑694 MHz and in adjacent frequency bands;

– Resolution **235** **(WRC-15)** did not mention secondary services at all.

– Annex (3) to CVC meeting Report stated clearly that “The impact of the incoming in-band service subject to the agenda item with respect to in-band secondary services need to be assessed if **it is mentioned in the resolution supporting that agenda item**. **In the absence of guidance from the resolution, the matter is to be treated in accordance with the relevant provisions of the Radio Regulations**.”

– Accordingly, some Administrations objected to the consideration of protection of the secondary services under the studies of AI 1.5.

Legal advisor will be invited to clarify: Is there any obligation from Resolution **235 (WRC-15)** to consider all secondary services considering the objections from multiple Administrations? Or it is subject to agreement from all Administrations?

View 2

…

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## 1/1.5/2.1 Review of the current use and future spectrum needs in 470-960 MHz

The band 470-960 MHz is used within ITU Region 1 by number of services and systems taking into account the allocations to the relevant services.

The ITU-R RR makes the following frequency allocations on primary basis within the band 470‑960 MHz within ITU Region 1:

– Broadcasting service: In Region 1, there is primary allocation to broadcasting service within the band 470-960 MHz (see also RR Nos. **5.149, 5.291A, 5.294, 5.296, 5.300, 5.304, 5.306, 5.312, 5.319, 5.322, 5.323**).

 In the band 862-960 MHz, stations of the broadcasting service shall be operated only in some countries of the African Broadcasting Area subject to agreement obtained under RR No. **9.21** (RR No. **5.322**).

– Mobile, except aeronautical mobile, service: In Region 1, there is primary allocation to mobile service within the band 694-960 MHz (see also RR Nos. **5.312A 5.317A, 5.316B**).

– Fixed service: In Region 1, there is primary allocation to fixed service within the band 790-960 MHz.

– Aeronautical Radionavigation service: In some countries, RR No. **5.312** makes allocation of the frequency bands 645-862 MHz, 646-686 MHz, 726-753 MHz, 778‑811 MHz and 822-852 MHz to the aeronautical radionavigation service (ARNS) on a primary basis, as well as RR No. **5.323** in the frequency band 862-960 MHz.

– Radioastronomy service: In the African Broadcasting Area, RR No. **5.304** makes the allocation of the frequency band 606-614 MHz to the radio astronomy service on a primary basis.

In addition, ITU-R RR makes the following frequency allocations on secondary basis to the relevant services within the band 470-960 MHz within ITU Region 1 which shall not claim any protection from other services with primary allocations within the band.

– Radiolocation service: In some countries, RR No. **5.291A** makes allocation of the frequency band 470‑494 MHz to the radiolocation service on a secondary basis, limited to the operation of wind profile radars.

– Radioastronomy service: In Region 1 (with the exception of the African Broadcasting Area), RR No. **5.306** makes allocation of the band 608‑614 MHz to the radioastronomy service on a secondary basis.

– Fixed service: In some countries, RR No. **5.294** makes allocation of the frequency band 470‑582 MHz to the fixed service on secondary basis.

– Fixed and mobile services: In some countries, RR No. **5.300** makes allocation of the frequency band 582-790 MHz to the fixed and mobile, except aeronautical mobile, services on a secondary basis.

– SAB/SAP (PMSE) application: In some countries, RR No. **5.296** makes allocation of the frequency band 470-694 MHz to the land mobile service on a secondary basis, intended for applications ancillary to broadcasting and programme-making.

## 1/1.5/2.2 Studies on possible regulatory options in the band 470‑694 MHz

Sharing and compatibility studies within the band 470‑694 MHz are required between the broadcasting service and the mobile (except aeronautical mobile) services as well as with other primary services for the relevant protection.

Based on the decision by CPM23-1 ITU-R TG 6/1 deals with sharing and compatibility studies based on the characteristics and parameters provided by relevant ITU-R Working Parties. Summaries of such studies are outlined in Section 3.

# 1/1.5/3 Summary and analysis of the results of ITU-R studies

*[This section should contain a summary of the technical and operational studies performed within ITU-R, including a list of relevant ITU-R Recommendations. Depending on the agenda item, this section could be divided in two parts, one part dealing with the summary and the other part dealing with the analysis. The results of the ITU-R studies should also be analysed with respect to the possible methods of satisfying the agenda item and presented in a concise manner.]*

[TBD]

# 1/1.5/4 Methods to satisfy the agenda item[[2]](#footnote-2)1

*[This section should contain the brief description of the Method or Methods to satisfy the agenda item as per Section A2.4 of Annex 2 to* [*Resolution ITU-R 2-8*](http://www.itu.int/pub/R-RES-R.2-8-2019)*.]*

## N/1.5/4.1 Method A: [title of Method A, if any][[3]](#footnote-3)2

*[Text describing the first method to satisfy the agenda item.]*

## N/1.5/4.2 Method B: [title of Method B, if any]

*[Text describing the second method to satisfy the agenda item.]*

*[Additional sections with text describing other methods to satisfy the agenda item, if any.]*

[TBD]

# 1/1.5/5 Regulatory and procedural considerations

*[Example(s) of regulatory text relating to the Method(s) to satisfy the agenda item.]*

## N/1.5/5.1 For Method A: [title of Method A, if any]

*[Example(s) of regulatory text for the first method to satisfy the agenda item.]*

