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| **World Radiocommunication Conference (WRC-19)Sharm el-Sheikh, Egypt, 28 October – 22 November 2019** |  |
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|  | CPG(18)073 ANNEX V-13A |
| PLENARY MEETING | **Addendum 13 toDocument XXX-E** |
|  | **DATE** |
|  | **Original: English** |
|  |
| European Common Proposals |
| Proposals for the work of the conference |
|  |
| Agenda item 1.13 |
| **26 GHz** |

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)**;

[Note: PT1 is considering the implication of Nos 5.536A, 5.536B and 5.536C and will consider if proposals from CEPT are needed in this ECP]

**Introduction**

This document presents the European Common Proposal for the band 24.25-27.5 GHz under WRC-19 Agenda Item 1.13.

**Proposals**

ARTICLE 5

Frequency allocations

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

MOD EUR/XXXA13/1

22-24.75 GHz

|  |
| --- |
| Allocation to services |
| Region 1 | Region 2 | Region 3 |
| 24.25-24.45FIXEDMOBILE ADD 5.A113 MOD 5.338A | 24.25-24.45MOBILE ADD 5.A113 MOD 5.338ARADIONAVIGATION | 24.25-24.45FIXEDMOBILE ADD 5.A113 MOD 5.338ARADIONAVIGATION |
| 24.45-24.65FIXEDINTER-SATELLITEMOBILE ADD 5.A113 MOD 5.338A | 24.45-24.65INTER-SATELLITEMOBILE ADD 5.A113 MOD 5.338ARADIONAVIGATION | 24.45-24.65FIXEDINTER-SATELLITEMOBILE ADD 5.A113 MOD 5.338ARADIONAVIGATION |
|  | 5.533 | 5.533 |
| 24.65-24.75FIXEDFIXED-SATELLITE(Earth-to-space) 5.532BINTER-SATELLITEMOBILE ADD 5.A113 MOD 5.338A | 24.65-24.75INTER-SATELLITEMOBILE ADD 5.A113 MOD 5.338ARADIOLOCATION-SATELLITE (Earth-to-space) | 24.65-24.75FIXEDFIXED-SATELLITE(Earth-to-space) 5.532BINTER-SATELLITEMOBILE ADD 5.A113 MOD 5.338A |
|  |  | 5.533 |

**Reasons:**

MOD EUR/XXXA13/2

24.75-29.9 GHz

|  |
| --- |
| Allocation to services |
| Region 1 | Region 2 | Region 3 |
| 24.75-25.25FIXEDFIXED-SATELLITE(Earth-to-space) 5.532BMOBILEADD 5.A113 MOD 5.338A | 24.75-25.25FIXED-SATELLITE(Earth-to-space) 5.535MOBILEADD 5.A113 MOD 5.338A | 24.75-25.25FIXEDFIXED-SATELLITE(Earth-to-space) 5.535MOBILE ADD 5.A113 MOD 5.338A |
| 25.25-25.5 FIXED INTER-SATELLITE 5.536 MOBILE ADD 5.A113 MOD 5.338A Standard frequency and time signal-satellite (Earth-to-space) |
| 25.5-27EARTH EXPLORATION-SATELLITE (space-to Earth) 5.536B FIXED INTER-SATELLITE 5.536 MOBILE ADD 5.A113 MOD 5.338A SPACE RESEARCH (space-to-Earth) 5.536C Standard frequency and time signal-satellite (Earth-to-space) 5.536A |
| 27-27.5FIXEDINTER-SATELLITE 5.536MOBILE ADD 5.A113 MOD 5.338A | 27-27.5 FIXED FIXED-SATELLITE (Earth-to-space) INTER-SATELLITE 5.536 5.537 MOBILE ADD 5.A113 MOD 5.338A |

**Reasons:**

ADD EUR/XXXA13/3

5.A113 The frequency band 24.25-27.5 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 they are allocated and does not establish priority in the Radio Regulations. Resolutions **[EUR-A113-IMT 26 GHZ] (WRC-19)** and **750 (Rev.WRC-19)** apply.

**Reasons:**

MOD EUR/XXXA13/4

5.338A In the frequency bands 1 350-1 400 MHz, 1 427-1 452 MHz, 22.55-23.55 GHz, 24.25 - 27.5 GHz, 30-31.3 GHz, 49.7‑50.2 GHz, 50.4-50.9 GHz, 51.4-52.6 GHz, 81-86 GHz and 92-94 GHz, Resolution **750 (Rev.WRC-**19) applies.     (WRC‑19)

**Reasons:**

ADD EUR/XXXA13/5

DRAFT NEW RESOLUTION [EUR-A113-IMT 26 GHZ] (WRC-19)

**International Mobile Telecommunications
in frequency band 24.25-27.5 GHz**

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

*considering*

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

*b)* 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;

*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;

*m)* that IMT systems have contributed to global economic and social development;

*n)* that ITU-R has studied, in preparation of WRC-19, sharing and compatibility with services allocated in bands identified for IMT above 24 GHz and in adjacent bands;

*p)* that identification of frequency bands allocated to mobile service on a co-primary basis 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;

*v)* 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*

*a)* Recommendation ITU‑R M.2083, on the framework and objectives of the future development of IMT for 2020 and beyond;

*b)* that Resolution ITU‑R 65 addresses the principles for the process of development of IMT for 2020 and beyond, and that Question ITU‑R 77‑7/5 considers the needs of developing countries in the development and implementation of IMT;

*c)* that Question ITU‑R 229/5 seeks to address the further development of IMT;

*d)* that IMT encompasses IMT-2000, IMT-Advanced, and IMT‑2020 collectively, as described in Resolution ITU‑R 56‑2;

