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| A close up of a sign  Description automatically generated | **World Radiocommunication Conference (WRC-23) Dubai, 20 November - 15 December 2023** | |  |
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| PLENARY MEETING | | **Document 181-E** | |
|  | | **30 October 2023** | |
|  | | **Original: English** | |
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| Cambodia (Kingdom of)/China (People's Republic of)/Lao People's Democratic Republic/Maldives (Republic of)/Myanmar (Union of)/Sri Lanka (Democratic Socialist Republic of) | | | |
| PROPOSALS FOR THE WORK OF THE CONFERENCE | | | |
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| Agenda item 1.2 | | | |

1.2 to consider identification of the frequency bands 3 300-3 400 MHz, 3 600‑3 800 MHz, 6 425-7 025 MHz, 7 025-7 125 MHz and 10.0-10.5 GHz for International Mobile Telecommunications (IMT), including possible additional allocations to the mobile service on a primary basis, in accordance with Resolution **245 (WRC‑19)**;

Introduction

APT supports identification of the frequency band 7 025-7 125 MHz for IMT globally through Method 5C together with a draft new WRC Resolution, in which the provisions for ensuring the protection, continued use, and future development of the fixed-satellite service (FSS) (Earth-to-space and space-to-Earth) and fixed service (FS) are included.

Those services allocations are not only limited to the frequency band 7 025-7 125 MHz but to the entire 6 425-7 125 MHz range in parts thereof, i.e. FSS uplink in the frequency band 6 425-7 075 MHz, FSS downlink in the frequency band 6 700-7 075 MHz and the FS in the frequency band 6 425-7 125 MHz. ITU‑R Working Party (WP) 5D has conducted studies of sharing and compatibility between IMT and incumbent services for the frequency range 6 425-7 125 MHz. The parameters used in these studies for FSS uplink, FSS downlink, and FS provided by the ITU‑R expert groups are the same and not differentiated between the frequency bands of 6 425-7 025 MHz and 7 025-7 125 MHz.

In this regard, the provisions specified for the frequency band 7 025-7 125 MHz in the draft new WRC Resolution as contained in the ACP Document WRC23/62([Add.2](https://www.itu.int/dms_pub/itu-r/md/23/wrc23/c/R23-WRC23-C-0062!A2!MSW-E.docx)) are sufficient to protect the same allocations on the frequency band 6 425-7 025 MHz. The proponents support to identify the frequency band 6 425-7 025 MHz in Region 1 and some countries in Region 3 using the same provisions as specified in the ACP for the frequency band 7 025-7 125 MHz.

Based on the sharing studies in ITU‑R WP 5D, the proponents believe that there is no additional condition needed on IMT stations to protect FSS uplink in the frequency band 6 425-7 075 MHz. However, to have the same conditions for the frequency band 6 425-7 025 MHz as for the band 7 025-7 125 MHz as described in the ACP for Band 5, the proponents support Example 2 of *resolves* 2.1 of the ACP “expected e.i.r.p. mask”. Regarding the values, we believe the condition in Example 3 of Alternative 2 under Method 4C/5C of CPM Report on IMT stations is sufficient to protect the FSS uplink operating in the frequency band 6 425-7 075 MHz.

Proposals

The proposals of the proponents are as follows:

• support the identification of the frequency band 7 025-7 125 MHz for IMT globally;

• support the identification of the frequency band 6 425-7 025 MHz for IMT in Region 1;

• seek to create a footnote in the Radio Regulations (RR) for an identification to IMT of the frequency band 6 425‑7 025 MHz for some countries in Region 3 by extending the same provisions as specified in the ACP for the frequency band 7 025-7 125 MHz to cover the identification of IMT in the frequency band 6 425-7 025 MHz in a draft new WRC Resolution;

• support to apply appropriate condition through Example 3 of Alternative 2 “expected e.i.r.p. mask” under Method 4C/5C as contained in the CPM Report, for the protection of FSS uplink in the frequency band 6 425-7 075 MHz.

This contribution proposes the following modifications to the RR.

ARTICLE 5

Frequency allocations

Section IV – Table of Frequency Allocations  
(See No. 2.1)

MOD CBG/CHN/LAO/MLD/BRM/CLN/181/1#1363

5 570-6 700 MHz

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| Allocation to services | | |
| Region 1 | Region 2 | Region 3 |
| 5 925-6 700 FIXED 5.457  FIXED-SATELLITE (Earth-to-space) 5.457A 5.457B  MOBILE 5.457C ADD 5.B12 ADD 5.X12  5.149 5.440 5.458 | | |

**Reasons:** This is to identify the frequency bands 6 425-7 025 MHz in Region 1 and countries in Region 3 and 7 025-7 125 MHz in all Regions for IMT by creating new RR footnotes with conditions which are contained in a draft new WRC Resolution.

