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| **World Radiocommunication Conference (WRC-19) Sharm el-Sheikh, Egypt, 28 October – 22 November 2019** |  |
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| PLENARY MEETING | **Addendum 3 to Document 24(Add.13)-E** |
|  | **20 September 2019** |
|  | **Original: English** |
|  | |
| Asia-Pacific Telecommunity Common Proposals | |
| Proposals for the work of the conference | |
|  | |
| Agenda item 1.13 | |

1.13 to consider identification of frequency bands for the future development of International Mobile Telecommunications (IMT), including possible additional allocations to the mobile service on a primary basis, in accordance with Resolution **238 (WRC-15)**;

Part 3 – Frequency bands 37-40.5, 40.5-42.5 and 42.5-43.5 GHz

Introduction

This document presents the APT Common Proposals for the frequency bands 37-40.5 GHz, 40.5-42.5 GHz and 42.5-43.5 GHz under WRC-19 agenda item 1.13.

Proposals

APT Members support identifying the 37-43.5 GHz frequency band, or portions thereof, for IMT globally through Methods C2, D2 and E2 with Alternative 2 together with a new WRC Resolution.

In addition, APT Members have the following views on Options under the respective Conditions for Methods C2, D2 and E2 contained in the CPM Report. It should be noted APT Members are still investigating the Options to be selected for these Conditions.

APT Views on Options under the respective Conditions for Methods C2, D2 and E2

| Conditions | | Supported Option |
| --- | --- | --- |
| C2a | Protection measures for the EESS (passive) in the 36-37 GHz frequency band | To be developed |
| C2b | Protection measures for the FSS (space-to-Earth) | To be developed |
| C2c | Protection measures for the SRS (space-to-Earth) | To be developed |
| C2d | Measures for the SRS (Earth-to-space) and EESS (Earth-to-space) | To be developed |
| C2e | Protection measures for multiple services | To be developed |
| D2a | Protection measures for the FSS (space-to-Earth) | To be developed |
| D2b | Protection measures for the RAS | To be developed |
| D2c | Protection measures for multiple services | To be developed |
| E2a | Protection measures for the FSS (Earth-to-space) | To be developed |
| E2b | Protection measures for the RAS | To be developed |
| E2c | Protection measures for multiple services | To be developed |
| E2d | Measures related to transmitting earth stations in the FSS (Earth-to-space) at known locations | To be developed |

Regarding the frequency band 37-40.5 GHz, APT Members do not support Method C3 in the CPM Report.

ARTICLE 5

Frequency allocations

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

MOD ACP/24A13A3/1#49849

34.2-40 GHz

|  |  |  |
| --- | --- | --- |
| **Allocation to services** | | |
| **Region 1** | **Region 2** | **Region 3** |
| **37-37.5** FIXED  MOBILE except aeronautical mobile ADD 5.B113  SPACE RESEARCH (space-to-Earth)  5.547 | | |
| **37.5-38** FIXED  FIXED-SATELLITE (space-to-Earth)  MOBILE except aeronautical mobile ADD 5.B113  SPACE RESEARCH (space-to-Earth)  Earth exploration-satellite (space-to-Earth)  5.547 | | |
| **38-39.5** FIXED  FIXED-SATELLITE (space-to-Earth)  MOBILE ADD 5.B113  Earth exploration-satellite (space-to-Earth)  5.547 | | |
| **39.5-40** FIXED  FIXED-SATELLITE (space-to-Earth) 5.516B  MOBILE ADD 5.B113  MOBILE-SATELLITE (space-to-Earth)  Earth exploration-satellite (space-to-Earth)  5.547 | | |

**Reasons:** APT Members support identifying the 37-43.5 GHz frequency band, or portions thereof, for the terrestrial component of IMT globally.

MOD ACP/24A13A3/2

40-47.5 GHz

|  |  |  |
| --- | --- | --- |
| **Allocation to services** | | |
| **Region 1** | **Region 2** | **Region 3** |
| **40-40.5** EARTH EXPLORATION-SATELLITE (Earth-to-space)  FIXED  FIXED-SATELLITE (space-to-Earth) 5.516B  MOBILE ADD 5.B113  MOBILE-SATELLITE (space-to-Earth)  SPACE RESEARCH (Earth-to-space)  Earth exploration-satellite (space-to-Earth) | | |
| **40.5-41**  FIXED  FIXED-SATELLITE  (space-to-Earth)  MOBILE ADD 5.B113  BROADCASTING  BROADCASTING-SATELLITE  5.547 | **40.5-41**  FIXED  FIXED-SATELLITE  (space-to-Earth) 5.516B  MOBILE ADD 5.B113  BROADCASTING  BROADCASTING-SATELLITE  Mobile-satellite (space-to-Earth)  5.547 | **40.5-41**  FIXED  FIXED-SATELLITE  (space-to-Earth)  MOBILE ADD 5.B113  BROADCASTING  BROADCASTING-SATELLITE  5.547 |
| **41-42.5** FIXED  FIXED-SATELLITE (space-to-Earth) 5.516B  MOBILE ADD 5.B113  BROADCASTING  BROADCASTING-SATELLITE  5.547 5.551F 5.551H 5.551I | | |
| **42.5-43.5** FIXED  FIXED-SATELLITE (Earth-to-space) 5.552  MOBILE except aeronautical mobile ADD 5.B113  RADIO ASTRONOMY  5.149 5.547 | | |