## N/1.5/5.2 For Method B: [title of Method B, if any]

*[Example(s) of regulatory text for the second method to satisfy the agenda item.]*

*[Additional sections with example(s) of regulatory text for the other methods to satisfy the agenda item, if any.]*

[TBD]

APPENDICES

RESOLUTION 235 (WRC-15)

Review of the spectrum use of the frequency band 470-960 MHz in Region 1

The World Radiocommunication Conference (Geneva, 2015),

considering

*a)* that the favourable propagation characteristics in the frequency bands below 1 GHz are beneficial in providing cost-effective solutions for coverage;

*b)* that there is a need to continually take advantage of technological developments in order to increase the efficient use of the spectrum and facilitate spectrum access;

*c)* that the frequency band 470-862 MHz is a harmonized band used to provide terrestrial television broadcasting services on a worldwide scale;

*d)* that, in many countries, there is a sovereign obligation to provide broadcasting services;

*e)* that terrestrial broadcasting networks have a long life cycle, and a stable regulatory environment is necessary to provide protection of investment and future development;

*f)* that, in many countries, there is a need for investment in the next decade for the migration of broadcasting into the frequency band below 694 MHz and for the implementation of new generation broadcasting technologies, in order to take advantage of technological developments to increase the efficient use of the spectrum;

*g)* that in many developing countries terrestrial broadcasting is the only viable means of delivery of broadcast services;

*h)* that the technology trend in digital terrestrial television (DTT) is towards high-definition television which requires a higher bit rate than standard-definition television;

*i)* that it is necessary to adequately protect all primary services in the frequency band *470‑694* MHz and in adjacent frequency bands;

*j)* that International Mobile Telecommunications (IMT) systems, utilizing some parts of the frequency band 694/698-960 MHz, are intended to provide telecommunication services on a worldwide scale, regardless of location, network or terminal used;

*k)* that, for countries listed in No. **5.296**, an additional allocation to the land-mobile service on a secondary basis is in place, intended for applications ancillary to broadcasting and programme-making;

*l)* that the frequency band 645-862 MHz is allocated on a primary basis to the aeronautical radionavigation service (ARNS) in the countries listed in No. **5.312**;

*m)* that, in some countries, parts of the frequency band are also allocated to the radiolocation service on a secondary basis, limited to the operation of wind profiler radars (No. **5.291A**), and also to the radio astronomy service on a secondary basis (No. **5.306**), and, according to No. **5.149**, administrations are urged to take all practicable steps to protect the radio astronomy service from harmful interference when making assignments to stations of other services,

recognizing

*a)* that the GE06 Agreement applies in all Region 1 countries, except Mongolia, and in Iran(Islamic Republic of), in particular for the frequency band 470-862 MHz;

*b)* that the GE06 Agreement contains provisions for the terrestrial broadcasting service and other primary terrestrial services, a Plan for digital television and a list of stations of other primary terrestrial services;

*c)* that a digital entry in the GE06 Plan may also be used for transmissions in a service other than the broadcasting service under the conditions set out in § 5.1.3 of the GE06 Agreement and the provisions of No. **4.4** of the Radio Regulations;

*d)* that information on implementation of the digital dividend and on the transition to digital television and its technological evolution is needed and may not be available before 2019,

noting

the ongoing development of new applications and technologies of both the broadcasting and mobile services,

resolves to invite ITU-R, after the 2019 World Radiocommunication Conference and in time for the 2023 World Radiocommunication Conference

1 to review the spectrum use and study the spectrum needs of existing services within the frequency band 470-960 MHz in Region 1, in particular the spectrum requirements of the broadcasting and mobile, except aeronautical mobile, services, taking into account the relevant ITU Radiocommunication Sector (ITU-R) studies, Recommendations and Reports;

2 to carry out sharing and compatibility studies, as appropriate, in the frequency band 470‑694 MHz in Region 1 between the broadcasting and mobile, except aeronautical mobile, services, taking into account relevant ITU-R studies, Recommendations and Reports;

3 to conduct sharing and compatibility studies, as appropriate, in order to provide relevant protection of systems of other existing services,

invites administrations

to participate actively in the studies by submitting contributions to ITU-R,

resolves to invite the 2023 World Radiocommunication Conference

to consider, based on the results of studies above, provided that these studies are completed and approved by ITU-R, possible regulatory actions in the frequency band 470-694 MHz in Region 1, as appropriate,

further invites ITU-R

to ensure intersectoral collaboration with the ITU Telecommunication Development Sector (ITU-D) in the implementation of this Resolution.

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1. \* Note: see the CPM23-1 Decision in Annex 9 to BR Administrative Circular [CA/251](https://www.itu.int/md/R00-CA-CIR-0251/en) on the establishment and Terms of Reference of Task Group 6/1 (TG 6/1) on WRC-23 agenda item 1.5. [↑](#footnote-ref-1)
2. 1 If a single Method is proposed to satisfy a given agenda item, it does not need to bear a number as it would be the only **Method to satisfy the agenda item**, in both Sections **N/1.xy/4** and **N/1.xy/5**. [↑](#footnote-ref-2)
3. 2 If alternatives are proposed to a given Method, they could be described as Sub-Methods in new sub-sections, e.g. Sub-Method A1 (to Method A) in sub-section **N/1.xy/4.1.1** and Sub-Method A2 (to Method A) in sub-section **N/1.xy/4.1.2**. [↑](#footnote-ref-3)