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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 4 toDocument 16(Add.13)-E** |
|  | **4 October 2019** |
|  | **Original: English** |
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| European 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 band 40.5 - 43.5 GHz**

Introduction

This document presents the European Common Proposal for the frequency band 40.5-43.5 GHz under WRC-19 agenda item 1.13.

CEPT supports the upgrade of 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 identify the frequency band for IMT by a new footnote with certain regulatory conditions. CEPT supports the identification of the frequency band 42.5-43.5 GHz for IMT by the same footnote.

Proposals

ARTICLE 5

Frequency allocations

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

MOD EUR/16A13A4/1

40-47.5 GHz

|  |
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| Allocation to services |
| Region 1 | Region 2 | Region 3 |
| 40.5-41FIXEDFIXED-SATELLITE (space-to-Earth)MOBILE ADD 5.C113BROADCASTINGBROADCASTING-SATELLITE5.547 | 40.5-41FIXEDFIXED-SATELLITE (space-to-Earth) 5.516BMOBILE ADD 5.C113BROADCASTINGBROADCASTING-SATELLITEMobile-satellite (space-to-Earth)5.547 | 40.5-41FIXEDFIXED-SATELLITE (space-to-Earth)MOBILE ADD 5.C113BROADCASTINGBROADCASTING-SATELLITE5.547 |
| 41-42.5 FIXED FIXED-SATELLITE (space-to-Earth) 5.516B MOBILE ADD 5.C113 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.C113 RADIO ASTRONOMY 5.149 5.547 |

ADD EUR/16A13A4/2

5.C113 The frequency band 40.5-43.5 GHz 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 **[EUR-A113-IMT 40 GHZ] (WRC-19)** applies.

**Reasons:** CEPT supports the upgrade of 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 identify the frequency band for IMT by a new footnote with certain regulatory conditions. CEPT supports the identification of the band 42.5-43.5 GHz for IMT by the same footnote. CEPT supports the conditions as shown in the draft new Resolution **[EUR-A113-IMT 40 GHZ] (WRC‑19)** applying to the 40.5-43.5 GHz frequency range.

ADD EUR/16A13A4/3

Draft New Resolution [EUR-A113-IMT 40 GHZ] (WRC-19)

International Mobile Telecommunications
within the frequency range 40.5-43.5 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 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;

*c)* 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;

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

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

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

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

*h)* that the pointing elevation of the main beam (electrical and mechanical) should normally be below the horizon for outdoor base stations;

*i)* that the coverage of outdoor hotspot has been assumed in sharing studies to be achieved with the deployment of base stations communicating with terminals on the ground and a very limited number of indoor terminals with positive elevation, resulting in an elevation of the main beam of outdoor base stations normally below the horizon, thus with high discrimination towards the satellites;

*j)* that the frequency band 42.5-43.5 GHz is allocated to the radio astronomy service on a primary basis,

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 (HDFSS) in the space-to-Earth direction in the frequency bands 39.5-40 GHz in Region 1, 40-40.5 GHz in all Regions and 40.5-42 GHz in Region 2 (see No. **5.516B**);

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

*d)* Resolution **176 (Rev. Dubai, 2018)** of the Plenipotentiary Conference on measurement and assessment concerns related to human exposure to electromagnetic fields,

resolves

1 that administrations wishing to implement IMT consider the use of the frequency band 40.5-43.5 GHz identified for IMT in No. **5.C113** and the benefits of harmonized utilization of the spectrum for the terrestrial component of IMT taking into account the latest relevant ITU-R Recommendation;

2 that administrations shall apply the following condition for the frequency band 42.5-43.5 GHz:

When deploying outdoor IMT base stations, it shall be ensured that each antenna normally[[1]](#footnote-1) transmits only with the main beam pointing below the horizon and the antenna shall have mechanical pointing below the horizon except when the base station is only receiving,

invites administrations

1 to ensure that, when considering, nationally or regionally, the spectrum to be used for IMT, due attention is paid to the need for spectrum for earth stations that could be deployed in a ubiquitous manner (i.e. small user earth stations) and for earth stations that could be coordinated (i.e. gateways) in both downlink (37.5-42.5 GHz) and uplink (42.5-43.5 GHz) directions, taking into account spectrum identified for the HDFSS as per No. **5.516B**;

2 to implement coordination and protection measures for the radio astronomy stations in the frequency band 42.5-43.5 GHz as required,

invites ITU‑R

1 to develop harmonized frequency arrangements to facilitate IMT deployment in the frequency bands 40.5-43.5 GHz 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 an ITU-R Recommendation to assist administrations in ensuring the protection of existing and future FSS earth stations in the frequency band 40.5-42.5 GHz from IMT deployments in neighbouring countries;

5 to update existing ITU-R Recommendations or develop new ITU-R Recommendations, as appropriate, to provide information on possible coordination and protection measures for the radio astronomy stations in the frequency band 42.5-43.5 GHz;

6 to regularly review the impact of the evolution of IMT technical and operational characteristics (including deployment and base-station density) on sharing and compatibility with other services (e.g. space services) and, as necessary, to take into account the results of these reviews in the development or revision of ITU‑R Recommendations/Reports, e.g. on IMT characteristics

instructs the Director of the Radiocommunication Bureau

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

**Reasons:** CEPT supports the conditions as shown in the above Resolution **[EUR-A113-IMT 40 GHZ] (WRC-19)** applying to the 40.5-43.5 GHz frequency range.

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1. With reference to *considering i)* it is assumed that only a very limited number of indoor terminals with positive elevation will be communicating with base stations. [↑](#footnote-ref-1)