MOD CBG/CHN/LAO/MLD/BRM/CLN/181/2#1372

6 700-7 250 MHz

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| --- | --- | --- |
| Allocation to services | | |
| Region 1 | Region 2 | Region 3 |
| 6 700-7 075 FIXED  FIXED-SATELLITE (Earth-to-space) (space-to-Earth) 5.441  MOBILE ADD 5.B12 ADD 5.X12 ADD 5.C12  5.458 5.458A 5.458B | | |
| 7 075-7 145 FIXED  MOBILE ADD 5.C12  5.458 5.459 | | |

**Reasons:** This is to identify the frequency bands 6 425-7 025 MHz in Region 1 and countries in Region 3 and 7 025-7 125 MHz in all Regions for IMT by creating new RR footnotes with conditions which are contained in a draft new WRC Resolution.

ADD CBG/CHN/LAO/MLD/BRM/CLN/181/3#1365

5.B12 In Region 1, the frequency band 6 425-7 025 MHz is identified for use by administrations wishing to implement the terrestrial component of International Mobile Telecommunications (IMT). This identification does not preclude the use of this frequency band by any application of the services to which it is allocated and does not establish priority in the Radio Regulations. Resolution**[CBG/CHN/LAO/MLD/BRM/CLN-6 GHz] (WRC‑23)** applies.     (WRC‑23)

**Reasons:** This is to identify the frequency bands 6 425-7 025 MHz in Region 1 and countries in Region 3 and 7 025-7 125 MHz in all Regions for IMT by creating new RR footnotes with conditions which are contained in a draft new WRC Resolution.

ADD CBG/CHN/LAO/MLD/BRM/CLN/181/4

5.X12 In Cambodia, China, Lao P.D.R., Maldives, Myanmar and Sri Lanka in Region 3, the frequency band 6 425-7 025 MHz is identified for use by these administrations wishing to implement the terrestrial component of International Mobile Telecommunications (IMT). This identification does not preclude the use of this frequency band by any application of the services to which it is allocated and does not establish priority in the Radio Regulations. Resolution**[CBG/CHN/LAO/MLD/BRM/CLN-6 GHz] (WRC‑23)** applies.     (WRC‑23)

**Reasons:** This is to identify the frequency bands 6 425-7 025 MHz in Region 1 and countries in Region 3 and 7 025-7 125 MHz in all Regions for IMT by creating new RR footnotes with conditions which are contained in a draft new WRC Resolution.

ADD CBG/CHN/LAO/MLD/BRM/CLN/181/5#1373

5.C12 The frequency band 7 025-7 125 MHz is identified for use by administrations wishing to implement the terrestrial component of International Mobile Telecommunications (IMT). This identification does not preclude the use of this frequency band by any application of the services to which it is allocated and does not establish priority in the Radio Regulations. Resolution **[CBG/CHN/LAO/MLD/BRM/CLN-6 GHz] (WRC‑23)** applies.     (WRC‑23)

**Reasons:** This is to identify the frequency bands 6 425-7 025 MHz in Region 1 and countries in Region 3 and 7 025-7 125 MHz in all Regions for IMT by creating new RR footnotes with conditions which are contained in a draft new WRC Resolution.

ADD CBG/CHN/LAO/MLD/BRM/CLN/181/6#1370

draft new Resolution [CBG/CHN/LAO/MLD/BRM/CLN-6 GHz] (WRC‑23)

Terrestrial component of International Mobile Telecommunications in the frequency band 6 425-7 025 MHz in Region 1 and countries in Region 3 and 7 025-7 125 MHz in all Regions

The World Radiocommunication Conference (Dubai, 2023),

considering

*a)* that International Mobile Telecommunications (IMT), including IMT‑2000, IMT‑Advanced and IMT‑2020, is the ITU vision of global mobile access, and is intended to provide telecommunication services on a worldwide scale, regardless of location and type of network or terminal;

*b)* that harmonized worldwide frequency bands for IMT are desirable in order to achieve global roaming and the benefits of economies of scale;

*c)* that identification of frequency bands allocated to the mobile service for IMT may change the sharing situation regarding applications of services to which the frequency band is already allocated, and may require regulatory actions;

*d)* that the ITU Radiocommunication Sector (ITU‑R) has studied, in preparation for WRC‑23, sharing and compatibility with services allocated in the frequency band 6 425‑7 125 MHz, and its adjacent band, as appropriate, based on characteristics available at that time, and results may change if these characteristics change;

*e)* that it is assumed that a very limited number of IMT base stations will be communicating with a positive elevation angle towards IMT indoor mobile stations;

*f)* that the frequency band 6 425-7 125 MHz, or part thereof, is allocated on a primary basis to the fixed, mobile, fixed-satellite (Earth-to-space and space-to-Earth) and space operation services (Earth-to-space),

noting

*a)* Resolutions **223 (Rev.WRC‑19)**, **224 (Rev.WRC‑19)**, **225 (Rev.WRC‑12)**, **241 (WRC‑19)**, **242 (WRC‑19)** and **243 (WRC‑19)**, which also relate to IMT;