**Reasons:** APT Members support i) upgrading the existing secondary allocation to the mobile service in the frequency band 40.5-42.5 GHz to a primary allocation in the Table of Frequency Allocations and ii) identifying the frequency band 37-43.5 GHz, or portions thereof, for the terrestrial component of IMT globally.

ADD ACP/24A13A3/3#49852

5.B113 The frequency band 37-43.5 GHz or portions thereof 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 they are allocated and does not establish priority in the Radio Regulations. Resolution **[ACP-B113-IMT 40/50 GHZ] (WRC‑19)** applies.     (WRC‑19)

**Reasons:** APT Members support identifying the frequency band 37-43.5 GHz, or portions thereof, for the terrestrial component of IMT globally together with a new WRC Resolution.

ADD ACP/24A13A3/4#49927

Draft New Resolution [ACP-B113-IMT 40/50 GHz] (WRC-19)

International Mobile Telecommunications in frequency bands 37-43.5 GHz

The World Radiocommunication Conference (Sharm el-Sheikh, 2019),

considering

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

*b)* that the evolution of IMT is being studied within ITU‑R;

*c)* that adequate and timely availability of spectrum and supporting regulatory provisions is essential to realize the objectives in Recommendation ITU‑R M.2083;

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

*e)* that IMT systems are now being evolved to provide diverse usage scenarios and applications such as enhanced mobile broadband, massive machine-type communications and ultra-reliable and low-latency communications;

*f)* that ultra-low latency and very high bit-rate applications of IMT will require larger contiguous blocks of spectrum than those available in frequency bands that are currently identified for use by administrations wishing to implement IMT;

*g)* that the properties of higher frequency bands, such as shorter wavelength, would better enable the use of advanced antenna systems including MIMO and beam-forming techniques in supporting enhanced broadband;

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

*i)* the need to protect existing services and to allow for their continued development when considering frequency bands for possible additional allocations to any service,

noting

Recommendation ITU‑R M.2083 “IMT Vision –Framework and overall objectives of the future development of IMT for 2020 and beyond”,

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)* the identification of high-density applications in the fixed-satellite service in the space-to-Earth direction in the bands 39.5-40 GHz in Region 1, 40-40.5 GHz in all Regions and 40.5-42 GHz in Region 2 and in the Earth-to-space direction in the bands 47.5-47.9 GHz in Region 1, 48.2-48.54 GHz in Region 1, 49.44-50.2 GHz in Region 1 and 48.2-50.2 GHz in Region 2 (see No. **5.516B**);

*c)* that Resolution **752 (WRC‑07)** established a power limit of −10 dBW for stations in the mobile service in the 36-37 GHz band in order to facilitate sharing between active and passive services in this band;

*d)* that the relevant standards organizations have standardized an unwanted emission level of −13 dBm/MHz from IMT stations operating in the 37-40 GHz band, which is below the limit in *recognizing c);*

*e)* that for the purpose of protecting the radio astronomy service in the frequency band 42.5-43.5 GHz, No. **5.149** applies,

resolves

that administrations wishing to implement IMT consider the use of frequency band 37-43.5 GHz, identified for IMT in No. **5.B113** and the benefits of harmonized utilization of the spectrum for the terrestrial component of IMT taking into account the latest relevant ITU‑R Recommendation,

invites ITU‑R

1 to develop harmonized frequency arrangements to facilitate IMT deployment in the frequency band 37-43.5 GHz, or portions thereof, taking into account the results of sharing and compatibility studies;

2 to continue providing guidance to ensure that IMT can meet the telecommunication needs of the developing countries and rural areas in the context of the studies referred to above;

3 to develop generic unwanted emission characteristics for mobile and base stations of the terrestrial radio interfaces of IMT-2020.

**Reasons:** APT Members support the identification of the frequency band 37-43.5 GHz, or portions thereof, for IMT together with the conditions shown in the above new WRC Resolution. It should be noted that APT Members are still investigating the options to be selected for the Conditions in the CPM Report, and additional provisions may be required in this Resolution.

ACP/24A13A3/5

Regarding the frequency band 37-40.5 GHz, APT Members do not support Method C3 in the CPM Report.

**Reasons:** APT Members are of the view that Method C3 is outside the scope of WRC-19 agenda item 1.13 because it seeks to consider the additional identification of 37.5-39.5 GHz to high-density applications in FSS for Region 1 through modifications of RR No. **5.516B**.

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