*e)* that Report ITU‑R M.2320 addresses future technology trends of terrestrial IMT systems;

*f)* Report ITU‑R M.2376, on technical feasibility of IMT in the frequency bands above 6 GHz;

*g)* that Report ITU‑R M.2370 analyses trends impacting future IMT traffic growth beyond the year 2020 and estimates global traffic demands for the period 2020 to 2030;

*h)* that there are ongoing studies within ITU‑R on the propagation characteristics for mobile systems in higher frequency bands;

*i)* that the FSS allocation in the frequency band 24.65-25.25 GHz was made by WRC‑12,

*recognizing*

*a)* that there is a lead time between the allocation of frequency bands by world radiocommunication conferences and the deployment of systems in those bands, and that timely availability of wide and contiguous blocks of spectrum is therefore important to support the development of IMT;

*b)* that identification of frequency bands for IMT should take into account the use of the bands by other services and the evolving needs of these services;

*c)* that there should be no additional regulatory or technical constraints imposed on services to which the frequency band is currently allocated on a primary basis;

*d)* that Resolution **750 (Rev.WRC-19)** establishes limits on unwanted emissions in the frequency band 23.6-24 GHz from IMT base stations and IMT mobile stations within the 24.25-27.5 GHz frequency band;

*e)* that spurious emission limits of Recommendation ITU-R SM.329 Category B (‑60 dB(W/MHz)) are sufficient to protect the EESS (passive) from the second harmonic of IMT base station emissions in the 24.25-27.5 GHz band,

*resolves*

1 that administrations wishing to implement IMT consider the use of frequency band 24.25-27.5 GHz identified for IMT in **No. 5.A113**, and the benefits of harmonized utilization of the spectrum for the terrestrial component of IMT taking into account the latest relevant ITU-R Recommendations,

2 in order to ensure the coexistence between IMT in the frequency band 24.25-27.5 GHz as identified by WRC-19 in Article **5** of the Radio Regulations and other services to which the frequency band is allocated including the protection of these other services, administrations shall apply the following condition:

*that, when deploying outdoor base stations, it shall be ensured that each antenna normally 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*

1to adopt provisions to protect other services from IMT networks and to ensure the possibility of deploying future SRS/EESS earth stations;

2to adopt provisions to ensure the possibility of deploying future FSS earth stations,

*invites ITU‑R*

1 to develop harmonized frequency arrangements to facilitate IMT deployment in the frequency band 24.25-27.5 GHz, taking into account the results of sharing and compatibility studies;

*2* to develop an ITU-R Recommendation to assist administrations in protecting of existing and future SRS/EESS earth stations operating in the frequency band 25.5‑27 GHz;

*3* to develop an ITU-R Recommendation to assist administrations in ensuring the coexistence between existing and future FSS earth stations and IMT operating within the frequency band 24.25‑27.5 GHz;

4 to update existing ITU-R Recommendations or develop a new ITU-R Recommendation, as appropriate, to provide information and assistance to the administrations on possible coordination and protection measures for the radio astronomy service in the frequency band 23.6-24 GHz from the IMT deployment;

5 to regularly update characteristics of IMT deployments (including base station density) and to study/assess the impact on sharing and compatibility with other services resulting from these deployments;

**Reasons:**

MOD EUR/XXXA13/6

RESOLUTION 750 (Rev.WRC‑19)

Compatibility between the Earth exploration-satellite service (passive) and relevant active services

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

…

resolves

1 that unwanted emissions of stations brought into use in the frequency bands and services listed in Table 1‑1 below shall not exceed the corresponding limits in that table, subject to the specified conditions;

…

TABLE 1-1

|  |  |  |  |
| --- | --- | --- | --- |
| EESS (passive) band | Activeservice band | Active service | Limits of unwanted emission power fromactive service stations in a specified bandwidthwithin the EESS (passive) band1 |
| … | … | … | … |
| 23.6-24.0 GHz | 24.25- 27.5 GHz | Mobile | −42 dBW Total Radiated Power in any 200 MHz in the EESS (passive) band for IMT base stations−38 dBW Total Radiated Power in any 200 MHz in the EESS (passive) band for IMT mobile stations |
| … | … | … | … |

1 The unwanted emission power level is to be understood as/is understood to mean the level measured at the antenna port, unless specified as Total Radiated Power.

…

**Reasons:** CEPT has harmonised the 24.25-27.5 GHz band for Europe through the adoption of a harmonisation decision (ECC Decision (18)06) which includes relevant conditions for the protection of other services in the band and adjacent bands. CEPT supports the band for worldwide harmonisation by an IMT identification under certain conditions as shown in the ECC Decision. Therefore CEPT supports to allocate the 24.25-25.25 GHz frequency band to the MS on a primary basis in Regions 1 and 2 and identify the 24.25-27.5 GHz frequency band for IMT in Regions 1, 2 and 3, subject to the conditions as shown in Resolutions **[EUR-A113-IMT 26 GHZ] (WRC-19)**. CEPT supports the unwanted emission limits of −42 dBW/200 MHz Total Radiated Power(TRP) for base stations and −38 dBW/200 MHz TRP for mobile terminals, into the 23.6-24 GHz band, to be included as mandatory limits in Resolution **750 (Rev. WRC-19)**

SUP EUR/XXXA13/7

RESOLUTION 238 (WRC‑15)

Studies on frequency-related matters for International Mobile Telecommunications identification including possible additional allocations to the mobile services on a primary basis in portion(s) of the frequency range between 24.25 and 86 GHz for the future development of International Mobile Telecommunications for 2020 and beyond

**Reasons:** Since the agenda item has been completed and a new draft WRC-19 Resolution is proposed, there is no need to keep Resolution **238 (WRC-15)**.

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