*b)* that the IMT terrestrial radio interfaces as defined in Recommendations ITU‑R M.1457, ITU‑R M.2012 and ITU‑R M.2150 are expected to evolve within the framework of ITU‑R beyond those initially specified, to provide enhanced services and services beyond those envisaged in the initial implementation;

*c)* that ITU‑R has developed its vision defining the framework and overall objectives of IMT towards 2030 and beyond to drive the future developments for IMT,

recognizing

*a)* that the identification of a frequency band for IMT does not establish priority in the Radio Regulations and does not preclude the use of the frequency band by any application of the services to which it is allocated;

*b)* that studies have shown that the protection of feeder links for the non-geostationary-satellite orbit (non-GSO) fixed-satellite service (FSS) (space-to-Earth) requires the determination of protection distances ranging between a few kilometres to tens of kilometres. These protection distances are site-specific and depend on several elements, such as the propagation parameters, local terrain topography, station and orbital parameters of the feeder links for non-GSO FSS (space-to-Earth);

*c)* that some administrations are planning to use the frequency band 6 425-7 125 MHz or portions thereof for IMT;

*d)* that some administrations are using and planning 6 425-7 125 MHz or portions thereof for other applications of the mobile service, including other wireless access systems,

resolves

1 that administrations wishing to implement IMT consider the use of the frequency band 6 425-7 025 MHz identified for IMT in No. **5.B12** in Region 1 and in **5.X12** in countries in Region 3 and the frequency band 7 025-7 125 MHz identified for IMT in No. **5.C12** in all Regions, taking into account the latest relevant ITU‑R Recommendations;

2 that administrations wishing to implement IMT in the frequency band 6 425-7 075 MHz shall apply the following conditions to IMT to ensure the protection, continued use and future development of the fixed-satellite service (Earth-to-space):

2.1 the level of expected equivalent isotropically radiated power (e.i.r.p.) emitted by an IMT base station as a function of vertical angle above the horizon in the frequency band 6 425-7 075 MHz or part thereof shall not exceed the following values:

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| --- | --- |
| Vertical angle measurement window θ*L* ≤ θ < θ*H* (vertical angle θ above horizon) | Expected e.i.r.p.  (dBm/MHz)  (NOTE 1) |
| 0° ≤θ < 5° | 32 |
| 5° ≤θ< 10° | 28 |
| 10° ≤ θ< 15° | 24 |
| 15° ≤ θ < 20° | 24 |
| 20° ≤ θ < 30° | 20 |
| 30° ≤ θ < 60° | 18 |
| 60° ≤ θ≤ 90° | 17 |
| NOTE 1: The expected e.i.r.p. is defined as the average value of the e.i.r.p., with the averaging being performed:  – over horizontal angles between −180° to +180°, and the IMT base station beamforming in a specific direction within its steering range,  – over different beamforming directions within the IMT base station steering range, and  – over the specified vertical angle measurement window θ*L* ≤ θ < θ*H*. | |

invites administrations

to take into account the benefits of harmonized utilization of the spectrum for the terrestrial component of IMT,

invites the ITU Radiocommunication Sector

1 to develop harmonized frequency arrangements to facilitate IMT deployment in the frequency bands 6 425-7 025 MHz in Region 1 and countries in Region 3 and 7 025-7 125 MHz in all Regions;

2 to continue providing guidance to ensure that IMT can meet the telecommunication needs of developing countries;

3 to develop a recommendation to address methods for the determination of geographic zones for the co-existence between IMT base stations in the frequency band 6 425-7 125 MHz and non-GSO earth stations in the frequency band 6 700-7 075 MHz;

4 to update existing ITU‑R Recommendations/Reports or develop new ITU‑R Recommendations, as appropriate, to provide information and assistance to the concerned administrations on possible coordination of fixed service stations with IMT stations in the frequency band 6 425-7 125 MHz;

5 to develop ITU‑R Recommendations and/or Reports, as appropriate, to assist administrations in ensuring the efficient use of the frequency band 6 425-7 125 MHz through coexistence mechanisms between IMT and other applications of the mobile service, including other wireless access systems,

instructs the Director of the Radiocommunication Bureau

to bring this Resolution to the attention of relevant international organizations.

**Reasons:** This is to identify the frequency bands 6 425-7 025 MHz in Region 1 and countries in Region 3 and 7 025-7 125 MHz in all Regions for IMT by creating new RR footnotes with conditions which are contained in a draft new WRC Resolution.

SUP CBG/CHN/LAO/MLD/BRM/CLN/181/7#1391

RESOLUTION 245 (WRC‑19)

Studies on frequency-related matters for the terrestrial component of International Mobile Telecommunications identification in the frequency bands 3 300-3 400 MHz, 3 600-3 800 MHz, 6 425-7 025 MHz,   
7 025-7 125 MHz and 10.0-10.5 GHz

**Reasons:** The work is now complete on agenda item 1.2.

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